WFi

Infor ERP System i WFi for System21

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INTRODUCTION

This guide is intended for Infor ERP System21 users who wish to use Infor ERP System i WFi. It covers the basic setup and configuration along with a set of Infor ERP System21 specific examples.

You should read the WFi Installation and User guides before reading this guide.

CONFIGURATION

System Manager

Application and Task Data

Within Infor ERP System21 Aurora, each application is installed into System Manager using the AMINSAPP command. As well as creating the Application data, it will also import all Task data.

For more information of AMINSAPP, please see the System21 Aurora Application Manager guides.

Role and Role Menu Data

All Role and Role Menu data for Infor ERP System21 Aurora is held in the **L1 A2** application. Install this application using the AMINSAPP command and then use the AMROLINS command to import all the Role and Role Menu data into System Manager.

For more information of AMROLINS, please see the System21 Aurora Application Manager guides.

Enable Role-Processing Mode

WFi requires Role Processing to be enabled. This is done on a per-Environment basis.

To enable Role Processing mode for an environment, use the **STRIPGAM** command on your IBM System i server to open the Application Manager menu. Select option 1 and enter the name of your WFi Environment.

In the Role Processing field, enter a 1 and press F3. When prompted, save the changes.

For more information of Environments and Role Processing, please see the System21 Aurora Application Manager guides.

Users

Use the **STRIPGCF** command on your IBM System i server to open the Administration Functions menu. Use option 2 to create the user profiles that you wish to use with WFi. Use option 2 or option 10 to authorise the User to a Role.

For more information on creating User Profiles, please see the System21 Aurora Application Manager guides.

WFi User Profile

The User Profile that is used to start the WFi Engine will need authority to WFi and any System21 files or program libraries that are used by your processes. Typically this would be the AULOWNER group profile and the AULEXTOWN supplemental profile.

The WFi User Profile will also need to be authorised to all the Roles/Menus that contain the tasks that are submitted to batch, or used as Data Fields within your Business Processes.

See the WFi Installation Guide for more detail on creating the WFi User Profile.

Usage of RUNAMTASK

RUNAMTASK is now a deprecated System Manager command, and as such, has not been updated to recognise WFi enabled programs. If this command is still being used to run System21 overnight batch jobs, it should be replaced by the newer **EXCAMTASK** command. So, for example, if the old **RUNAMTASK** was:

```
RUNAMTASK APPL(OE) ENVN(SP4) RLSL(03) TASK(1234) PGM(PPPPP)
CONO(Z1) USER(QPGMR)
```

It should be replaced with:

```
EXCAMTASK APPL(OE AUL A2) TASK(1234) USERENV(AUL) CONO(Z1)
USER(QPGMR)
```

(I.e. the PGM parameter is now redundant)

If you have jobs that run using a library list from a Job Description, you must either convert these to use **EXCAMTASK** or add **AULWFF3** to the **JOBD** library list. Only then should you attempt to activate WFi in the System21 environment.

WFi Engine

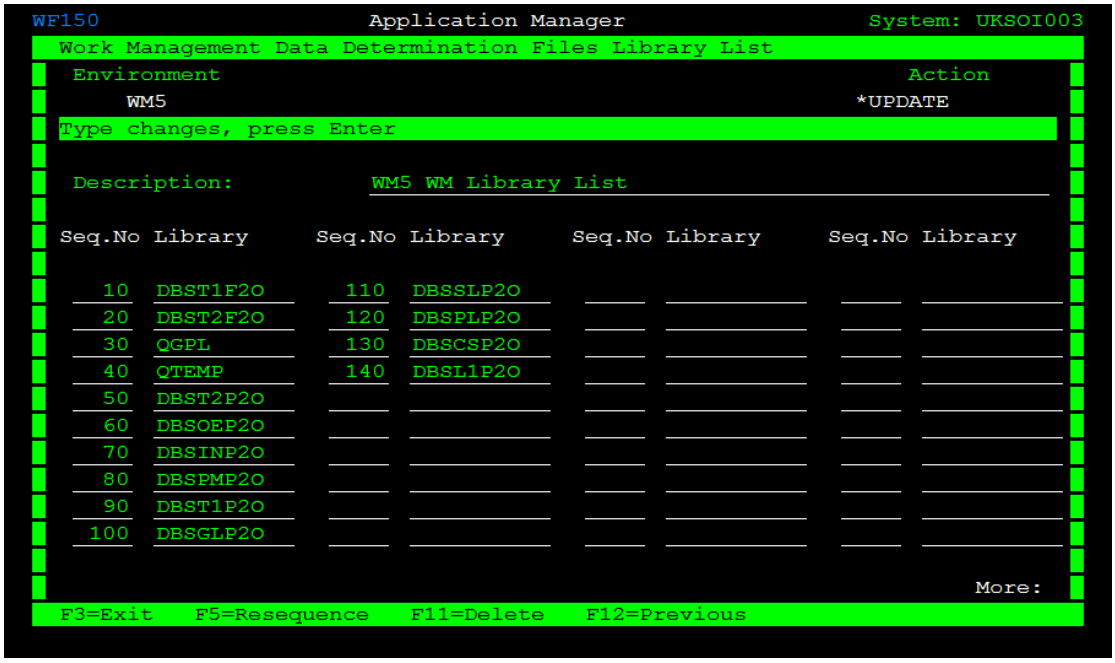
Libraries Used By WFi Business Processes

If your WFi Business Processes use either Data Fields or Batch Tasks that use Infor ERP System21 Aurora applications, you need to add the IBM System i libraries that contain the System21 files/programs to the WFi Engine's library list.

To do this, run the **STRIPGAM** command on your IBM System i server and select option 10. Select option 3, WM Environment Settings. Enter your WFi Environment code and press Enter.

Note: The WFi programs must be stopped before you can change the WFi Environment settings.

Press **F20** to display the Library List entry program.



Enter all the program and files libraries into this screen and press **F3** and save the changes when prompted.

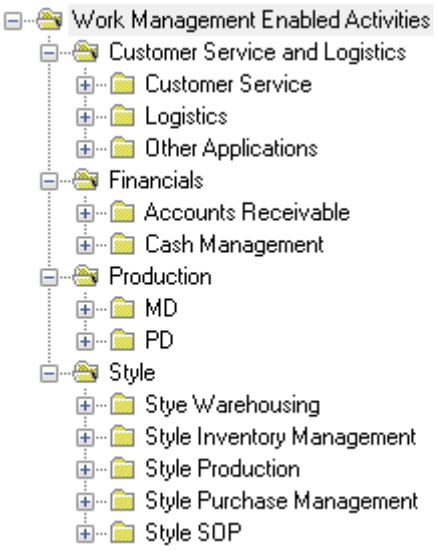
Re-start the WFi Engine to use the new library list.

WFi Modeler

WFi Enabled Tasks

The **WM Enabled Activities 2.4** CD contains all the definitions of the Infor ERP System21 Activities that have been WFi Enabled. As well as the Activity data, it also contains a test harness for each WFi enabled activity and several example processes.

Use the WFi Modeler Import option to load the `Aur2.4 Enabled Activities.CON` file from the CD's Enabled Activities folder. Your Activities section of the Palette will be populated with the tasks, grouped by application folders.

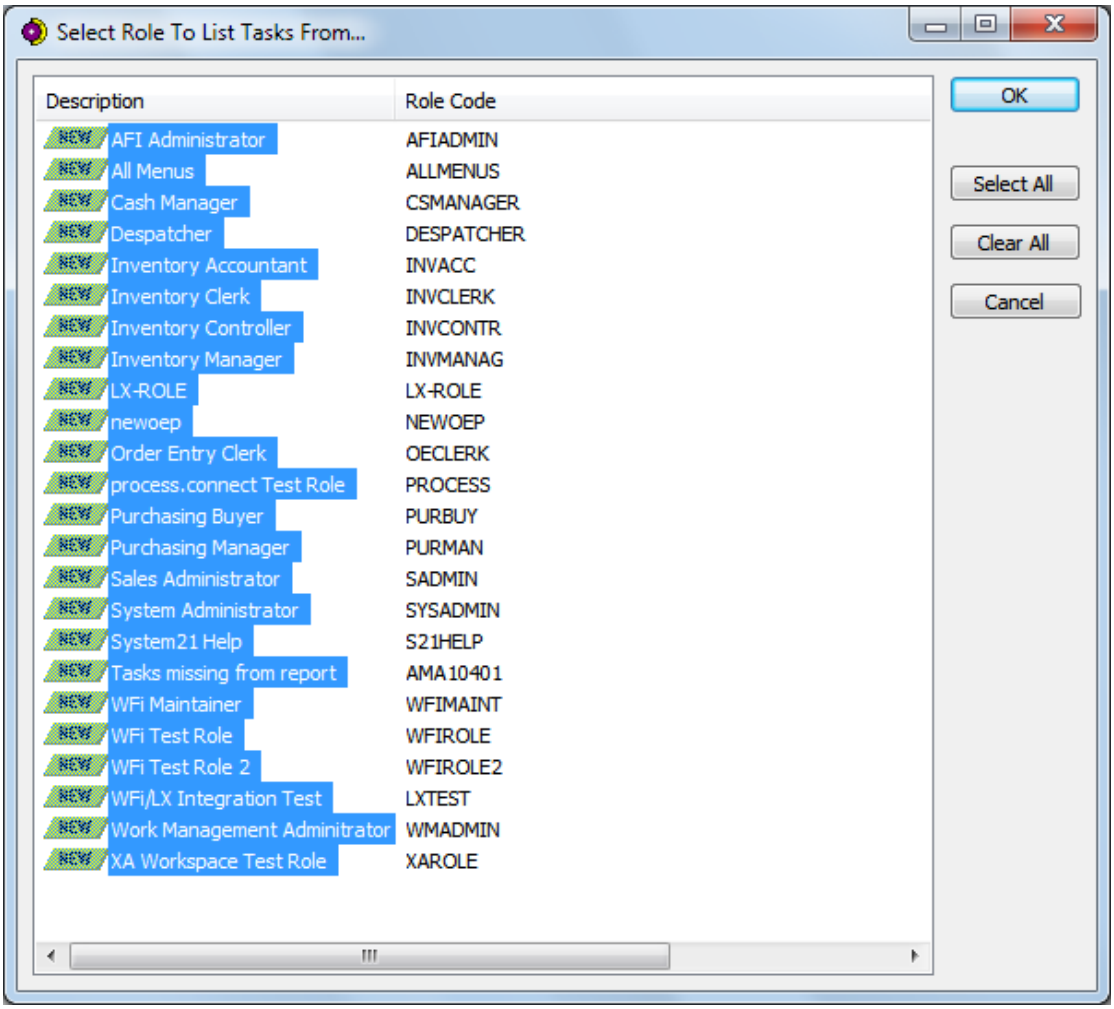


Non-WFi Enabled Tasks

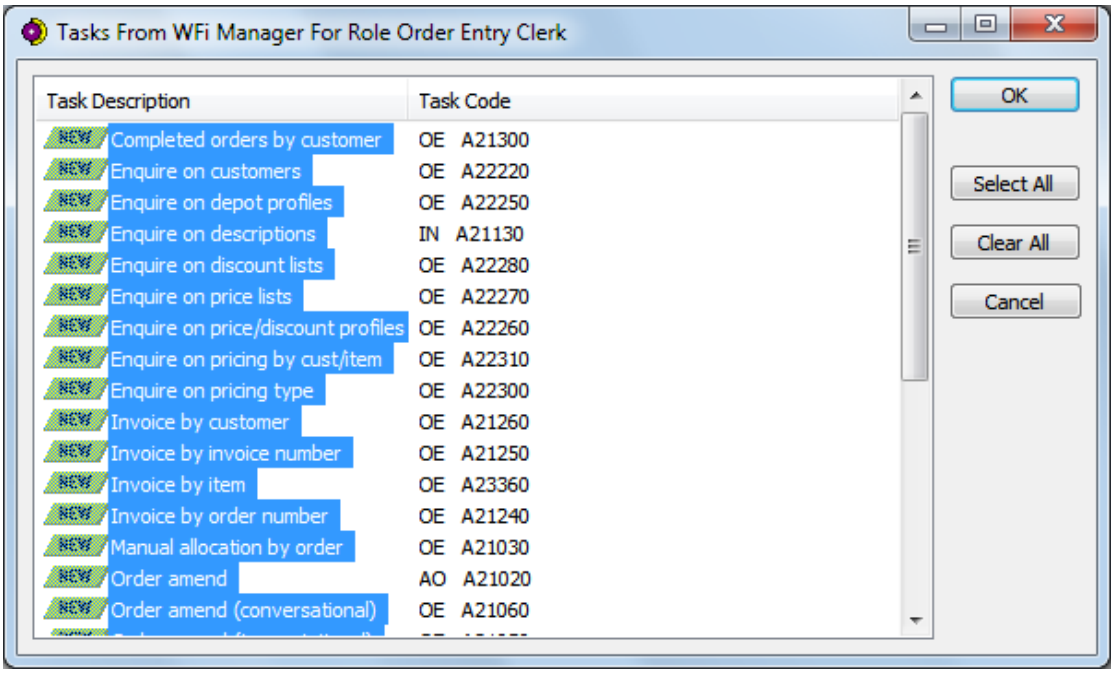
To import tasks into WFi Modeler that are not WFi Enabled, you can use the *Configure, Work Management, Retrieve* option.

From the grid select either **Activities from System Manager (by Role)** or **Activities from System Manager (by Application)** and press **Retrieve**.

When retrieving **Activities from System Manager (by Role)**, you will presented with a list of all the available Roles.

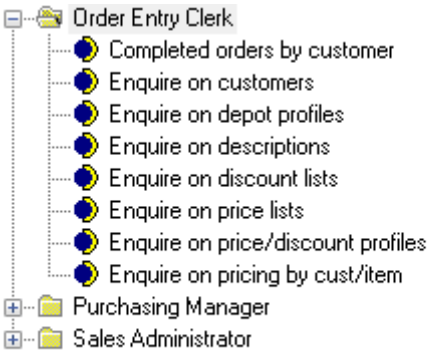


Select the Role(s) you wish to return Task data for and press **OK**. For each Role you select, a list of the Tasks authorised to the Role will be displayed.

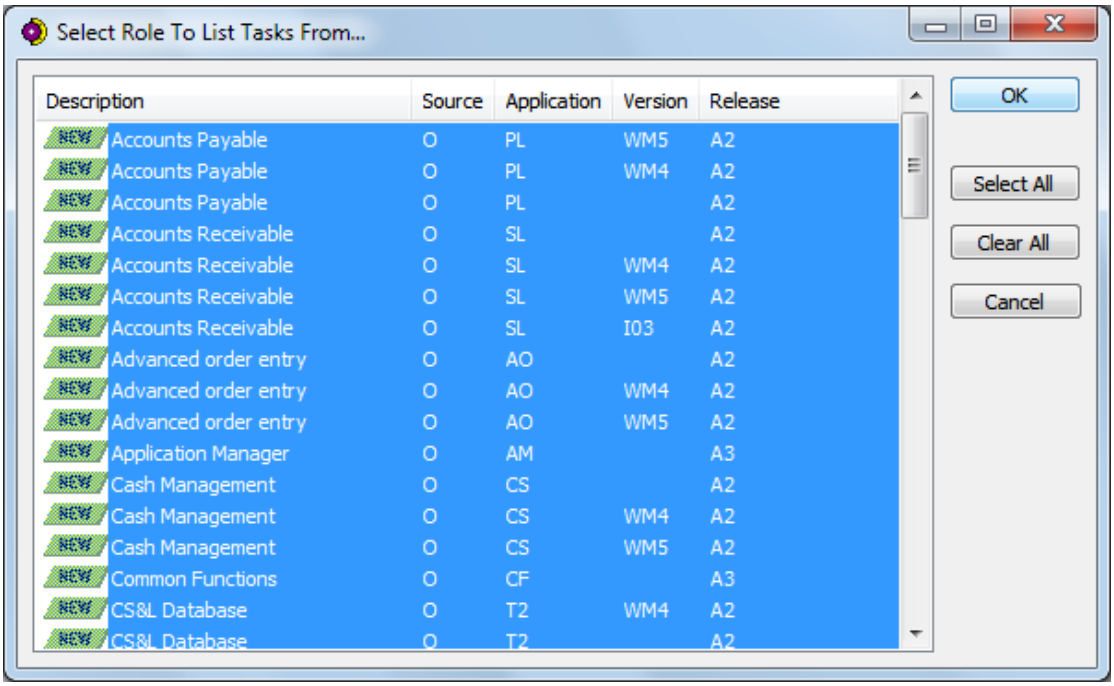


Select the Task(s) you wish to import into your Application Version and press **OK**.

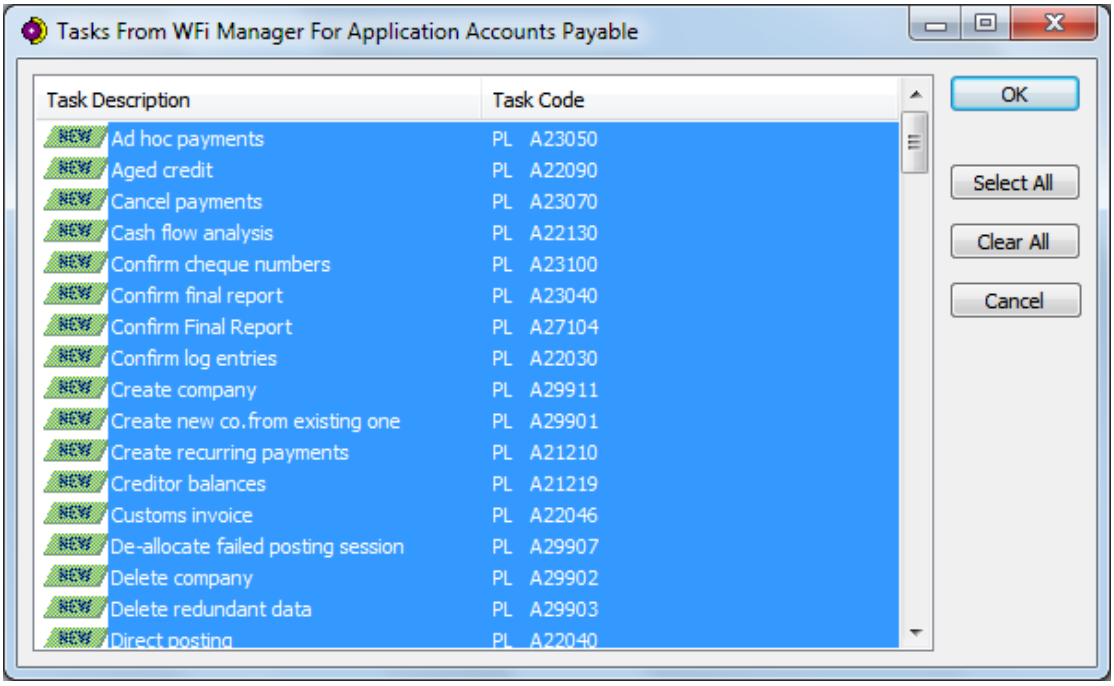
The tasks are grouped together by Role in the Activities section of the Palette.



When retrieving **Activities from System Manager (by Application)**, you will presented with a list of all the available Applications.

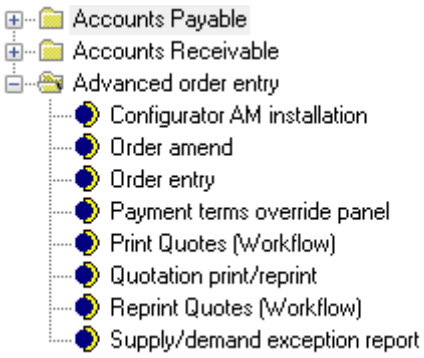


Select the Application(s) you wish to return Task data for and press **OK**. For each Application you select, a list of the Tasks authorised to the Application will be displayed.



Select the Task(s) you wish to import into your Application Version and press **OK**.

The tasks are grouped together by Application in the Activities section of the Palette.

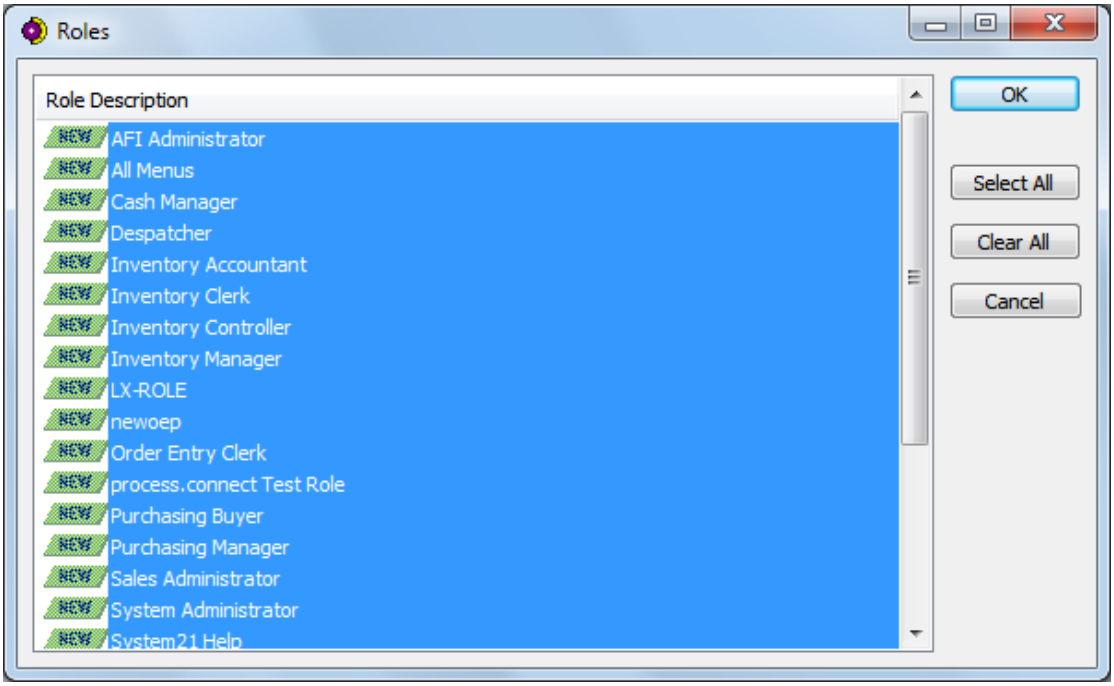


These tasks can now be used as Buttons within your Manual Activities.

Roles

To import Roles into WFi Modeler that are not WFi Enabled, you can use the *Configure, Work Management, Retrieve* option.

From the grid select the Roles option and press **Retrieve**. A list of Roles will be displayed.



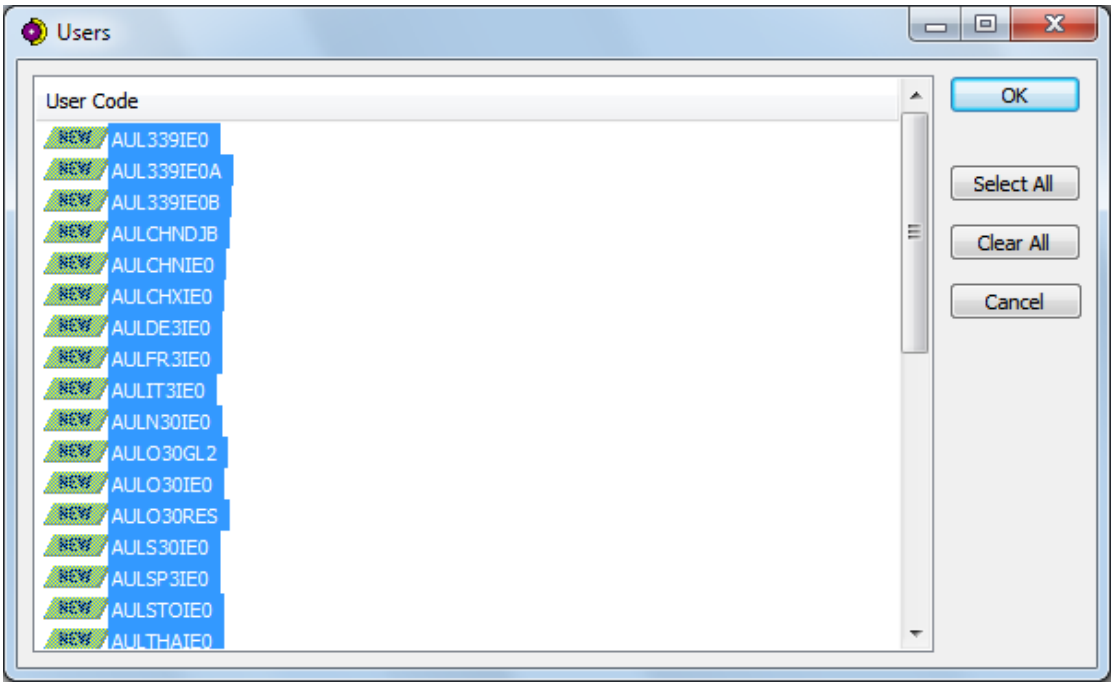
Select the Role(s) you wish to import and press **OK**.

You can now use these Roles as recipients for your Activities.

Users

To import Users into WFi Modeler that are not WFi Enabled, you can use the *Configure, Work Management, Retrieve* option.

From the grid select the Users option and press **Retrieve**. A list of Users will be displayed.



Select the User(s) you wish to import and press **OK**.

You can now use these Users as recipients for your Activities.

INFOR ERP SYSTEM21 SPECIFIC MODELING TUTORIAL

Introduction

The following tutorial has been designed to give the reader a practical introduction to using WFi Modeler with Infor ERP System21 via a worked example. Throughout the tutorial the reader is introduced to important WFi Modeler modelling concepts and features. Exercises are provided that can be followed to aid in the understanding of the discussed modelling concepts.

Case Study – BDT International

BDT International has been successfully in business for over 30 years. The organisation has a turnover of 150 million and employs 1000 people. Over recent years however, the competition has greatly intensified, leading to BDT International losing its market share. The organisation has found it difficult to compete with cheap imports and has struggled to adapt the business to the changing market conditions.

BDT International suffers from a reputation for providing a poor delivery service, due in particular to poor credit management, and not being very customer focussed. This reputation is badly affecting business. Typically, the first the customer knows about a failure to deliver is when the goods do not arrive.

A new management team has been brought in to restore the fortunes of the organisation. Initially, the focus of the management is to improve both the interface with the customer and to improve internal communications.

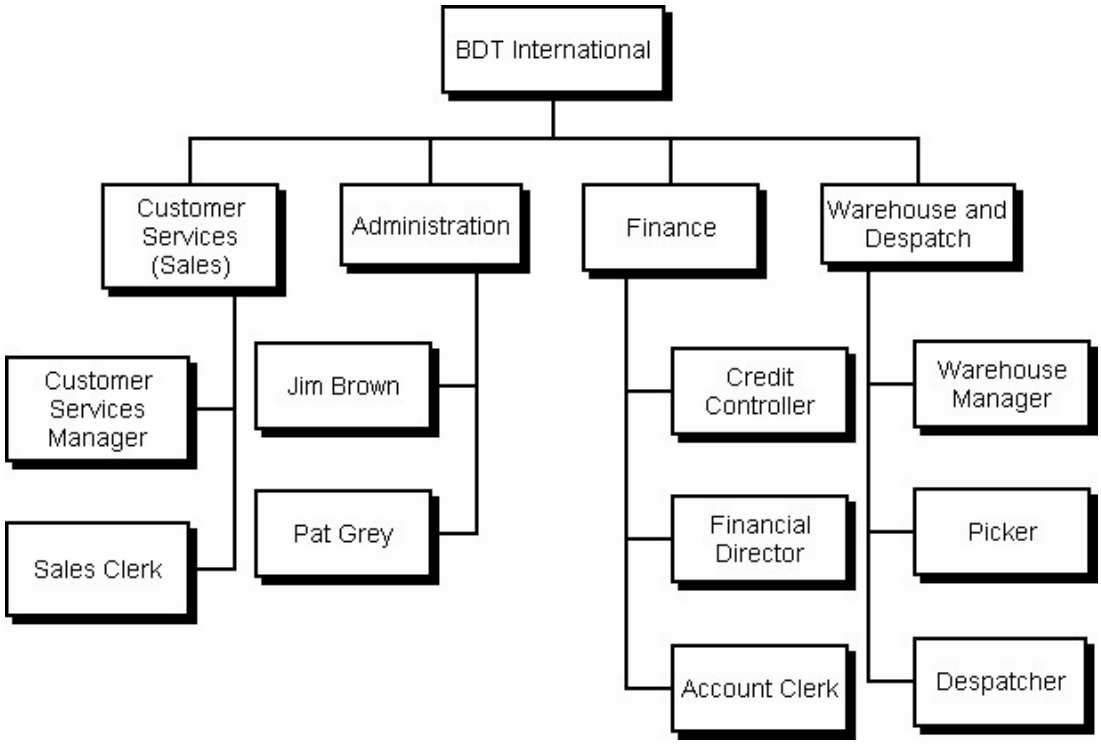
Internal systems have evolved over time, although a small computer system is being utilised but most procedures are paper based with a large amount of people overheads. Administration currently plays a major role in getting orders despatched to the customers.

80% of BDT International business comes from three main customers. Each year BDT International must compete for this business. The management team has recognised that the organisation must improve its service to these organisations in order to stand a chance of the contract next year. In total BDT International have over 100 customers.

Customers' place orders with BDT International, typically, 24 – 48 hours before they require delivery. Customers will not accept back orders or part deliveries. If BDT International cannot fulfil the order the customer will go elsewhere.

BDT International is hoping that a more efficient sales process and the introduction of a marketing department will help them to continue to grow the business. It is envisaged that extra personnel will be required for the marketing department.

The structure of the organisation is as follows:

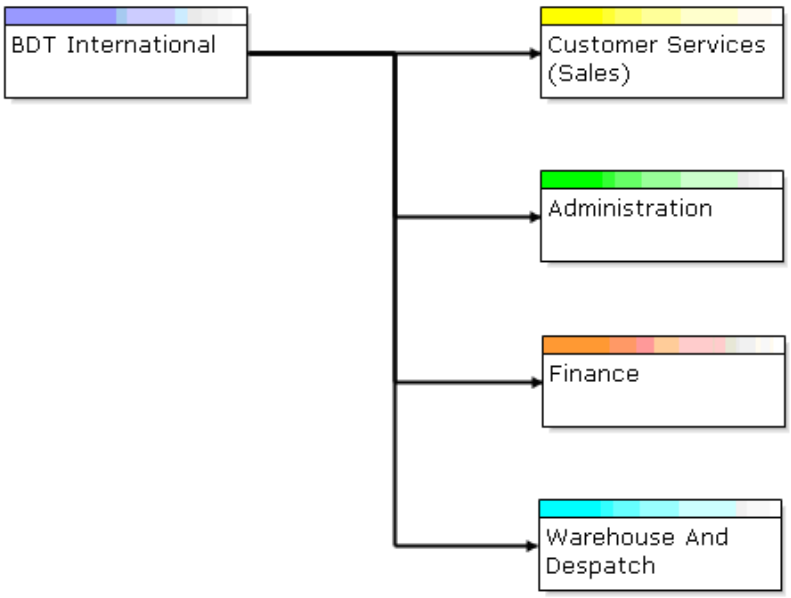


Building the Business Model

The first phase in the process is to model the organisation and their current processes. This section is concerned with building the Organisational Model, in order to provide a graphical representation of how the Company operates.

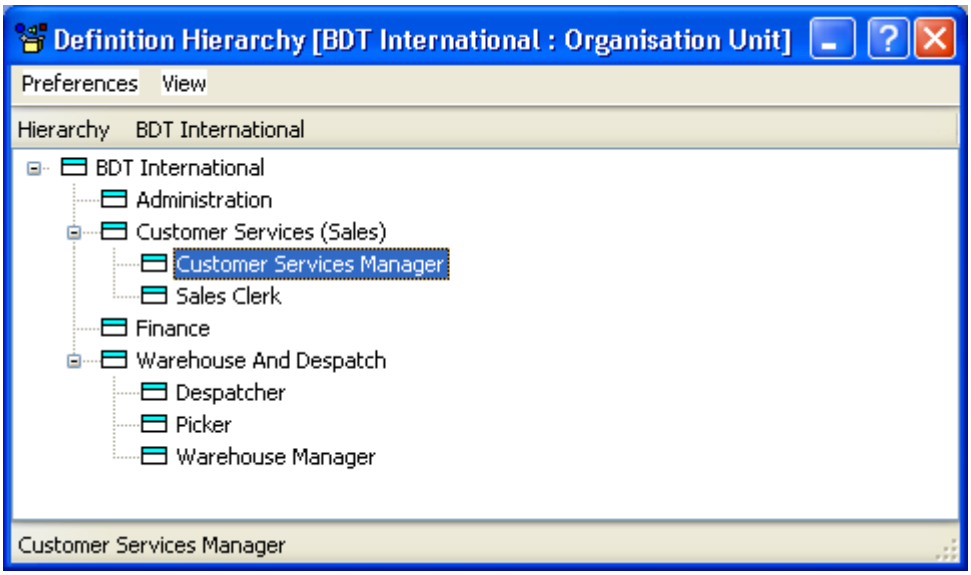
The Organisational Model

In this example, the Organisational Model will focus on the key departments and employees within BDT International. The Organisational Model is hierarchical. The Organisation Model acts as a reference model on which the Process Models are based.



The first stage of the business is to build the organisational model, depicted in the previous section of this document, within WFi Modeler. A similar structure may be built within WFi Modeler using Organisation Units. In each level there is a parent and one or more children. The above example illustrates the top level of the WFi Modeler organisational model.

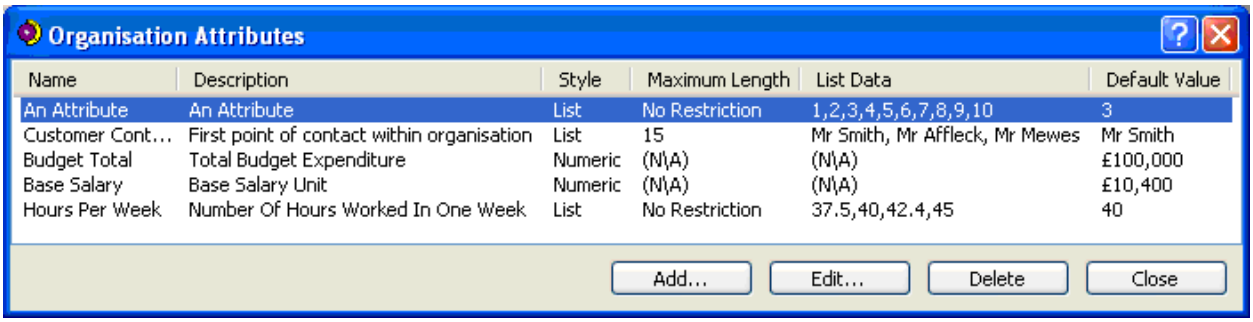
The view that WFi Modeler within the Organisation Unit canvas offers is restricted to two levels at a time, however it is fully hierarchical. The full hierarchy can be viewed via the Child Map facility.



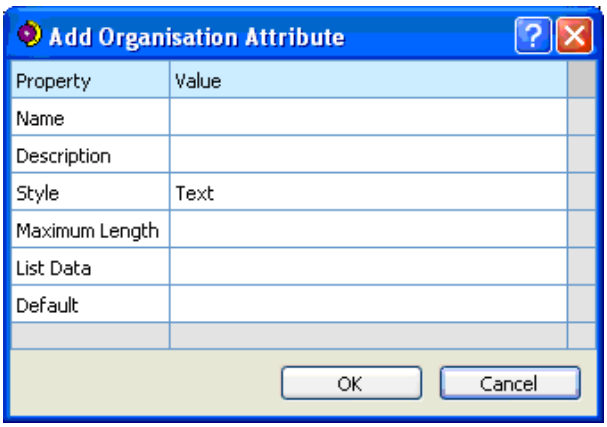
Organisational Modelling Attributes

From the *Configure* menu select Organisation Modelling and then *Organisation Attributes*. The *Organisation Attributes* dialog opens.

Attributes are entered for memorandum purposes. They are not actively used in WFi Modeler. They allow the User to be prompted for informational data on creating Organisation Units, e.g. location, notes, contact information, manager, etc. It is useful to create Attributes first as they are to be applied to the Categories and then to Organisation Units. They can, however, be created at any stage of the design.



To add a new Attribute, select **Add**. This opens the *Add Organisation Attribute* dialog.



Fields

Name

Enter the attribute name. This is that which appears in the *Attribute* list when creating a Category.

Description

Add some text to be used as reference.

Style

Choose between different styles for the Attribute:

- *Text* for a text box
- *List* for a combo box
- *Yes/No* for a check box
- *Colour* for a Palette of colours
- *Numeric* for a numeric field.

They define the styles used to represent the Attributes values within Organisation Units.

Maximum Length

This represents the maximum length allowed for that new value. It ranges from 0 to 256.

List Data

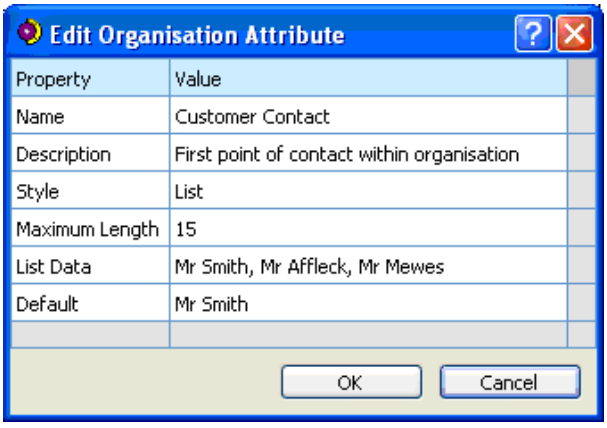
Add a list of items, separated by a comma. They represent the possible values for the attribute.

When an Organisation Unit contains a Category, which is associated with an Attribute, the Attribute Default Value may be changed with another value.

Note: If the style chosen is List, its values cannot be changed.

Default

Default Value is shown in Organisation Unit after applying a Category that uses this Attribute.



Once all the details are entered, select **OK** to add the Attribute to the list.

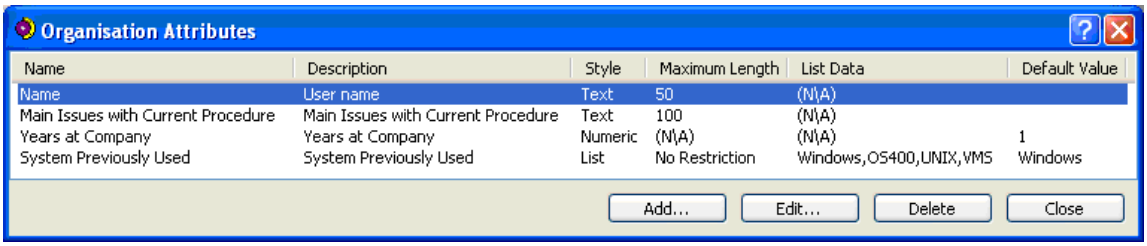
More Attributes may be added, amended or deleted by choosing Add, Edit and Remove in the Organisation Attribute dialog.

Exercise 1 – Create Organisational Attributes

Create 4 attributes using the following names and styles:

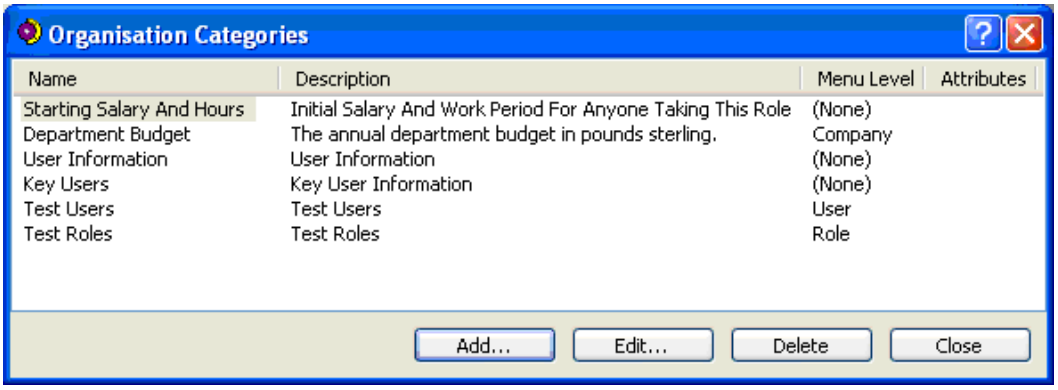
- Name – Text
- Main Issues with Current Procedure – Text
- Years at Company – Numeric
- System Previously Used – List

Here's how the *Organisation Attributes* dialog should look when finished…



Organisational Modelling Categories

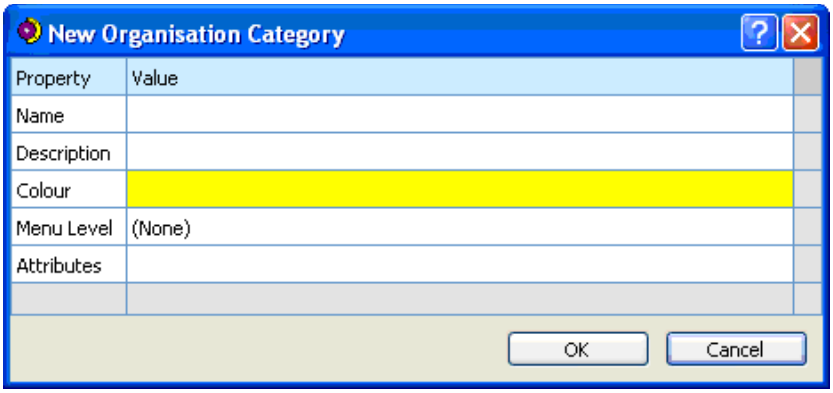
A Category is a template for a Unit, a logical group of attributes. From the *Configure* menu select *Organisation Modelling* and then *Organisation Categories*. This opens the *Organisation Categories* dialog.



Function

Add

Select **Add** to add a new Category. This opens the *New Organisation Category* dialog.



Fields

Name

Give a name to the Category.

Description

Give a Description to the Category.

Menu Level

This is used in Role Menu generation. This is no longer used as Role Menu creation and maintenance is now managed under the System21 Aurora Application Manager.

Attributes

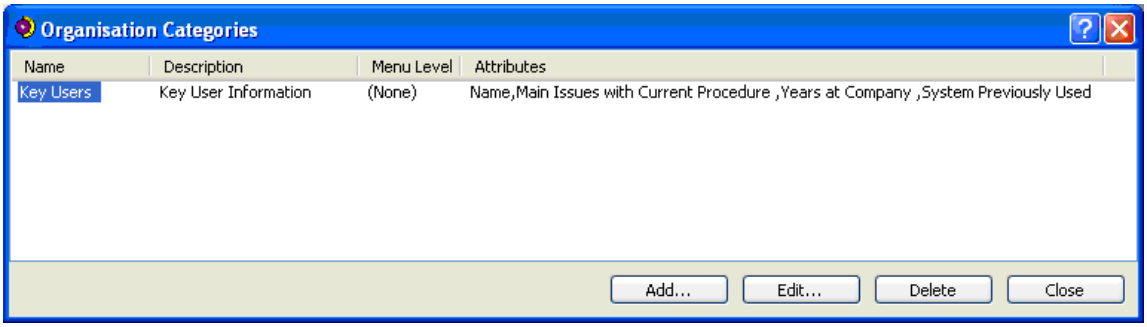
Clicking in the Attributes field opens the *Organisation Attributes* dialog. Select from there the required Attributes for the Category. To remove an unwanted Attribute, highlight it in the *Attributes* list and delete it.

More Categories may be added, amended or deleted by selecting ***Add***, ***Edit*** or ***Remove*** in the *Organisation Categories* dialog.

Exercise 2 – Create Category

Create a Category named *Key Users*. Define it so that it holds the 4 attributes previously created.

Here's how the *Organisation Categories* dialog should look when finished…



Creating the Organisational Model

Different levels are used to represent the departmental structure of a Company. Each level contains a parent Organisation Unit and one or more child Organisation Units.

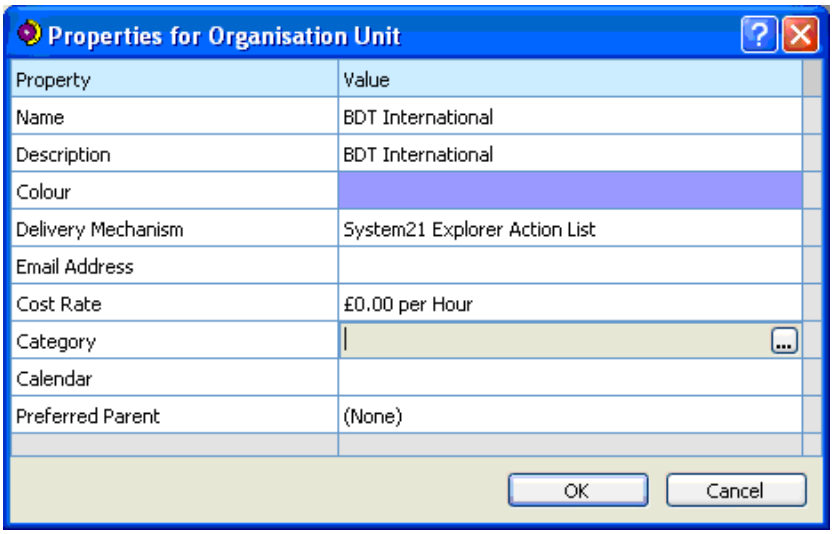
Creating a new Organisation – The Parent

Select *File* menu, *New* and *Organisation Unit*. A message box appears prompting for a name for the new Organisation Unit. Call the Organisation *BDT International*.

The parent Organisation Unit is placed at the top left of the Canvas. It may be repositioned if desired, but not resized.

Right clicking on the Organisation Unit opens its context sensitive menu. Selecting *New* allows adding Child Organisation Units. A label and a new line may also be added to the parent Organisation Unit by selecting *Label* or *Line*.

The menu item *Properties* opens the *Properties for Organisation Unit* dialog.



Tip: *Properties* is the default action of the Organisation Element so double clicking on the item within the Canvas window opens this dialog too.

Fields

Name

This shows the Organisation Unit name. To change it, right click on the Unit from within the Palette and select **Rename**.

Description

This is for reference purposes only.

Colour

The colour of the top of the Organisation Unit box may be changed, by selecting a new colour amongst the colours available in the *Colour* palette. This colour is used when the Organisation Unit is used as a Swimlane.

Delivery Mechanism

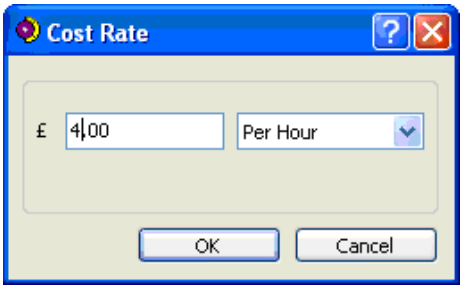
The Delivery Mechanism becomes the default mechanism for any Recipient configured with this Organisation Unit. That is, if an Activity is pinned into a Swimlane then this default is reflected in the recipient details listed in the *Properties For Links Window.* It is shown in blue text, to represent a Swimlane default and cannot be overridden.

Email Address

This only needs to be completed if one of the Email options for the Delivery Mechanism field is selected.

Cost Rate

This rate allows metrics to be applied to this Organisation Unit. The rate that is selected here becomes the default rate for any Recipient configured with this Organisation Unit. That is, if an Activity is pinned into a Swimlane then this default is reflected in the Metrics Window and the Task Metrics Window (from the Planned Schedule Window). Select the prompt to open the *Cost Rate* dialog.



This allows the entry of a currency value and the metric unit.

Category

Use the prompt facility to open the Organisation Categories dialog. Here it is possible to select a Category to associate with the parent Organisation Unit. If a Category is selected, and the Category has an Attribute associated with it, the Attribute's name appears as a new field. The default value of this field is automatically entered.

Calendar

Use the prompt facility to open the Calendars Window from which a Calendar can be selected. Calendars form an essential part of the overall Process Rescheduling mechanism within WFi Modeler, together with Planned Schedules and Organisation Units.

Preferred Parent

Where the Organisation Unit is a child then there is the option to select a Preferred Parent. This enables the Child to inherit the availability details from the Parent.

Once the parent Organisation Unit has been created, it appears in the Palette under the Organisation Unit tree view.

Completing the Organisation Model

To complete the Organisation Unit, add child Organisation Units. To add a new child, right click on the parent Organisation Unit's Canvas and select *New, Organisation Unit*.

Tip: Alternatively drag and drop a Organisation Category from the Palette onto the Canvas. By using this method a category is already associated with the Organisation Unit and attributes may be immediately viewed.

Enter the details and choose a different colour from the parent box. After all the information is added, select **OK** to save the child Organisation Unit details. The child box is added to the Canvas and it is linked to its parent.

The child Organisation Unit is added to the Palette.

Note: The icons used for parent and child Organisation Units are identical.

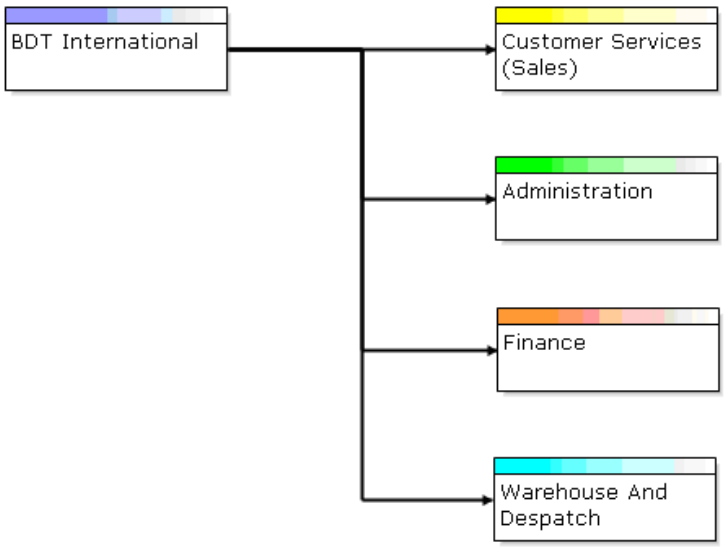
Tip: Other child boxes may be added in the same way, or selecting **Repeat** on the *Properties for a New Organisation Unit* dialog.

Exercise 3 – Create the Organisation Model

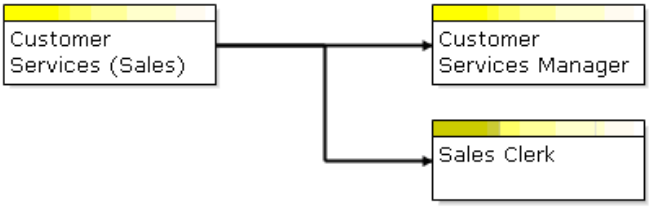
Complete the BDT International Organisation Unit based on the organisation map in the section *Building the Business Model*.

Tip: Right-click on a child Organisation Unit and select the *Organisation* option to open that child's Organisation Model.

The top-level Organisation Unit should end up looking something like this…



The Organisation model for Customer Services (Sales) should end up looking something like this…



Experiment applying the Organisation Categories to the different Organisation Units as well as creating new Organisation Categories.

Business Process Models

There are two types of Business Process Model, the **As-Is Model** and the **To-Be Model.**

The As-Is Model describes the way the Company presently works, prior to any changes.

The To-Be Model describes the way a company is going to be restructured. This model may be built making comparisons with reference models such as the Supply Chain Councils SCOR model.

Note: It is not essential to create both an AS-IS and TO-BE models. The techniques described in the following section apply to both types of model. It is important to recognise that business process models are geared to describing how an organisation functions independent of the implemented software.

Creating the As-Is Model

The modelling of BDT International's current sales process is covered in this section. WFi Modeler is used to map out the process and External Activities are used to build the process.

BDT International's order cycle consists of the same steps as 99% of organisations. Basically within the cycle someone takes orders over the phone or by fax, someone checks the order, someone prints picking notes and takes them to the warehouse, someone will pick the goods, the pick will be checked, someone will despatch the goods and finally someone will print the invoices.

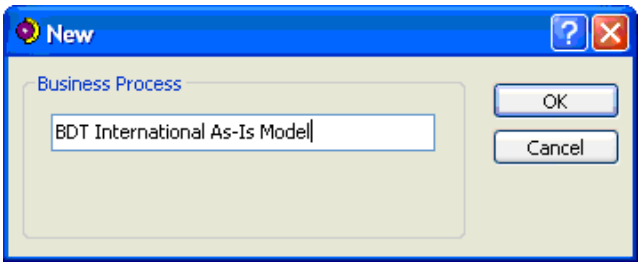
The identified steps of the process are as follows:

- Order Written on Order Pad
- Written Order taken to Admin
- Order Keyed into System
- Order Manually Checked
- Picking Documentation and Labels Produced
- Picking Document taken to Warehouse
- Items Picked and Packed
- Goods Despatched
- Invoice Produced for Orders

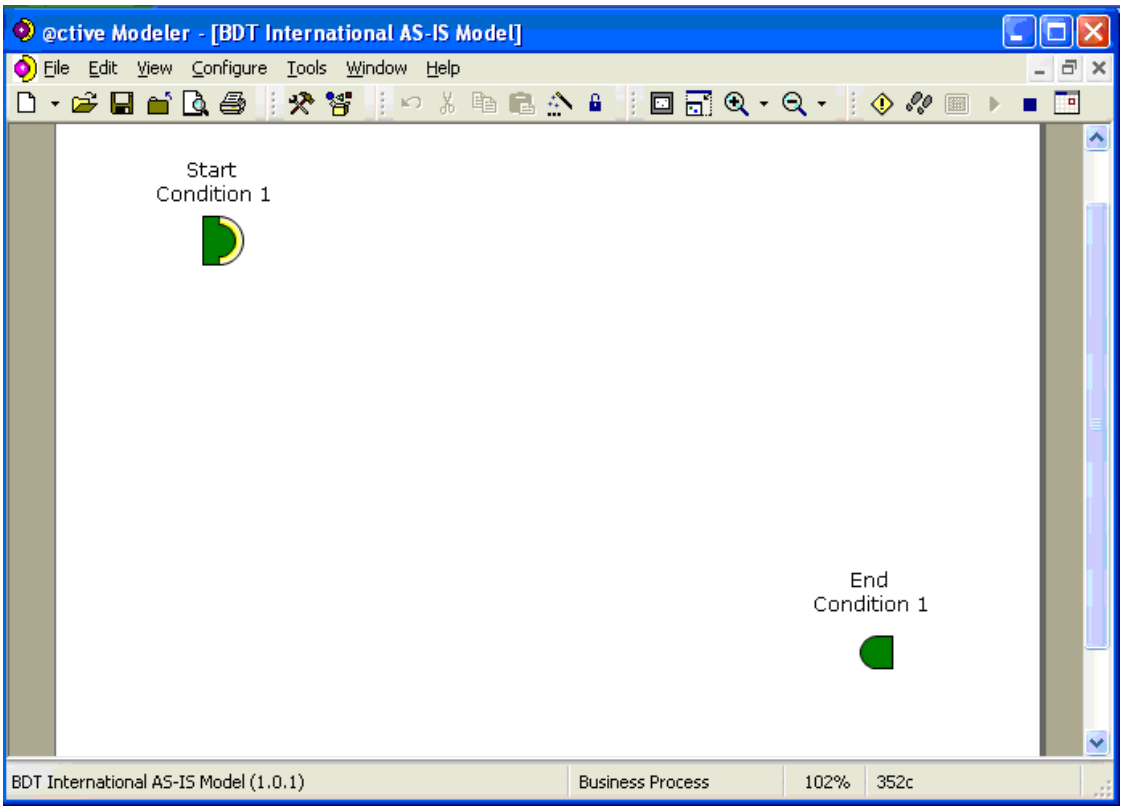
Creating a New Business Process

There are two ways of creating a new Business Process either select **New** on the Toolbar and choose *Business Process* or, from *File* menu, select *New* and *Business Process.*

In both ways an input box appears prompting for a name for the new Business Process.



After a name is assigned, the new Business Process' Canvas appears. The WFi Modeler's title bar contains the name of the new Business Process.

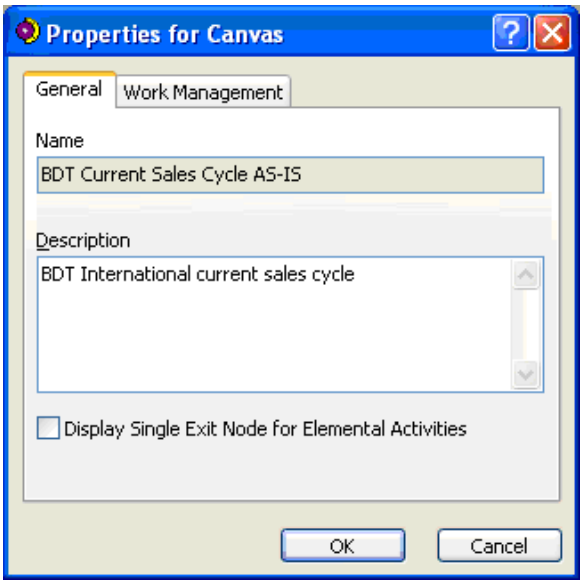


A Start Condition and End Condition are automatically placed on the Canvas.

More Details on Canvas Properties

Right click on the Canvas to open its context sensitive menu. Selecting the *Properties* menu item opens the *Properties for Canvas* dialog. This contains two tabs: *General* and *Work Management*.

The *General* tab displays the name of the open Business Process and allows adding a *Description* of it, to appear as a ToolTip.

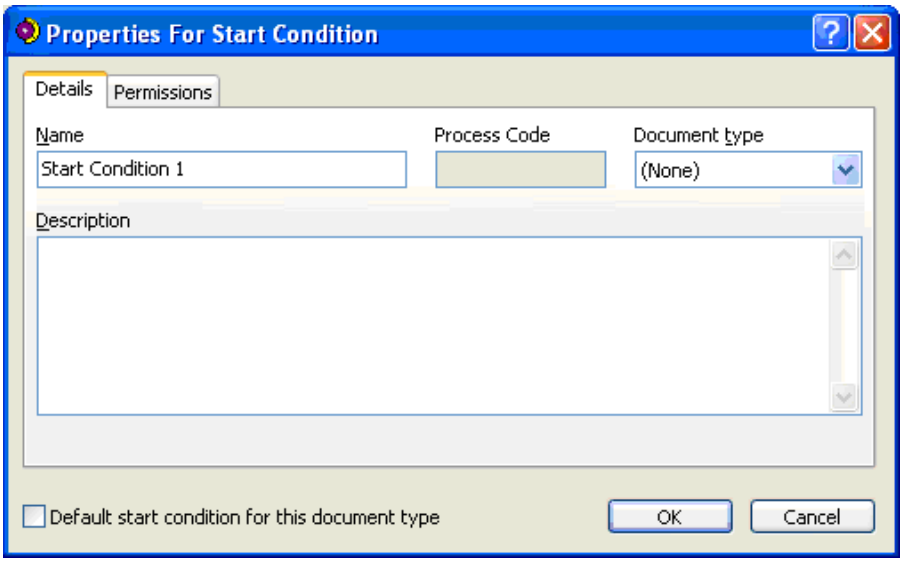


Note: Checking the Display Single Exit Node for Elemental Activities will cause all Elemental Activities on the Canvas to be linkable to other activities by a single path. The activities left border will appear green when this option is on.

Note: The Work Management tab will be explained in a later section.

Start Conditions

A Start Condition determines the initial point of a Process. Either double click on the Start Condition or use the right-click context menu *Properties* option to open the *Properties for Start Condition* dialog.



Fields

Name

Alter the name that appears on the Canvas by changing the name. The name of the Start Condition must be unique.

Document Type

This can be set to define the document used by this process path. A Start Condition with a Document Type set denotes an entry point to an existing process (e.g. cancellation of an existing order).

Description

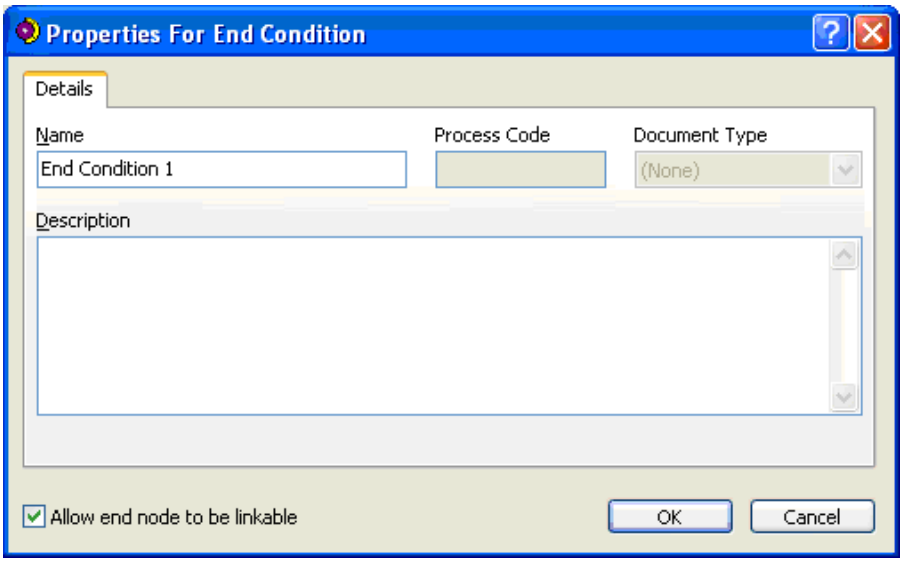
Descriptive text may be added. This text is displayed during the walkthrough.

Note: The Permissions tab can be used to define how the Business Process is to be started (Start Mode field) and who is going to be allowed to start it (Recipient Type and Recipient fields).

Note: A Business Process may contain more that one Start Condition. Multiple Start Conditions should be used where more than one state could start the process or where it is possible to join a process subsequently.

End Conditions

An End Condition represents an end point of a process. Multiple End Conditions should be used where the process could end in more than one way or state. Either double click on the End Condition or use the right-click context menu *Properties* option to open the *Properties for End Condition* dialog.



Fields

Name

Alter the name that appears on the Canvas by changing the name. The name of the End Condition must be unique.

Description

Descriptive text may be added. This text is displayed during the walkthrough.

Allow end node to be linkable

This check box determines whether this exit node can be linked to other activities when this Business Process is embedded within another Business Process.

Exercise 4 – Create New Process

Create New Business Process, called BDT Current Sales Cycle AS-IS and alter its properties so that...

- The name of the Start Condition is *Customer Calls*.
- The name of the End Condition is *Order Despatched and Invoiced*.
- The process has a description (i.e. edit the Canvas properties).

Tip: Make sure to save the Business Process after each exercise.

After following the exercise the Canvas should look something like…

Adding Items to the Canvas

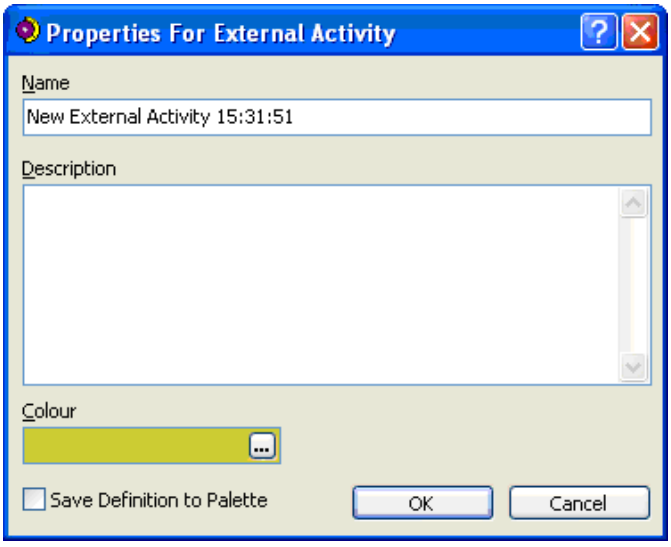
A new item may be added to a Business Process either from the Palette or from the Canvas. All of the items contained in the Palette may be added to the Canvas.

To add an item from the Palette, drag it onto the Canvas from the Tree View.

Another way of adding a new item to a Business Process is right clicking on the Canvas and, from its context sensitive menu, selecting **New** and the required item.

More Detail on External Activities

External Activities have only one Exit Node but can accept a multiple inputs. The *Name*, *Description* and *Colour* of the External Activity can be set via its *Properties* option.



An External Activity may be used to describe a physical step in a process that is not software related.

External Activities are mainly used to build Business models (i.e. stages in the modelling where System21 Aurora software is not involved).

Linking Items

Once items are placed on the Canvas they can be linked together. To create a link, click on the Exit Node of the first item and drag the mouse pointer into the item it needs to be linked to.

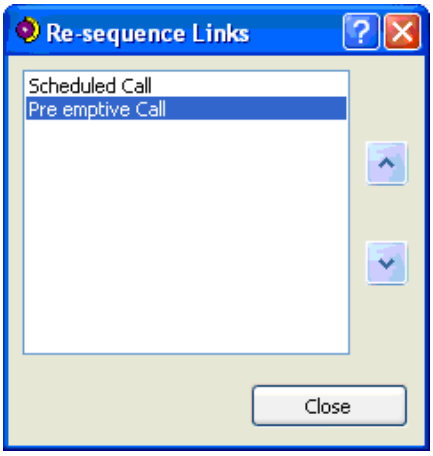
When the mouse button is released, a line is drawn between the two items. This is referred to as a *link*.

Only one line can be drawn from each Exit Node, though more than one link can be drawn into an item.

Re-sequencing Nodes

Upon right clicking on each item on the Canvas, their context sensitive menus appear. Most of the menu items are common to all of the items.

The *Configure* sub menu of each item contains the *Re-sequence Links…* menu item. This opens the *Re-sequence Links* dialog in which the item's Exit Nodes may be repositioned.



The *Re-Sequence Links* dialog shows a list of the item's Exit Nodes. Select an Exit Node and use the arrows up and down to change its position in the sequence. The result of this can be viewed after closing this dialog, when moving the mouse pointer over the Exit Nodes.

Aligning and Changing Items Order

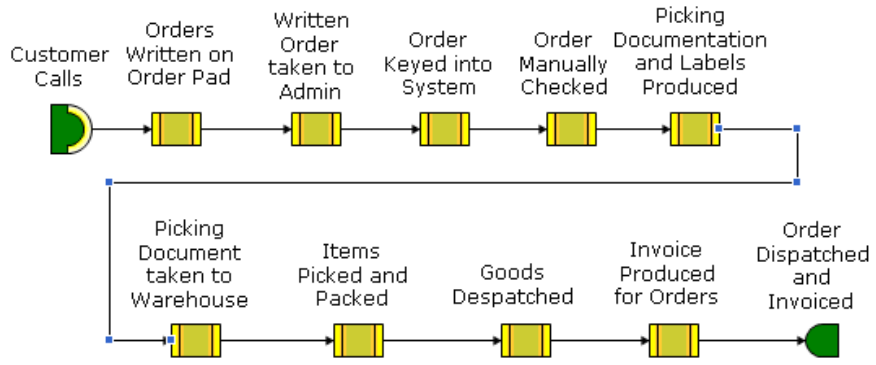
Items may be aligned to other items on the Canvas. Select the *Align* menu item and then either *Horizontal* or *Vertical*. The cursor changes to a question mark. Clicking on another item, it aligns the first item horizontally or vertically with it.

Items automatically stack in individual layers as they are added to the Canvas. Individual Items may be moved in the stack. The *Order* submenu contains two options: *Bring to Front* and *Send to Back,* which allow the User to move Items to the top or bottom of a stack in one move.

Exercise 5 – Build the AS - IS Process

Using External Activities create the BDT Current Sales Cycle AS-IS model from the steps identified.

After following the exercise the Canvas should look something like…



More Detail on PC Shortcuts

The PC Shortcut control may be used to attach the different levels of documentation to all model types. They are only used for Software Modelling.

Right clicking on the PC Shortcut Control opens its context sensitive menu. Selecting the *Properties* menu item opens the *Properties for PC Shortcut* dialog.

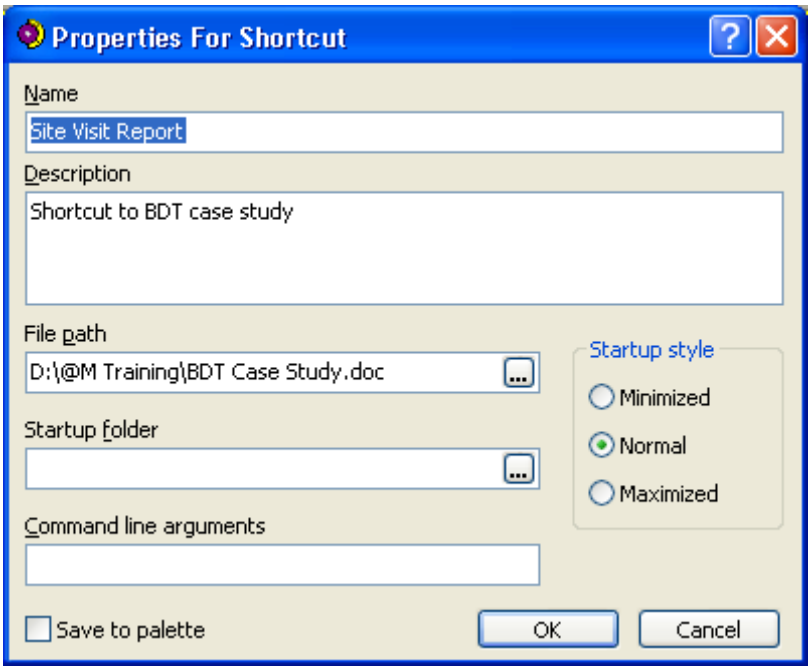
It is possible to specify paths to PC programs, pictures or documents. In this respect they should be used to represent the launch into a program outside of System21 Aurora. The program location should be specified in the *File Path* field on the *Properties* tab.

Exercise 6 – Create a PC Shortcut

Create a new PC shortcut on the AS-IS model, called Site Visit report. Attach the content of the case study (or some other Microsoft Word document).

Tip: Double Click on the PC Shortcut to launch the document.

After following the exercise the PC Shortcut properties dialog should look something like…



Applying the Organisation Model

The model just created provides in itself a good working model. However, overlaying the Organisational Model (defined in a previous section) can enhance this.

The Business Process Canvas may be subdivided into vertical or horizontal coloured bands. These bands are referred to as *Swimlanes* and may be added at any stage of the design and their colours changed.

A coloured Swimlane identifies each department within the process. The benefits can easily be seen as in one model not only is the process identified but also the responsibilities within the process can be easily viewed.

To add existing Swimlanes to a model drag Organisation Units from the Palette onto the current Canvas. Right clicking on the Canvas and selecting *New, Swimlane* from the context menu creates a new Swimlane.

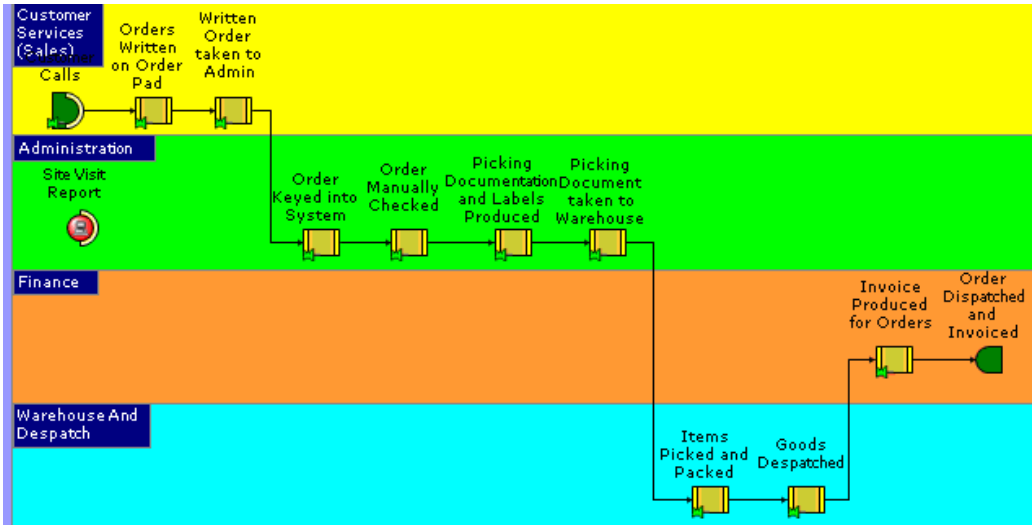
Exercise 7 – Overlay Organisation on AS - IS Model

To amend the BDT AS-IS model to include Organisation information

- From the Palette drag the parent BDT International Organisation Unit across to any point on the Business Process. The colour of the parent unit will flood the Canvas area.

- Move the mouse pointer on to the Swimlane tab (white label). Double click on it, or right click on the Swimlane and select *Expand*.
- Move the external activities so that they appear in the appropriate Swimlanes.
- Save process with a different name (use the *Save As* option off the *File* menu).

After following the exercise the Canvas should look something like…



Tip: Double click on the other tabs. This further explodes the Swimlanes to show the sub-categories.

Manipulating Swimlanes

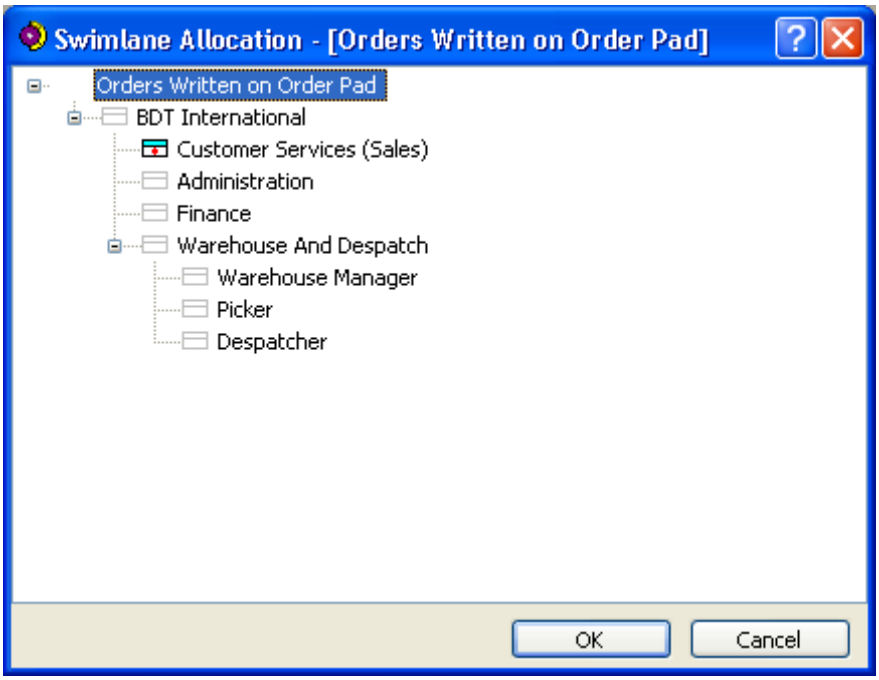
To remove an unwanted Swimlane, right click on the Canvas of a Swimlane and select *Delete* from its context sensitive menu.

Once Swimlanes are applied, they may be resized, moved and their caption and colour changed. To change the size of a Swimlane, grab the line between Swimlanes and drag it.

Items on the canvas may be pinned to a Swimlane by selecting the *Allocate* menu item from their context sensitive menus.

A pin appears beside the allocated item. When an item is allocated a De-allocate option appears on the menu so it can be removed

To make an item span multiple Swimlanes select the *Select* menu item from the same sub menu shown above. This opens a dialog where multiple Swimlanes may be selected.



Creating the To-Be Model

At this point it may be appropriate to utilise a reference model, such as the SCOR models, to help in process improvement.

Tip: You can find out more about SCOR models at http://www.supply-chain.org/resources/scor

The TO-BE model is software independent. It states how the organisation would like to function. Before creating the TO-BE model it is important to understand the organisations objectives.

BDT International's Objectives

Since BDT International deals mostly with a select number of customers in its day-to-day business it was agreed that the new system should aim to highlight these priority customers and to organise the distribution system so as to ensure the product is delivered as quickly as possible.

BDT International, in the past, has been prone to poor credit management of their customers, often leading to despatch of orders being delayed. To solve these problems it was decided that in future a new system should be proactive in alerting credit issues.

Simultaneously the status of the customer needs to be determined. For priority customers the picking notes should be produced, the items picked and packed immediately. For non-priority customers the picking notes production, picking and packing can occur hourly. The despatch of the goods and the production and issuing of invoices does not depend on the status of the customer.

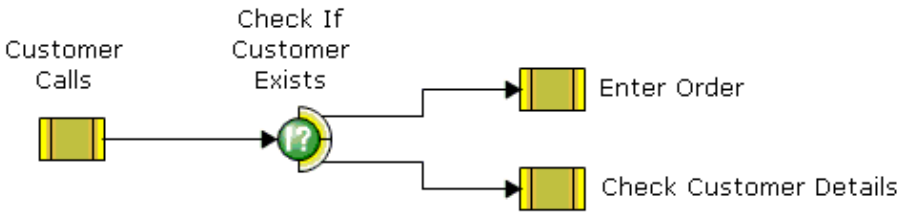
In addition, to improve the level of customer service the organisation would like to simultaneously inform the customer that their order is being processed once it has passed the credit check.

More Detail on Parallel Paths

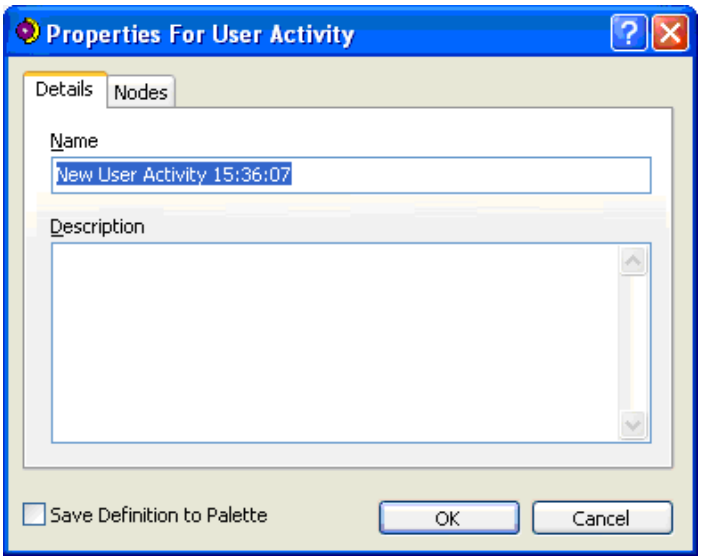
A Parallel Path supplies a way to connect one Exit Node to two or more Elements or Controls. This allows following two or more simultaneous paths in a Process that are not mutually exclusive. These should be labelled to describe the action to be taken next in the process.

More Details on User Activities

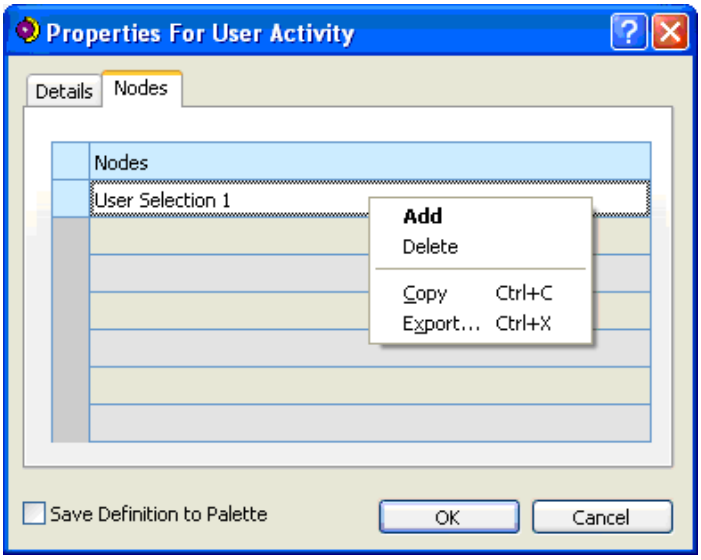
A User Activity may be used where a manual decision has to be made to take one of two or more mutually exclusive options.



Selecting *Properties* from the context sensitive menu opens the *Properties for User Activity* dialog. This contains two tabs. In the *Details* tab a *Name* for the Activity may be supplied.



In the Nodes tab, Exit Nodes may be added to the Control.



To enter a new Exit Node right click on the grid and select *Add* from the context sensitive menu. To remove an unwanted Exit Node, right click on it and select *Delete*.

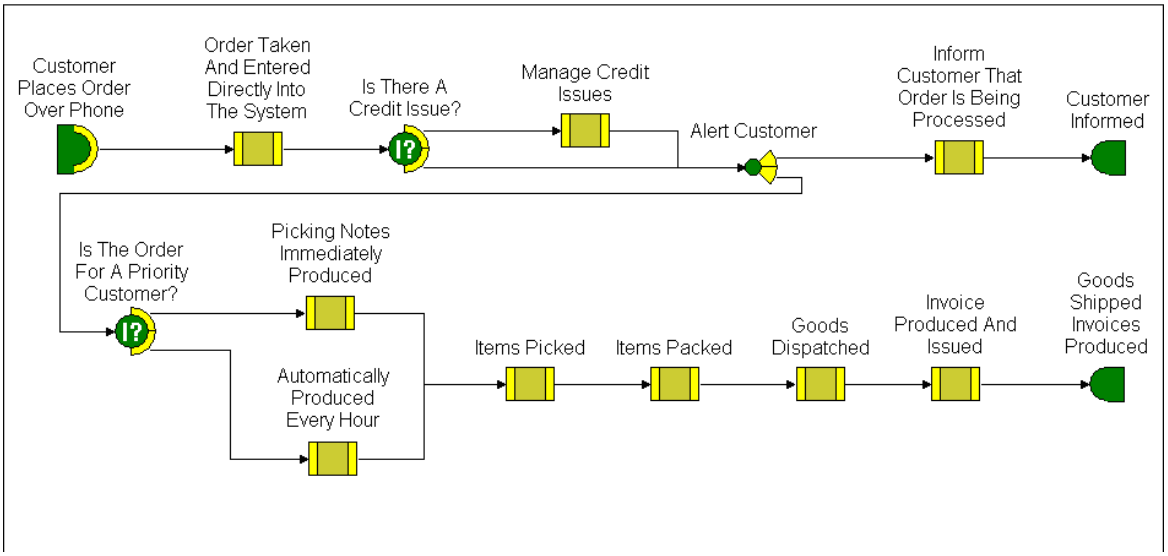
Exercise 8 – Create BDT International's TO-BE Model

Create a new Business Process called *BDT International TO-BE*. Amend the model so that it meets the following desired criteria:

The customer wishes to receive orders by phone that will be entered directly into the system. If there is a credit issue it should be dealt with immediately after the order is entered. When the order is accepted the customer should be notified and the process should continue. Then, for priority customers, the picking notes should be produced immediately before being picked and packed. For other customers the pick notes should be produced every hour. The goods should then be dispatched and an invoice produced.

Using Parallel paths, User Activities and External Activities create the TO-BE model based on the specified objectives.

After following the exercise the Canvas should look something like…



Software Model

The next phase in the modelling process is to take the Business Process model and convert it into a model that can be implemented with System21 Aurora. This is often the most time consuming phase of the process.

To do this the process designer must have a good understanding of System21 Aurora and what the System21 Aurora tasks in the associated business area can do.

Tip: Infor professional services can provide implementation assistance and training on how to build System21 Aurora WFi solutions. Contact your Infor representative for more information.

Creating the Software Model

The user may either take an existing Reference Model that matches their requirements and amend/remove the activities or create a new toolkit from scratch using knowledge of System21 Aurora to map activities correctly. The tutorial will follow the latter approach.

For the BDT International example the tasks can be mapped in the following way…

TO-BE Model Element	System21 Aurora Task
Order Taken And Entered Directly Into The System	Order Capture or Order Entry (Conversational)
Inform Customer That Order Is Being Processed	Order Acknowledgement
Manage Credit Issues	Suspended Order Release
Picking Notes Immediately Produced	Picking Notes (Immediate)
Automatically Produced Every Hour	Picking Notes (Batch)
Goods Dispatched	Confirmation Of Despatch
Invoice Produced And Issued	Print Invoices and Invoice Posting

Note: Infor provides the definitions for its tasks within the WFi Enabled Activities for Aurora product. To obtain these definitions, import the relevant WFi Modeler export file into the current Application Version.

Tip: When creating Software Models edit the Canvas properties and tick the box that says *Display Single Exit Node for Elemental Activities*. This allows the model to represent the direct data flow. Multiple exit paths are used within the Execution Model.

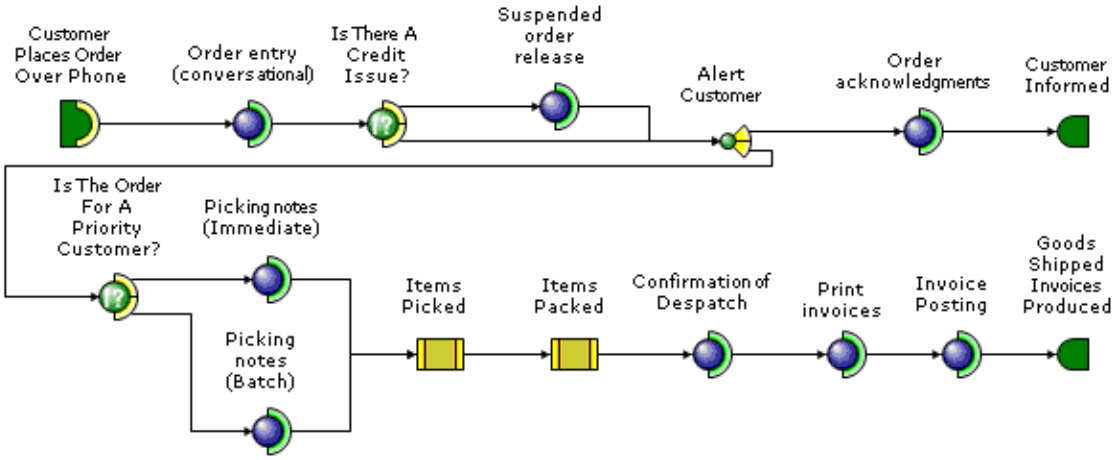
Exercise 9 – Create the Software Model

Create a copy of the TO-BE model and alter it to use the System21 Aurora activities defined in the table above.

Note: Picking Notes (Immediate) and Picking Notes (Batch) are the same System21 Aurora task (Picking Notes). This task can be run as an interactive job or as a batch program as we will see in the Execution Model.

For now just copy the Picking Notes task from the Palette to the Canvas and alter the name using the Format option off the right click context menu.

After following the exercise the Canvas should look something like…



Execution Model Concepts

The Execution Model is the final WFi solution that is applied to the WFi Engine, designed to proactively drive the Enterprise.

The WFi Engine

The WM Engine has the responsibility of moving things along a predetermined path. It does not start the whole proceeding. The enabled activity starts the proceeding by calling an API that writes a record to a data queue (using IBM WebSphere MQ Series). The Engine constantly checks for records that have been written to the data queue and if there is something present it reacts to it appropriately. Information concerning the status of the transaction is written to a file and this status is updated as the transaction (job) goes through different stages.

The Engine handles any subsequent transactions that may be required. A completion status on one transaction can act as a trigger to process a new pending transaction if one exists. The Engine schedules new activities by putting them in a queue for Automatic Execution or adding them to an Action List for user execution. The Engine supports parallel and serial execution of activities.

The term trigger is associated with the Engine. These are the data queue entries which twin with the transaction completion details file. Each one represents a completion code for a document type, which the engine detects and processes.

The WFi Scheduler

Transactions that need processing at particular times are posted to the WFi Scheduler. These are established and configured in WFi Modeler. The WFi Scheduler checks the time stamp on an activity and if it corresponds with the current time it will queue those tasks in its own subsystem.

The WFi Scheduler may be started and stopped from the Work Management menu in Application Manager or scheduled in Machine Manager.

The WFi Escalation/Delegation Processor

Activities that have not been completed by a User within a particular time range as set up through WFi Modeler will be escalated or delegated to another System21 Aurora User. An existing activity is given a higher priority on an existing Action List or is moved automatically onto another User's Action List. This is handled by this utility.

The WFi Escalation/Delegation Processor may be started and stopped from the Work Management menu in Application Manager or scheduled in Machine Manager.

Infor ERP System21 Processes

The Infor ERP System21 Processes are a series of standard Business Processes based over System21 Aurora that are developed by Infor. These are supplied on the WFi Enabled Activities for Aurora CD.

System i Workspace v2012

The System i Workspace v2012 is Infor's interface to System21 Aurora. From this users can carry out their daily tasks via a browser-based web interface.

System i Workspace v2012 presents the user with all the System21 Aurora tasks that they are authorised to along with informing them when the roles they are assigned to receive new Action List records.

Note: The WFi application must be installed on the IBM i that System i Workspace v2012 logs into for the Action List/Tracker functionality to be available.

Action Lists

An Action List is a set of activities assigned to a specific user or role. Day-to-day the System i Workspace v2012 user uses the content of the Action List to drive their activities.

Depending on the design of the Business Process, the Action List receives either Manual Activity messages (e.g. Phone customer to query order) or System21 Aurora tasks (e.g. Picking Notes).

Once the user has completed the action they can complete it via the Action List so that the Business Process proceeds as designed.

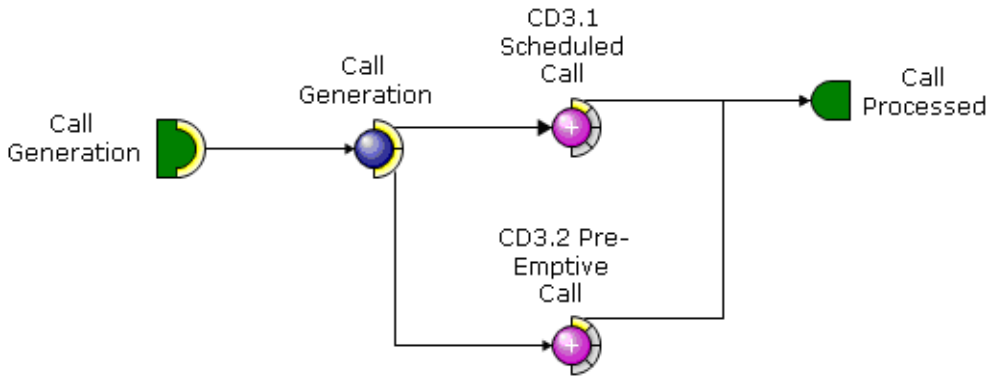
Action Tracker

The Action Tracker allows managers and administrators to check the flow of Business Processes within the system and respond to any delays or errors that may occur.

The information shown via the Action Tracker interface and the scope of the data search can be tailored.

Elemental Activities

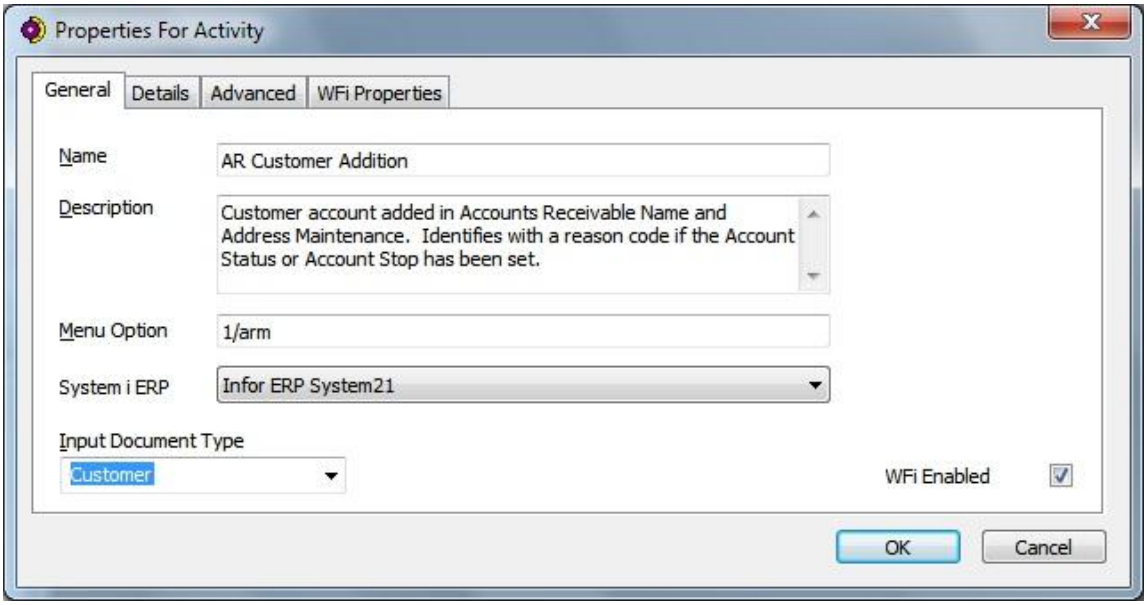
System i ERP programs, such as Advanced Order Entry, must be WFi Enabled in order to work under the control of the WFi Engine. Within WFi Modeler, System i ERP programs are known as *Elemental Activities*. Elemental Activities are represented in the Palette and on the Canvas by a blue circle with yellow halo, e.g.



All System i ERP activities that are defined within WFi Modeler have their own set of properties. You can see the properties of an Elemental Activity by selecting the Activities button within the tab and then double-clicking on any of the entries with a

Elemental Activity icon. The *Properties for Activity* dialog has four tabs. First is the *General* tab…

Properties for Activity – General Tab



Fields

Name

The name of this activity, as shown in the Palette.

Description

Text describing the function that this activity performs.

Menu Option

This denotes the shortcut used to launch the task using System Manager.

System i ERP

WFi Modeler supports multiple Infor System i ERP platforms. Use this feature to denote which ERP this task is associated with. The options are Infor ERP IDF, Infor ERP LX and Infor ERP System21.

Input Document Type

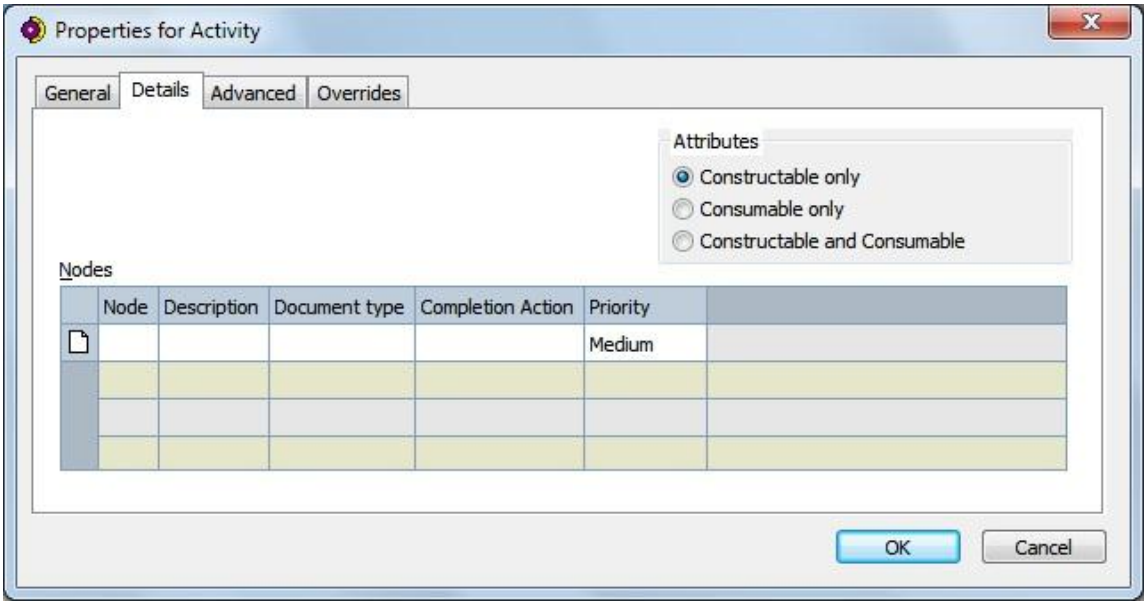
This field indicates what type of information the activity requires in order to execute. Activities that start a process such as Advanced Order Entry have an input document type of none, as they are the point when information is initially entered into the system.

WFi Enabled

Only when an activity is set as *WFi Enabled* will the *WFi Properties* tab be enabled.

Properties for Activity – Details Tab

The *Details* tab is used to define the exit routes for the activity. Right-click within the grid to access its context menu. Grid lines can be Added and Deleted.



Fields

Attributes

This group determines whether the element is to be a Constructable or a Consumable or both. System i ERP Activities should always be set Constructable only.

Nodes

In the *Nodes* grid enter the node details for the exit paths for this activity. Each exit path can be linked to other elements within the Business Process.

Node

This is the two-character alphanumeric completion code. The default is blank.

Description

Description of the node to be displayed as a tool tip.

Document Type

Valid Document Type name to be used by the node, for example Invoice.

Completion Action

This field can be safely ignored in most cases. Use this only to define special processing for the completion node.

(none) - no specific action to be taken and transaction completed.

1 - Cancel Transactions. This sets the Document Type to completed status and then cancels anything that is pending.

2 - Assign New Thread. This assigns a unique identifier to all the Document Types associated with this activity.

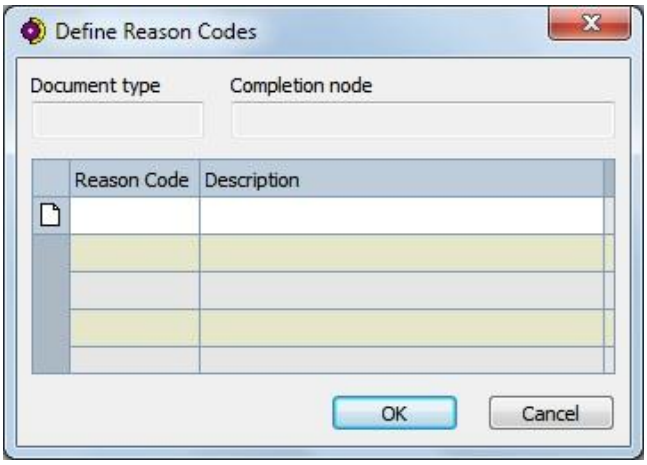
Priority

The priority value that the proceeding element will receive if sent to an Action List.

Note: At least one exit path needs to be specified for the Elemental Activity to be used within a Business Process

Right clicking on an entry within the Nodes grid displays a context menu that allows nodes to be added, deleted, copied, exported and, for existing nodes, the definition of Reason Codes.

Reason Codes are used to explain why a particular Elemental Activity has failed and should only be applied to exit routes that denote a failure (e.g. failed to create pick note). Selecting the *Reason Codes* option from the context menu, by right clicking within the desired exit node, displays a dialog that allows Reason Codes to be defined.



Fields

Reason Code

Each code must be a unique two-character value.

Note: The Reason Codes relate only to the Completion Code, within the Document Type, within the Activities exit node.

Note: The creation of Reason Codes should only be performed when the underlying System i activity has been altered to generate the Reason Codes at runtime, otherwise the data will never be used.

Description

This should be an appropriate reason why the error occurred.

Functions

OK

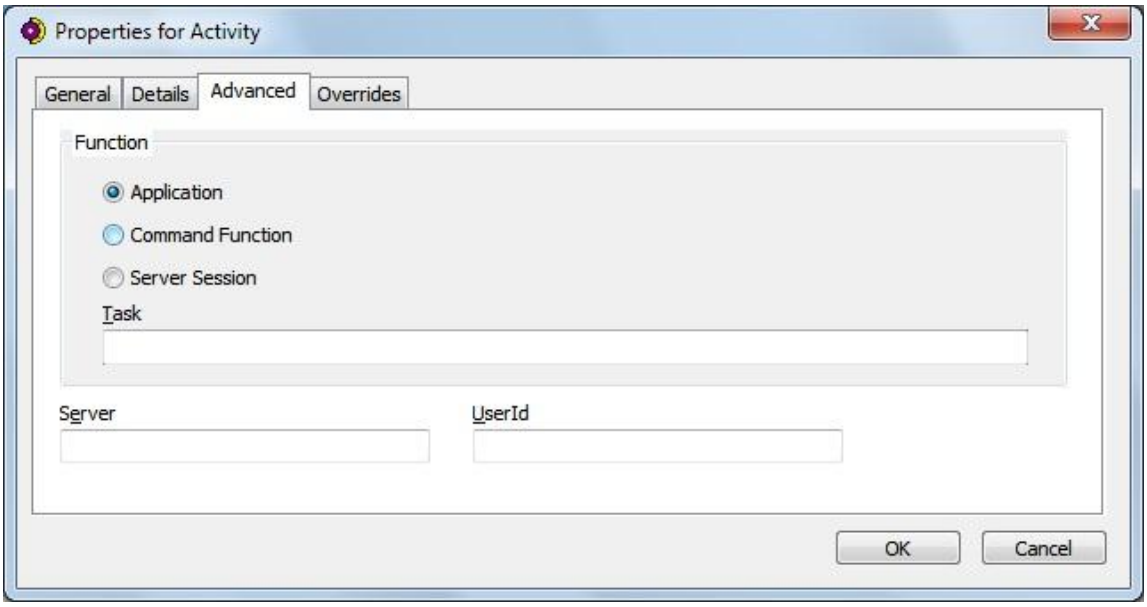
Selecting OK saves the changes and closes the dialog.

Cancel

Selecting Cancel closes the dialog without saving the changes.

Properties for Activity – Advanced Tab

The *Advanced* tab allows a System21 Aurora application AS/400 task code to be entered (in the *Task* field) and an optional *Server* and *UserId* may be set for Multi Server environments only.



Fields

Function

For an existing Activity, one of the following options will show the function type and cannot be changed. For a new Activity you can select one of the following function types that describe the activity.

Application

The function is a System i ERP application.

Command Function

When you select Command here, the Task entry line changes to Command for you to enter the command.

Server Session

Name of the OLE server or System i ERP activity to execute the process.

Note: This field is disabled if the element is WFi enabled.

Task

The System Manager task code for this application. You must enter this if you wish to use the Preview facility within a Business Process Walkthrough.

Server

The name of the server on which the activity is to be executed.

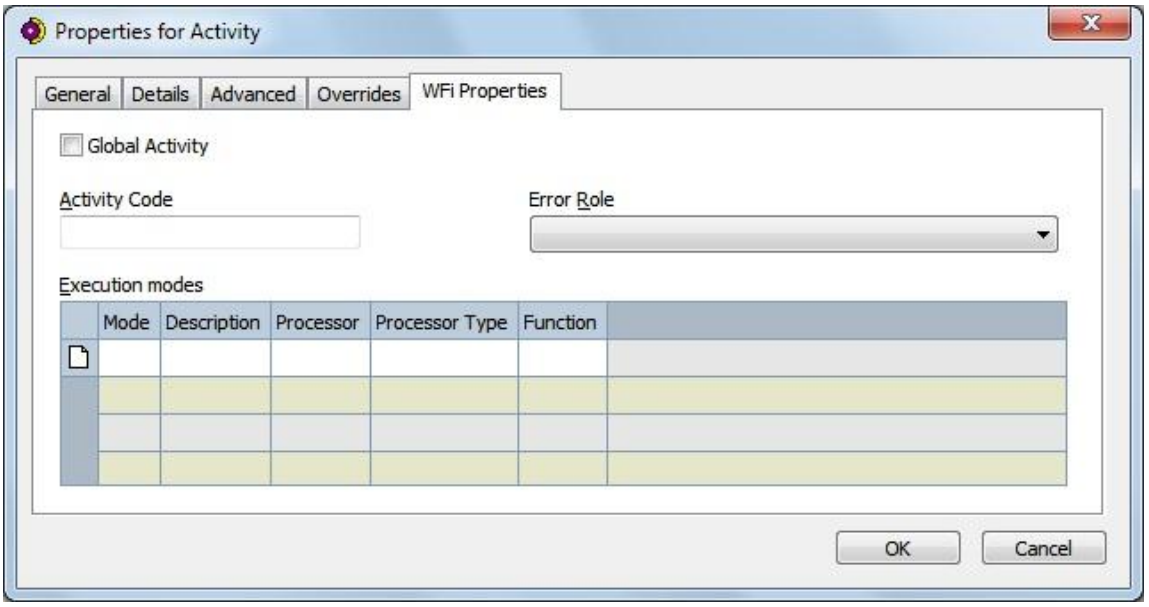
User Id

Valid user logon.

Properties for Activity – WFi Properties Tab

The WFi Properties tab is used where an Activity is to be uploaded as part of a Business Process.

Note: The WFi Properties Tab only becomes available when you check the WFi Enabled check-box in the General tab.



Fields

Global Activity

Set where the Activity should be available across all applications.

Activity Code

Mandatory and should be unique within the Application Version. Hardcoded within the System i ERP application program so the WFi Engine can associate this Activity with processes that use this Activity definition.

Error Role

The optional allows a role to be selected that receives notice of an error in the execution of the activity.

Execution Modes

The Execution Modes grid allows the definition of all Execution Modes supported by the activity. Execution Modes are added by selecting from the Pop-Up menu.

Mode

This is the two-character numeric Execution Mode. A valid mode must be selected from the menu.

Description

The Description cannot be changed.

Processor

The System Manager task code used to execute the task. This is an 11-character code with characters 1-2 denoting the *Application Identifier*, characters 3-5 denoting the *Environment Code*, characters 6-7 denoting the System i ERP *Release Level* and characters 8-11 denoting the *Task Code* as defined in System Manager.

Processor Type

This should always be set to TASK.

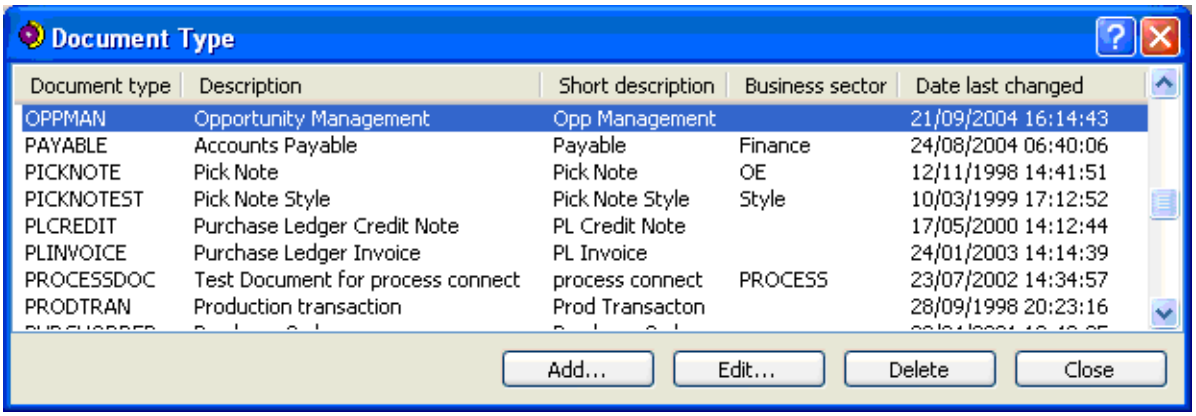
Function

Not used.

Document Types

Document Types are amalgamations of data fields that represent the flow of information in a process. A typical example might be a Sales Order; the information that is required for a Sales Order includes fields like Customer Name and Address. Activities are generally identified with Document Types.

Document types may be maintained within WFi Modeler by selecting the *Configure, Work Management, Document Types…* menu item.



Document Types may be added, edited or deleted. When Adding a Document Type a unique 10 character code must be entered in the Document Type field while an arbitrary description may be entered. This is only used for internal administration while the Short Description is generally what the user sees.

Within WFi Modeler, Document Types may have associated child Document Types. For example, a Sales Order Line document type can be associated to the Sales Order document type.

Execution Modes

Execution Modes are used to determine whether a server may be used to conduct an activity or whether that activity should involve human interaction. They also specify how the server should conduct that activity or who should be involved.

WFi Modeler comes packaged with five standard Execution Modes. These may be viewed through *Configure, Work Management, Execution Modes*. The standard execution modes may be edited here, or new modes may be added.

Note: New execution modes require bespoke modification to the WFi Engine.

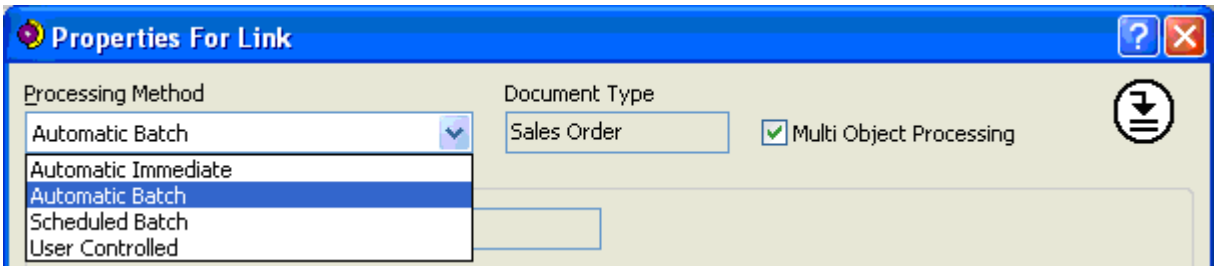
The shipped Execution Modes are:

Code	Description	Short Description	Multi-Object Process
10	User Invoked	User Invoked	No
20	Automatic Immediate	Auto Immediate	No
30	Automatic Batch	Auto Batch	Yes
40	Automatic Scheduled	Auto Scheduled	Yes
50	Externally Invoked Event	External Event	No

Note: Single object processing is designed around a job that processes one business object and is then complete.

Multi-object processing allows many business objects to be processed in one run of an activity. An activity that is about to be executed and has a multi-document attribute, will not be submitted for processing if there already is a job awaiting processing on the job queue for the exact same activity.

An execution mode may be assigned to a link by right clicking the link in WFi Modeler and choosing *Properties*.



Fields

Processing Method

Select one of the following:

User Invoked - User Invoked Execution Modes indicate that there must be some input by a User in the execution of the process. For example, an activity such as Advanced Order Entry requires a user to enter the order details so the server cannot execute it automatically.

Automatic Immediate - An Automatic Immediate Execution Mode indicates that the process will be executed automatically. The WFi Engine places this process into a job queue reserved for immediate processing. By default this job queue is generally QINTER in QGPL.

Automatic Batch - An Automatic Batch Execution Mode submits the job to a single thread job queue. The process will be executed in batch and is sent to the common batch queue for this purpose. The default shipped queue is QBATCH in QGPL.

Scheduled Batch - Using a Scheduled Batch Execution Mode the process will be processed automatically in batch format, but is scheduled to start at a specified time. Scheduled Batch is often used to print end of day/week reports. The WFi Engine passes all scheduled processes to the WFi Scheduler for handling.

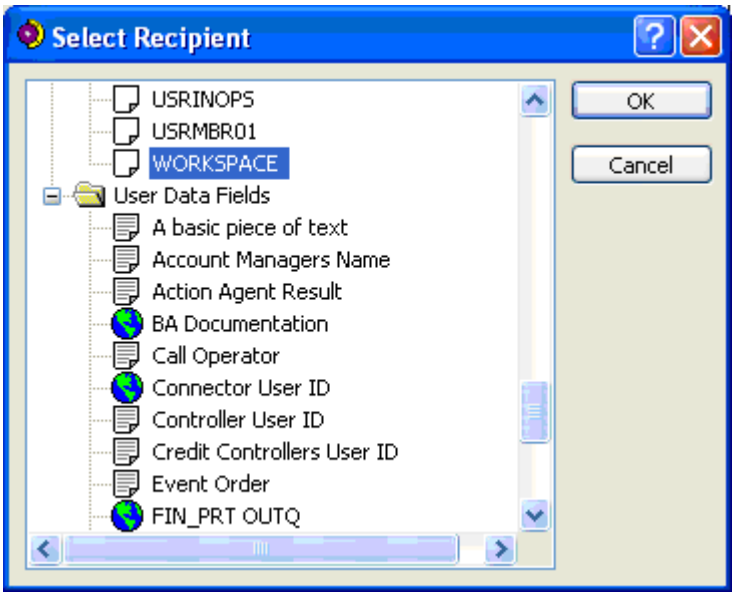
External Event - This Execution Mode is used by Event activities. It cannot be used by other activities. It is automatically used when an Event is inserted into a Business Process.

Note: The user may define custom Execution Modes but to use these within a live Business Process significant RPG bespoke work is required.

Contact your Infor representative to get an estimate of the development cost involved.

For the Automatic Immediate, Automatic Batch and Scheduled Batch execution modes any output or spool files that are produced by the Elemental Activity may be directed to a named user via the *Output Queue User* field.

Use the prompt facility to allow the recipient to be selected…



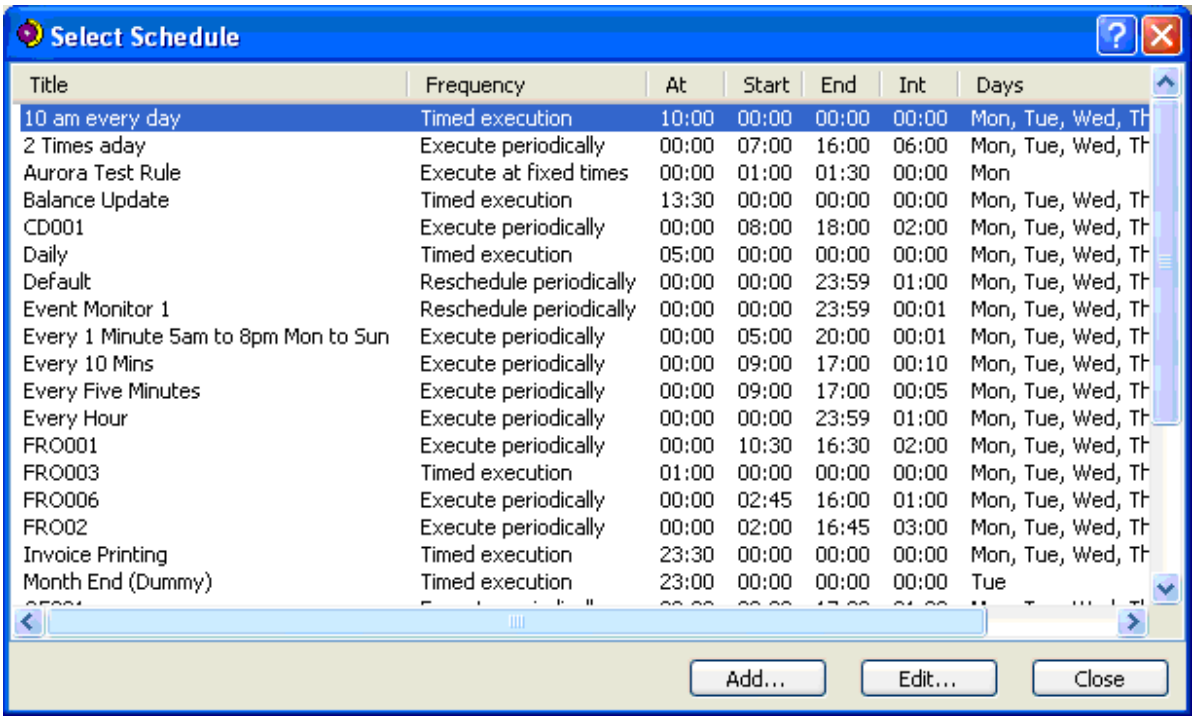
The user can be set to a System21 Aurora user profile code (retrieved from System21 Aurora Application Manager) or to the value retrieved via a Data Field (that has been defined as usable as a user field – see the *Introduction to Data Fields* section below for more information). Only Data Fields associated with the Business Object of the Elemental Activity will be displayed. A Data Field will be highlighted in red within the entry field.

Note: If left blank any output produced by the Elemental Activity will go to the output queue for the user that started the WFi Engine.

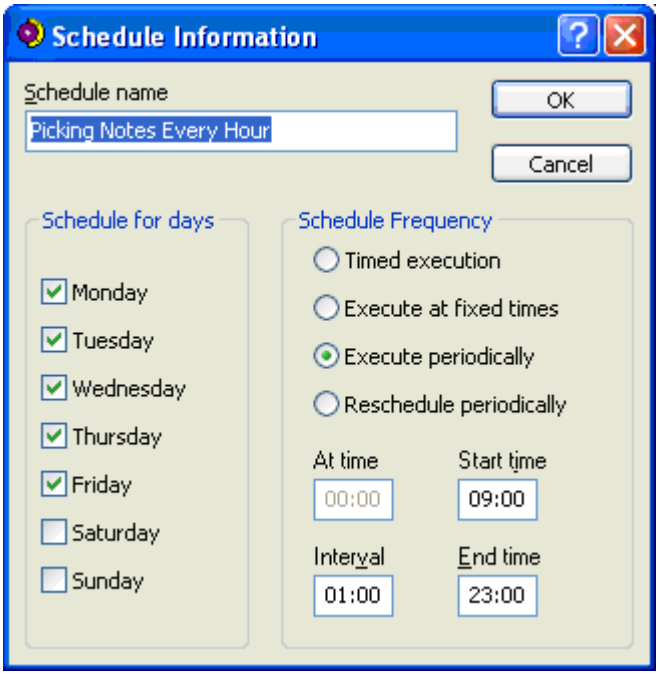
Schedule Rules

Schedule Rules, working with the WFi Scheduler on the IBM i server, identify when activities with a Scheduled Batch Execution Mode should be processed.

The Schedule rules in the current Application Version can be viewed and edited using the *Select Schedule* dialog launched from *Configure, Work Management, Schedule Rules* menu option.



When adding a schedule a Schedule name must be entered. Appropriate days may be selected and the frequency chosen.



Fields

Schedule Frequency

Select one of the following:

Timed Execution needs a precise *At Time* only and is used when a job should start at a fixed time on fixed days.

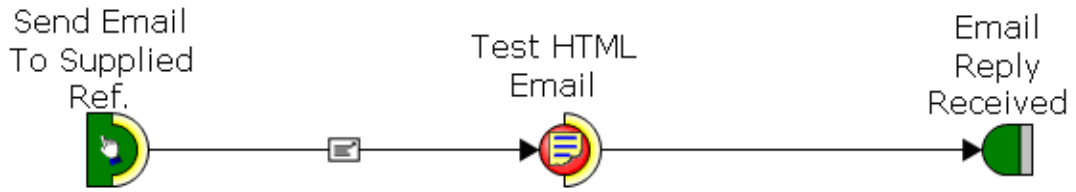
Execute at Fixed Times needs an *At Time*, *Start Time* and *End Time* and are used where a job should start at, for example, 15 minutes past the hour during the working day. Hence the Start Time would be 9:00, Stop Time would be 17:30 and the At Time would be 00:15.

Execute Periodically needs a *Start Time*, *End Time* and I and starts the job at fixed intervals during the day, possibly every 35 minutes between 9:00 and 17:30.

Reschedule Periodically needs an *Interval* only to tell WFi Modeler to delay the start of a job after it has been submitted to the system.

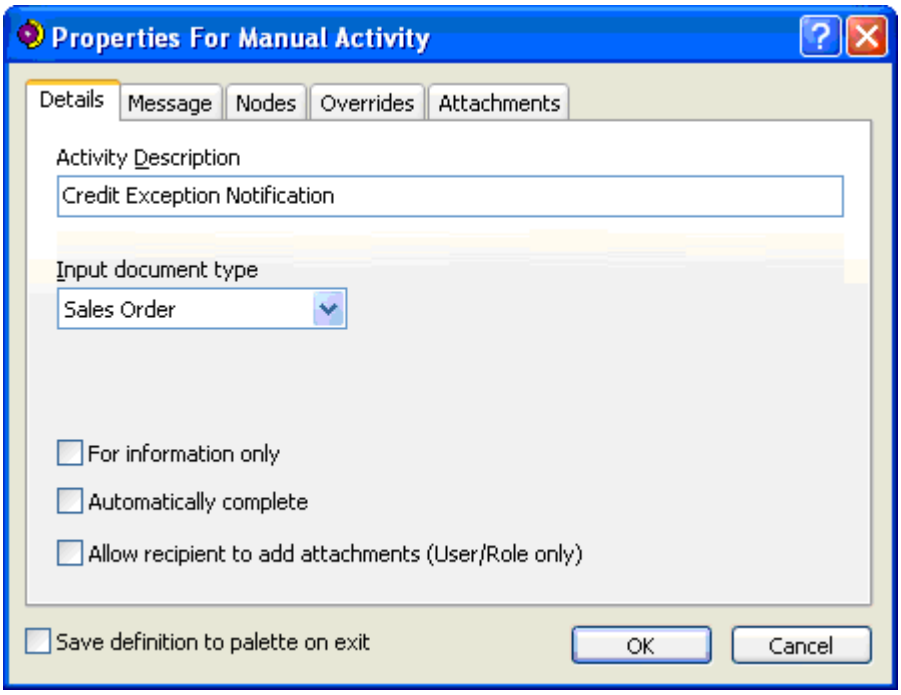
Manual Activities

A Manual Activity can be used to instruct relevant personnel of a task they must manually carry out. They are represented on the Palette and the Canvas by a “document” symbol, e.g.



Selecting the *Properties* context menu item opens the *Properties For Manual Activity* dialog. The dialog contains four tabs.

In the *Details* tab the caption of the label associated with the Control may be entered in the *Activity Description* field.



Fields

Input Document Type

Select from the available list of Document Types.

For information only

Check this box if this activity is to be an Informational Manual Activity only. When the Manual Activity appears in the user's Action List the user will see only the Title. The user will be able to progress the activity without opening it up. However, in order for this to happen there must be only one exit node defined on the Properties For Manual Activity Nodes Tab.

Automatically Complete

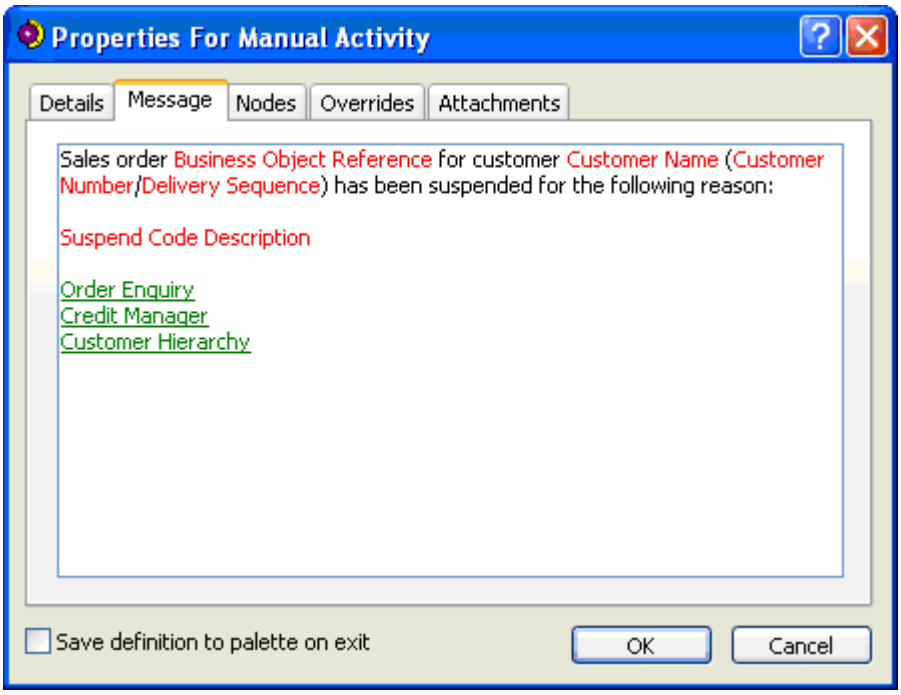
This option is for messages that are part of the process flow but do not need a user-interaction before proceeding.

Allow recipient to add attachments

Check this box if you want to allow Action List recipients of this message to be able to add ad-hoc attachments to this message.

The *Message* tab is where the information sent to the user is defined. These messages can contain a combination of static and variable information as well as links to appropriate software applications and tasks that may need to be carried out.

Standard text may be typed into the Message field on the Message tab and appears in black text.



Variable Data may also be included in the message to supply the recipient with more information concerning the pending activity. Information such as the Customer's Name or Account Status is common information used. Variable data is entered in the form of *Data Fields*. Inserted Data Fields appear as *red* text in the message.

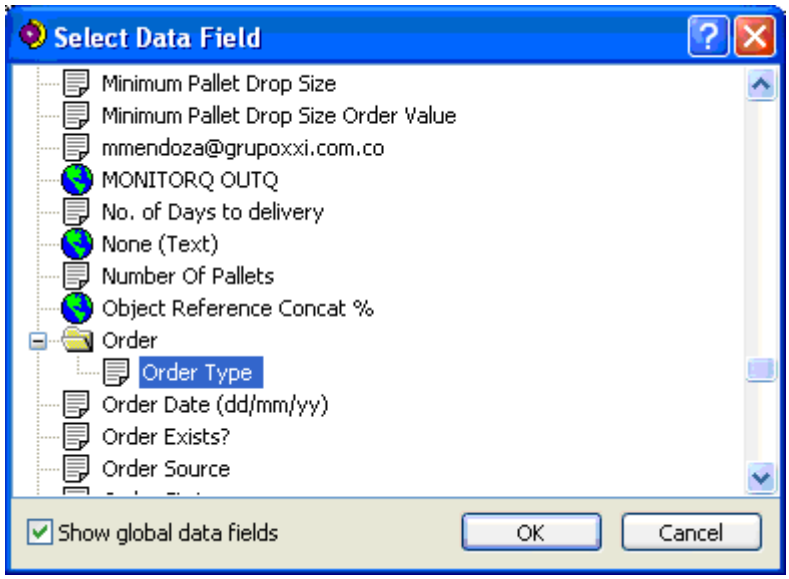
Introduction to Data Fields

To enter Data Fields right click in the Message field and choose *Insert Data Field*.

Data Fields are variables used by WFi Modeler to extract relevant data from the System21 Aurora database. Data fields can be defined in multiple formats including SQL Data Fields, Programmatic Data Fields and Text Data Fields. SQL Data Fields represents data extracted directly from the databases. Programmatic Data Fields, on the other hand, hold the result of a calculation. Data Fields are not shipped with WFi Modeler but may be imported into the Design Time Database by importing them as part of a Business Process.

By default only those Data Fields directly related to the input Document Type are shown, But Global Data Fields may also be used are shown be selecting the *Show global data fields* check box. Relevant Data Fields may then be selected as appropriate.

Global Data Fields are those that are available to every process, regardless of the Document Type being used. They represent process critical data such as the unique process and activity numbers, current System21 Aurora Company and Business Object.



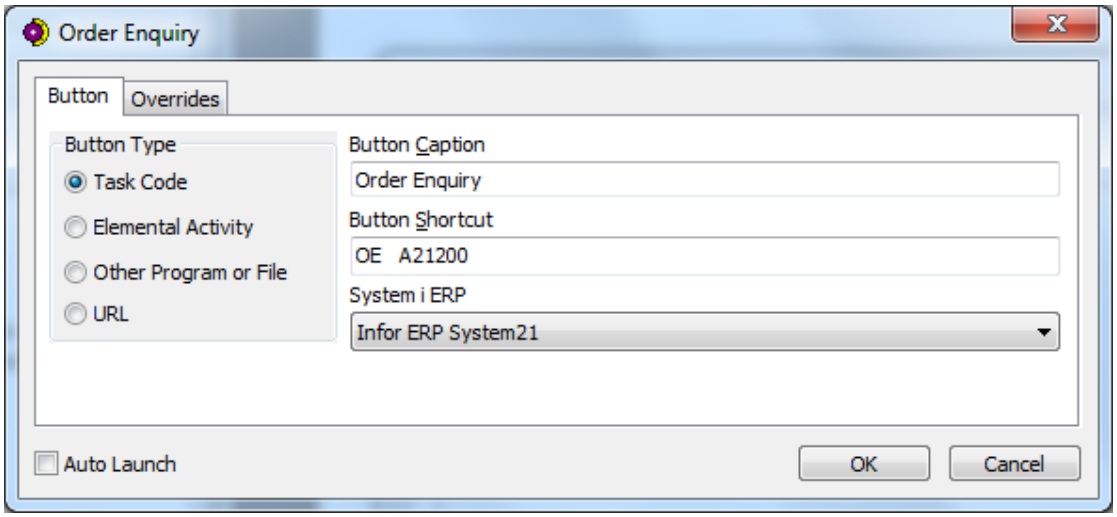
Each document that goes through a Business Process can be assigned a unique reference number, for example a sales order is given a unique sales order number. The Global Data Field used to determine this reference number is the *Business Object Reference.*

When using Child document types, the *Level Reference Data Fields* may be used. *Level Reference 1* contains the business object reference number for the parent Document Type e.g. the sales order number, while *Level Reference 2* contains the business reference number for the first child level e.g. the sales order line number.

Manual Activity Message Buttons

Buttons are entered by selecting *Insert Button* from the Message context menu.

To assist the recipient in determining the next course of action, or just as a way of providing more information, Buttons may be added to the Manual Activity message as shortcuts to Infor System i ERP activities (applications), URL's or PC applications/files. Buttons appear on the Message field in blue text.



Fields

Button tab

Button Type

A System i ERP activity can be defined using the Task Code or Elemental Activity options on the Select Button window. A PC application can be defined when the Other Program or File option is selected. Internet URL's can be defined when the URL option is selected.

Button Caption

This must be specified. This value appears in the message as a link for the user to select.

Button Shortcut

This contains a link to the relevant activity/application/URL.

Use the prompt facility to select a pre-defined Elemental Activity in the current Application Version when a Button Type of Elemental Activity is selected.

Use the prompt facility to locate an executable program or file on your system when a Button Type of Other Program or File is selected.

Use the prompt facility to set a Data Field when a Button Type of URL is selected (the value of the data field will be resolved at runtime to form the URL).

System i ERP

Note: This option is only available when the Button Type is set to either Task Code or Elemental Activity.

The Infor System i ERP associated with this button. Supported values are Infor ERP LX, Infor ERP IDF and Infor ERP System21. If the Button Type is set to Task Code, where you can manually enter the Button Shortcut, you will be able to select the System i ERP from the drop down list appropriate for the application code. If the Button Type is set to Elemental Activity, then the System i ERP type is read from the pre-defined Elemental Activity within the current Application Version and the list box is set to read-only.

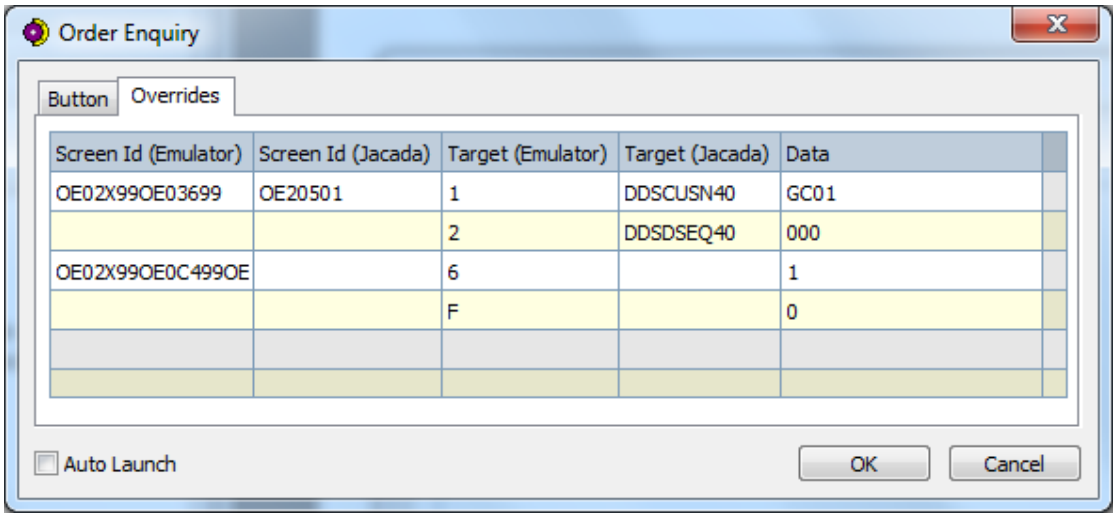
Auto Launch

When launching Manual Activities, there are cases where an activity will almost always be launched from it. With the Auto Launch option, the selected task is run automatically when the message is viewed.

Overrides tab

The Overrides tab allows the user to pre-fill fields within Infor ERP System21 Aurora tasks launched from buttons with process specific data.

Note: This option is only available when the Button Type is set to either Task Code or Elemental Activity.



The Grid within the Overrides tab changes dependant on the selected System i ERP in the Button tab. For Infor ERP System21, the columns will be...

Column Name	Description
Screed Id (Emulator)	Enter a System i Workspace v2012 Emulator Magic Number value.
Screen Id (Jacada)	Enter the Jacada Panel name.
Target (Emulator)	Enter the index of the System i Workspace v2012 Emulator field.
Target (Jacada)	Enter the Jacada Field name.
Data	Either manually enter a hard-coded value to put into the field or use the prompt button to select from a list of WFi Data Fields valid for the current Business Object.

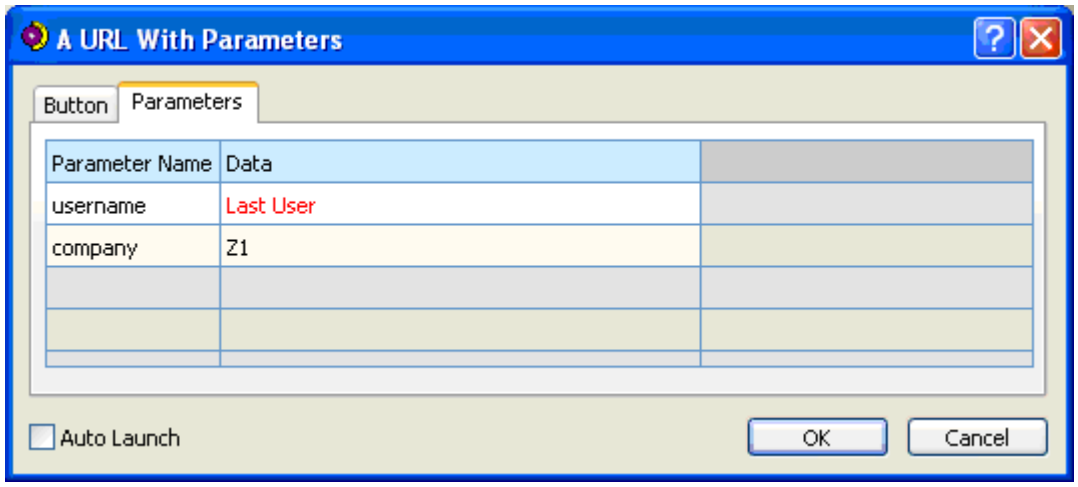
Tip: If you wish to automate a Jacada override, you can set the Target (Jacada) to CMDOK or CMDCAN to press Enter or F3 respectively, and set the Data field to 1.

Tip: If you wish to automate a Emulator override, you can set the Target (Emulator) field to F and then set the Data to 0 to press Enter or set to 1 – 24 to press that appropriate function key on the selected screen ID.

Tip: If you set the Screen Id (Emulator or Jacada) to blank then the override will be applied to the 1st screen displayed to the user.

The *Parameters* tab allows the user to set parameters that will be passed as part of a URL.

Note: This option is only available when the Button Type is set to URL.



The grid lists all the user defined parameters. Use the right click context menu to add new entries.

Fields

Parameter Name

The parameter name. Text only.

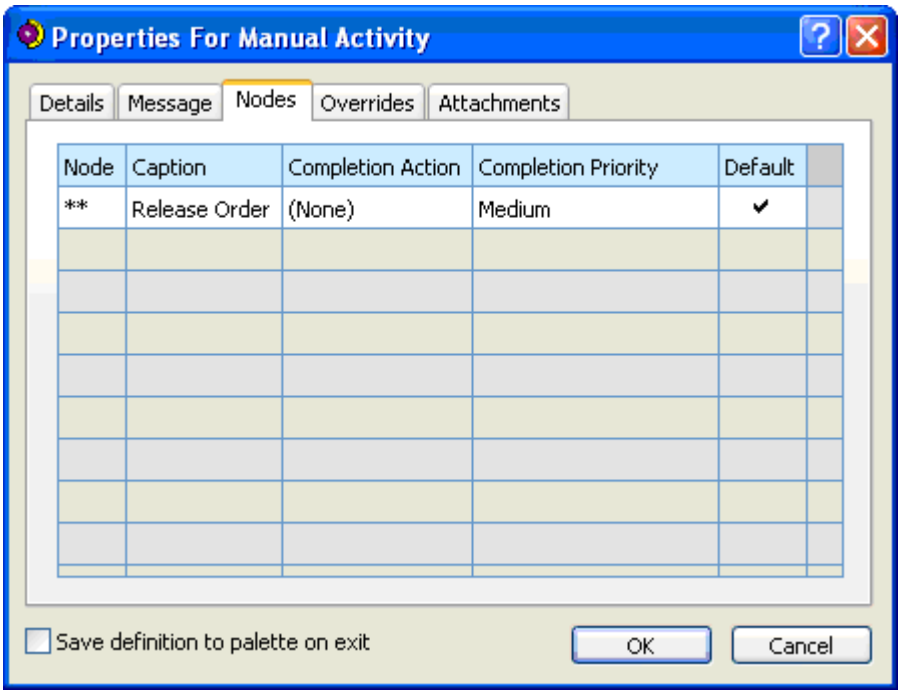
Data

The value of the parameter. Can be text or a data field selected from the drop down list.

Note: Parameter names may be case sensitive.

More Manual Activity Properties

The *Nodes* tab allows the completion nodes (routes) for the Manual Activity to be defined. By default there is one Node: OK. This may be changed as appropriate.



Fields

Node

A two-character completion code. Must be unique within this Manual Activity.

Caption

The text shown to the Manual Activity recipient.

Completion Action

This can be left as (None) in most cases. However, it can be set to the following actions:

Cancel Transactions - sets the Document Type's status to complete and cancels all pending transactions

Assign New Thread - generates a new multi-thread identifier value for subsequent activities within this process.

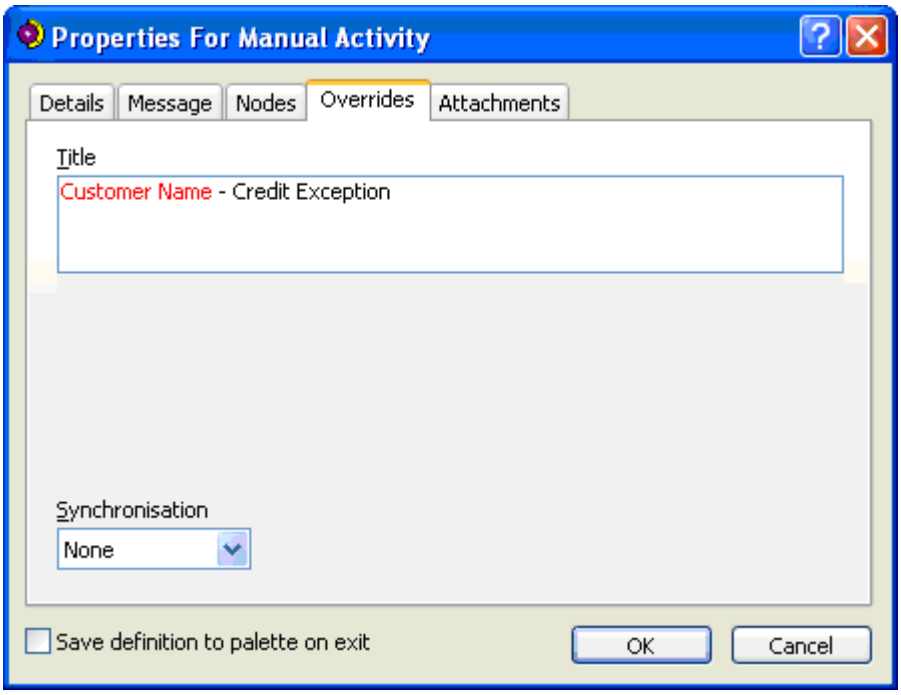
Completion Priority

The priority value that the proceeding element will receive if sent to an Action List.

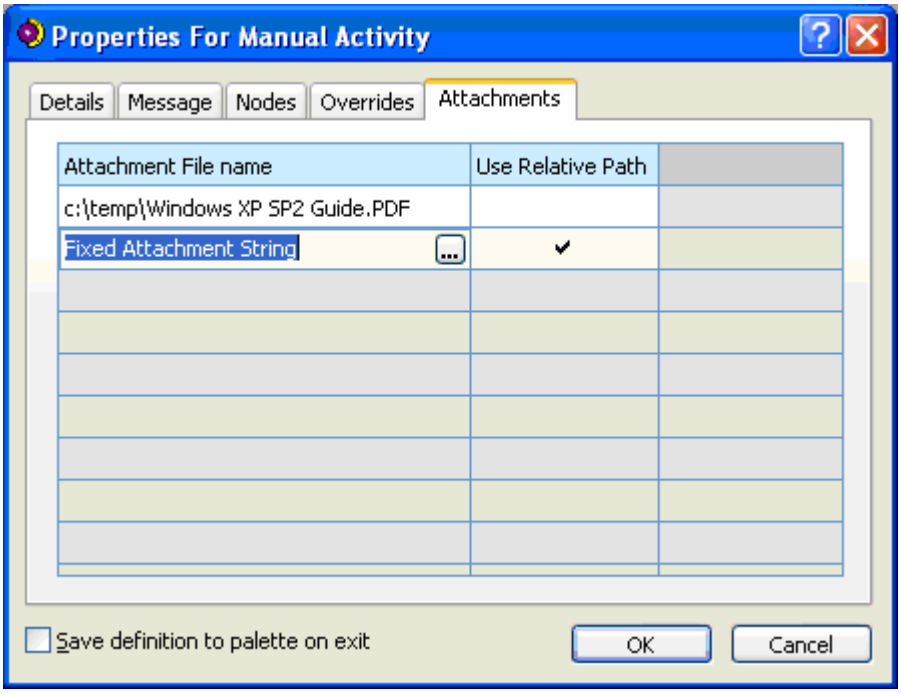
Default

One of the completion nodes can be checked to be the default exit route. This is used when an Activity is auto-completed using Action List/Tracker.

The *Overrides* tab on the Manual Activity Properties Window can be used to create a title for the message. Like the actual message both static and variable data can be used but buttons cannot be used.



The *Attachments* tab on the Manual Activity Properties Window allows the user to design attachments that will be associated with this message. These type of attachments are “fixed” in that they are files that are “designed into” the process. Fixed attachments are directly associated with a Manual Activity and cannot be removed or altered at runtime.



Fields

Attachment File Name

This can be either a fixed text value or a Data Field.

Use the prompt facility to select an appropriate Data Field for the current Manual Activity Document. When using a Data Field, the field content is highlighted in red.

Use Relative Path

This defines whether the Attachment File Name is an absolute path or whether it is a partial path that, when appended to a root path, will locate the file. The base root path is configurable within the application that renders the message (E.g. System i Workspace, Email Writer).

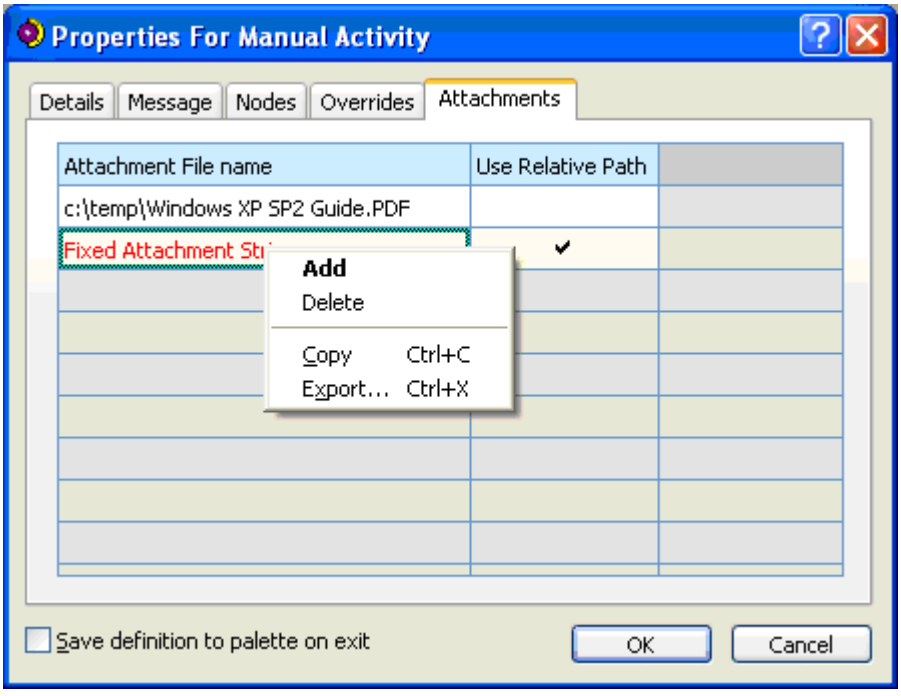
Options

Add

Select Add to add attachment definitions within the table.

Delete

Select Delete to delete attachment definitions within the table.



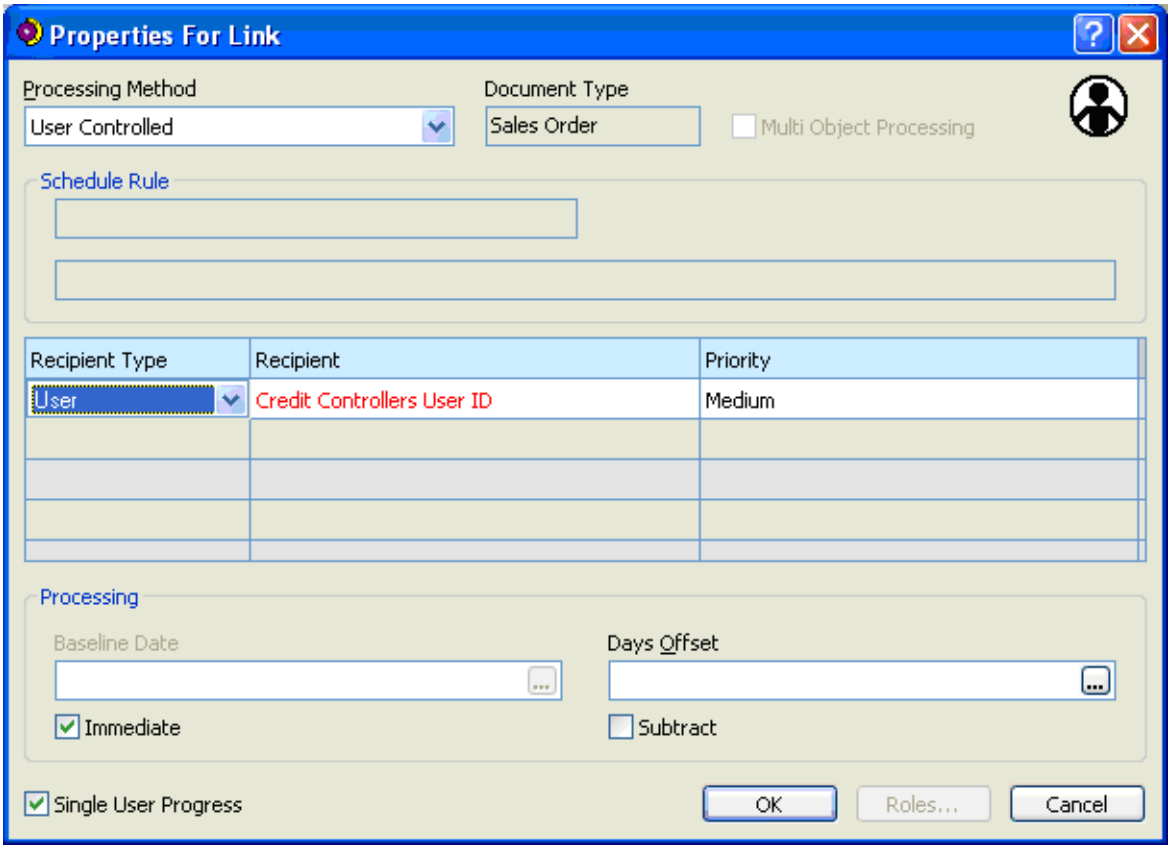
Attachments appended in this way are defined as being part of the message (their content is part of the Manual Activity XML message definition). When displayed, via System i Workspace v2012, they are shown as links for the recipient to open/view. When dispatched, via Email, they are attached to the outgoing message.

Attachments can be added to both text and HTML email messages. The attachment file path can be either a valid UNC (e.g. c:\mypc\myfiles\myfile.txt, \\myserver\mydir \myfile.doc) or a URL (e.g. http://www.infor.com/banner.gif).

Executing Manual Activities

Manual Activities must be executed by the User Invoked Execution mode.

Right clicking on the path into the Manual Activity and selecting the *Properties* option displays the dialog that allows the definition of the recipient(s) of the link.



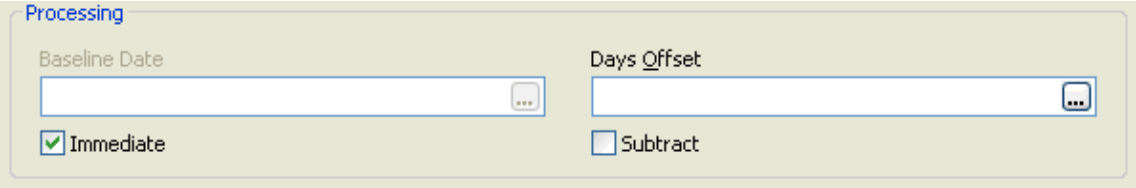
There are three ways that the appropriate person may be notified; by Email, by User name or by Role type.

Note: The message data may also be sent to an IBM WebSphere MQ Series queue but this is more applicable to XML Activities.

Selecting the Recipient Type from the grid and subsequently selecting the Recipient and Priority determine these modes.

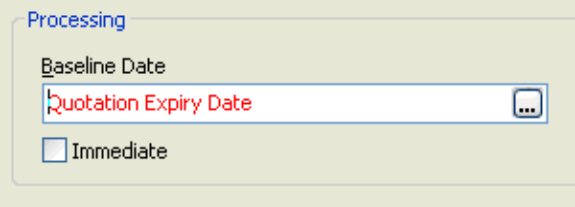
Icon	Recipient Type	Description
	User	The User type allows an activity to be directed to a specific System21 Aurora User's Action List.
	Role	The Role type allows an activity to be placed in the Action List of all members of a certain role. This may involve multiple Users or, where there is only a single member within a role, a single User.
	Email	The Email Recipient Type allows an Email to be sent to a specified User's PC. The format of the email should include information about the problem and may contain links to the appropriate actions. WFi supports both Text and HTML based email formats which can be selected at this point. The email reader dispatches the email.
	Multi-Type	If there is more than one row of details entered in the grid, the symbol changes to the one resembling that shown. The symbol indicates how many entries appear in the grid, irrespective of the Recipient Types specified. Should an activity be sent to multiple recipients the execution mode is set by default to be a Single User Progress, i.e. one recipient completing an activity is enough to let the Business Process continue.

An activity that is assigned to a person, by default, will appear in that person's Action List/Mail account as soon as the previous activity is completed. Should, for example, a customer require an order to be delivered sometime in the future that activity may lay dormant in the action list for some time before it is relevant. By using the Processing group box an activity can be assigned to the person after a certain date.



By Default each activity is assigned to the recipient immediately. By un-checking the immediate check box the *Baseline Date* and *Days Offset* fields become available.

A *Baseline Date* may be chosen by using the prompt facility, a Global date Data Field or one associated to the appropriate Document Type may be selected. This date may be selected as a reference point for the completion of the activity. The activity may actually be placed in the relevant action list a number of days prior to or after the Baseline Date. This is achieved by using the Days Offset field combined with the subtract option.



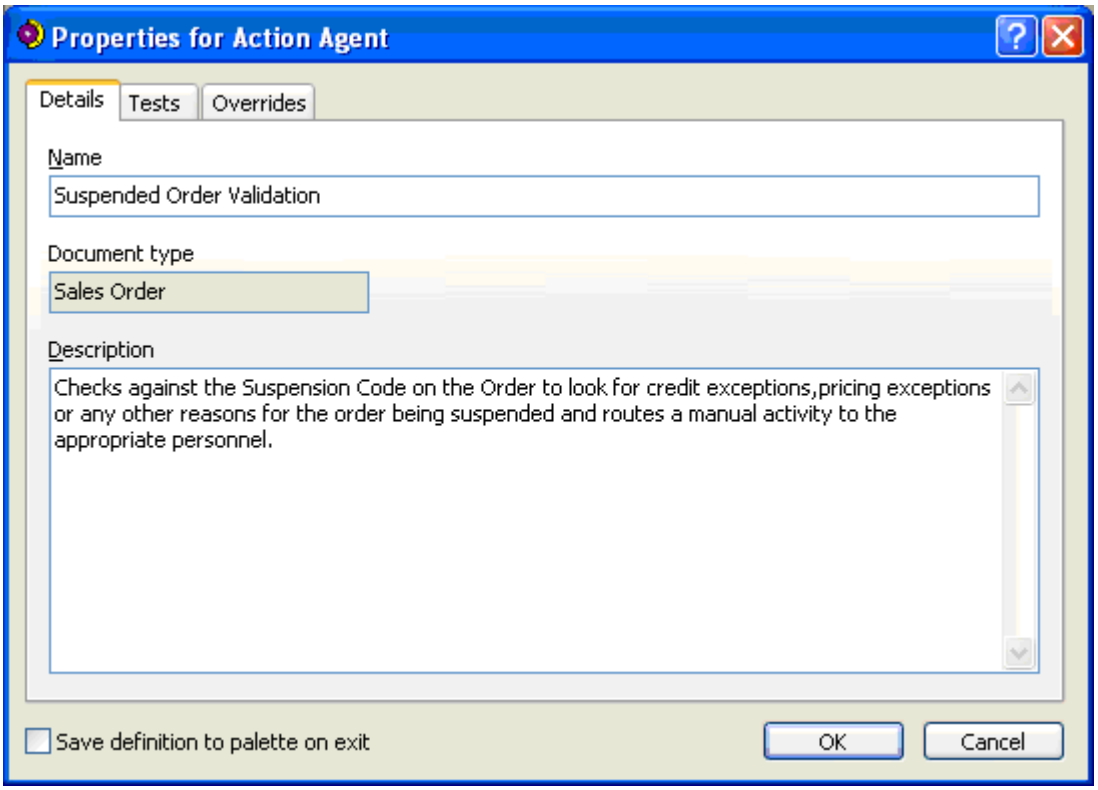
Informational Manual Activities

A setting against the Manual Activity in WFi Modeler allows simpler messages to be deleted directly from the Action List, without a requirement to be opened and completed (as with Manual Activities). Typically, the content of these messages are held in the Title Override and hence appear in Action List.

A message such as 'Your Employee xxxx has authorised this purchase order - xxxx' is an information message for say, the manager of that employee. The manager could open the manual activity as normal for further information, but most of the time, would accept that the employee has simply completed a task he was assigned and can simply complete the message.

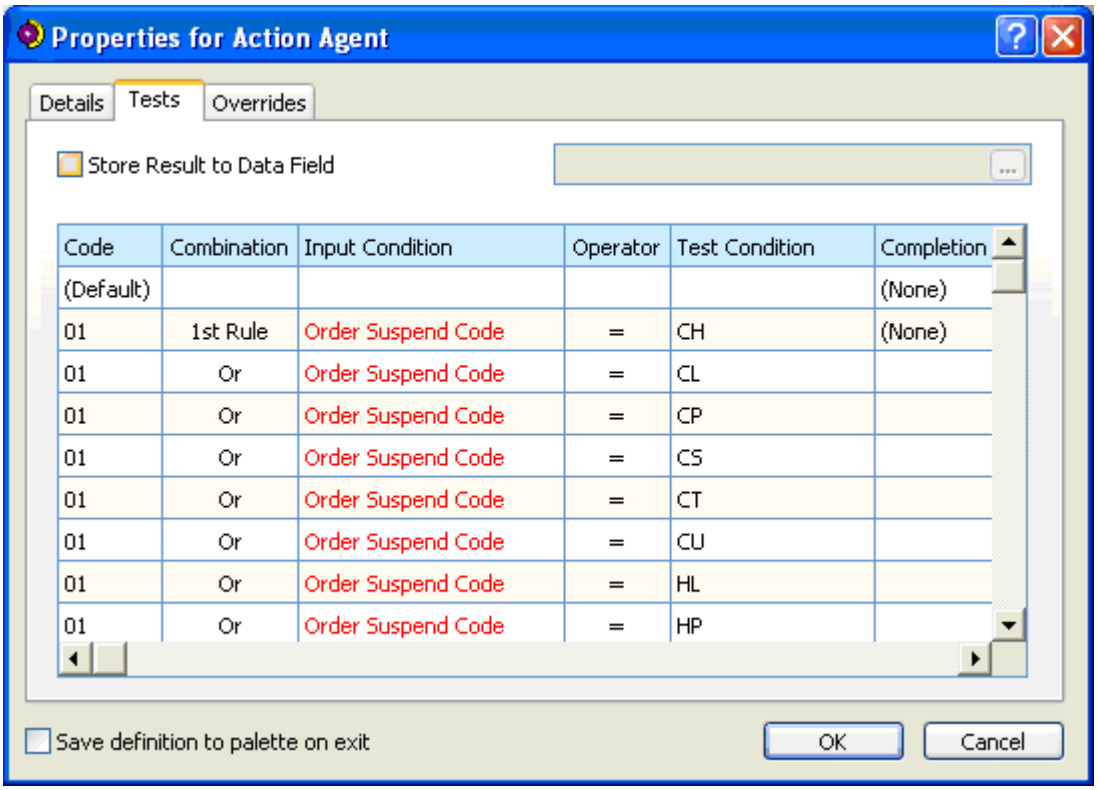
Action Agents

In addition to Manual Activities, *Action Agents* provide much of the benefits of WFi. They are used to perform exception testing within a process.



Action Agents inherit Data Fields for evaluation via the Document Types of the previous activity. Each Action Agent must have a name and an optional description. Action agents can also be saved to the palette so that they can be used in other Business Processes.

As long as there is a Document Type associated with the Action agent the Tests panel can allow rules to be set that shall determine the flow of the process. This is performed through the Tests grid where rules can be added via the Pop-Up menu.



Fields

Code

This represents the value of the exit node.

Combination

Specifies whether an evaluation is the first line of a rule for an exit node (1st Rule) or is a continuation of the rule (using And or Or).

Input Condition

Values can be static (alphanumeric strings) or variable (Data Fields) data

Operator

This is a logical operator used to compare the input and test conditions.

Test Condition

Values can be static (alphanumeric strings) or variable (Data Fields) data

Completion Action

This allows the user to force the exit node to use a new thread (think of it as treating subsequent activities as a new process), to terminate the process, or to carry on as normal (recommended default).

Display Name

This forms the ToolTip of the node when viewed from the Canvas (and will be shown as the completion description at runtime).

Overrides tab

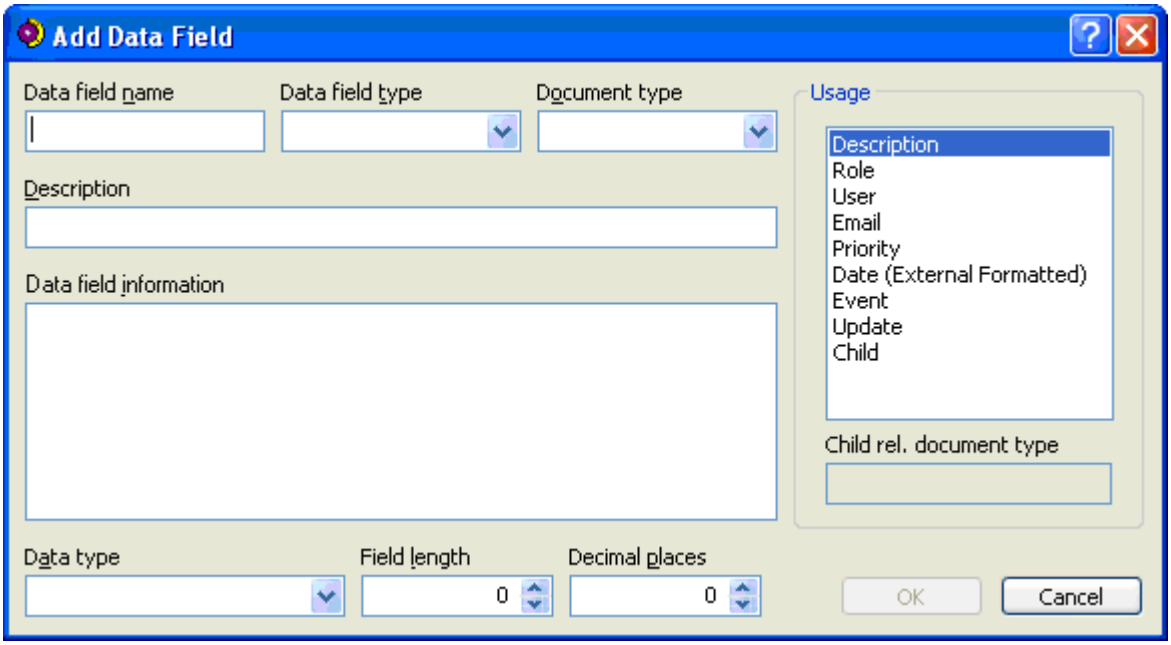
The *Overrides* tab is similar to that for the Manual Activity.

If the *Store Result to Data Field* check box is checked, the edit field to its right will become enabled. This option allows you to select a Stored Data Field to save the result to (see the Stored Data Fields chapter in the Advanced Features section below for further information).

Creating a New Data Field

A Data Field may be added selecting **Add**.

Document Types are only shown where they have associated Data Fields.



Fields

Data Field Name

This field value is arbitrary. The maximum character length is 19 characters for a Document Type of Global and 20 characters for any other Document Type.

Note: This field is disabled if you create a new child relationship

Note: If the Document Type is Global, the Data Field Name must not start with ERR.

Data Field Type

For Infor ERP System21, the type should be set to one of the following:

Text - Data Fields are any literal text

SQL - Data Fields are evaluated using an SQL statement

Programmatic - Data Fields need an associated RPG program

Stored – Stored Data Fields are used in Action Agents and Manual Activity Edit Fields and store the result of the valid condition/user entry.

Group Update – For creating a combination of two or more Update Data Fields and Paired Updates that occur at the same time

Paired Update – For creating a combination of two Update Data Fields that occur at the same time

Note: Programmatic, Paired and Group Data Fields should be added by experienced users only.

Document Type

A designer should also choose a Document Type to which the Data Field is associated. The Data Field can only be used in Controls that are of the same Document Type.

Description

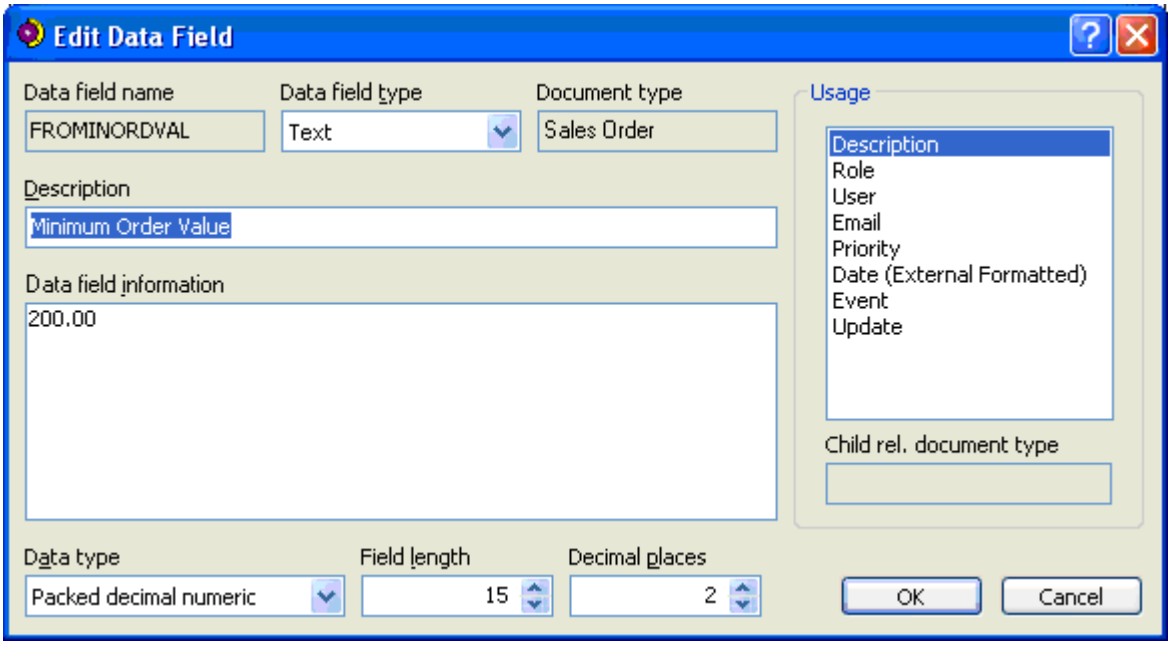
This field can be used to assign the Data Fields into directory structures by inserting backslashes into the data field names, for example Customer\Contact\Customer Name. The result of this is apparent when the designer of a Business Process needs to use specific Data Fields.

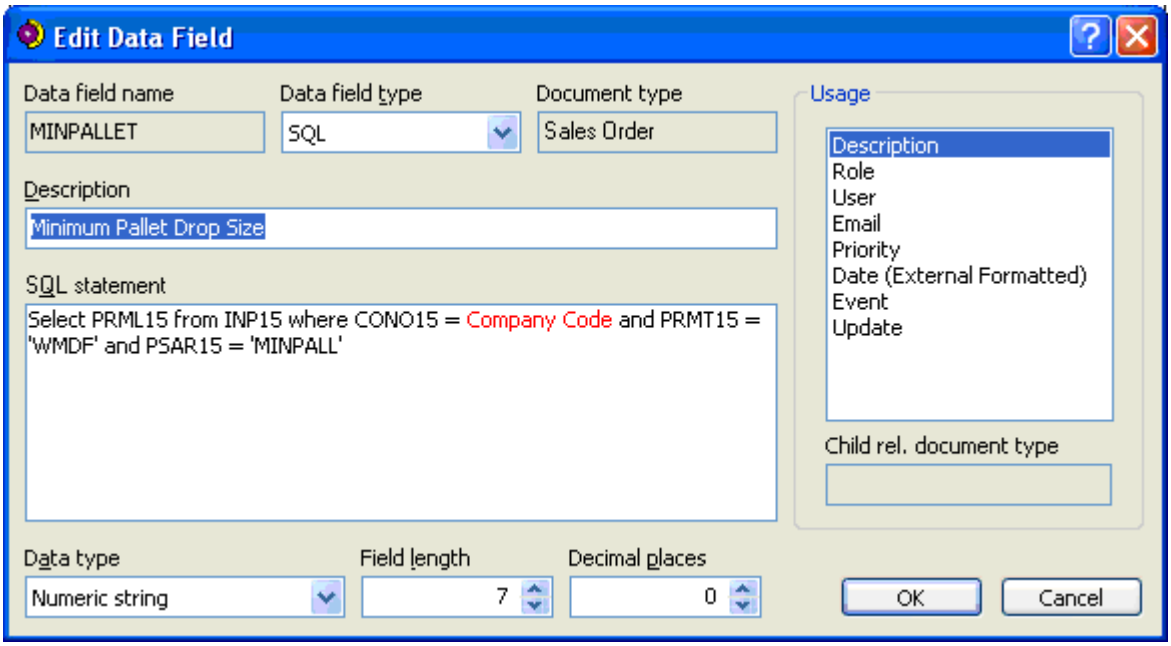
Usage

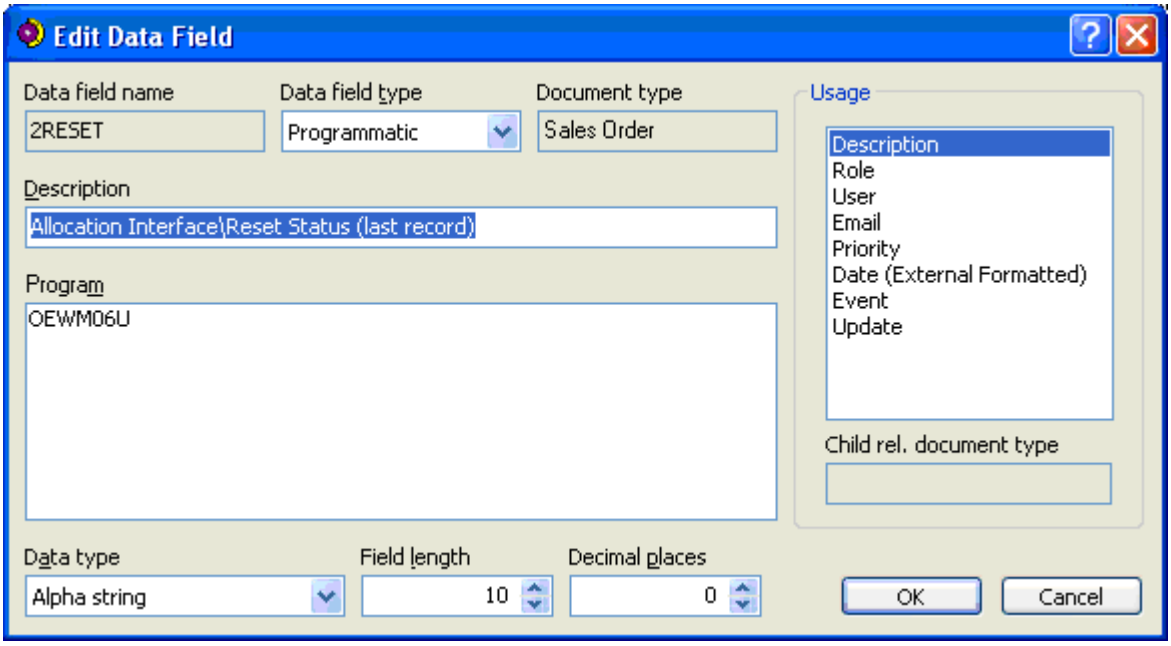
This limits the scope of the Data Field as to where the Data Field may be used. A minimum of one item in the list must be selected, but more may be selected as appropriate.

Data Field Information

Depending on the Data Field Type, the main input field on the window may be SQL Statement, Data Field Information or Program. The *Data Field Information* may be used to enter literal text, while the SQL Statement field is used to enter an SQL statement. Where the Program field appears a program code may be entered.







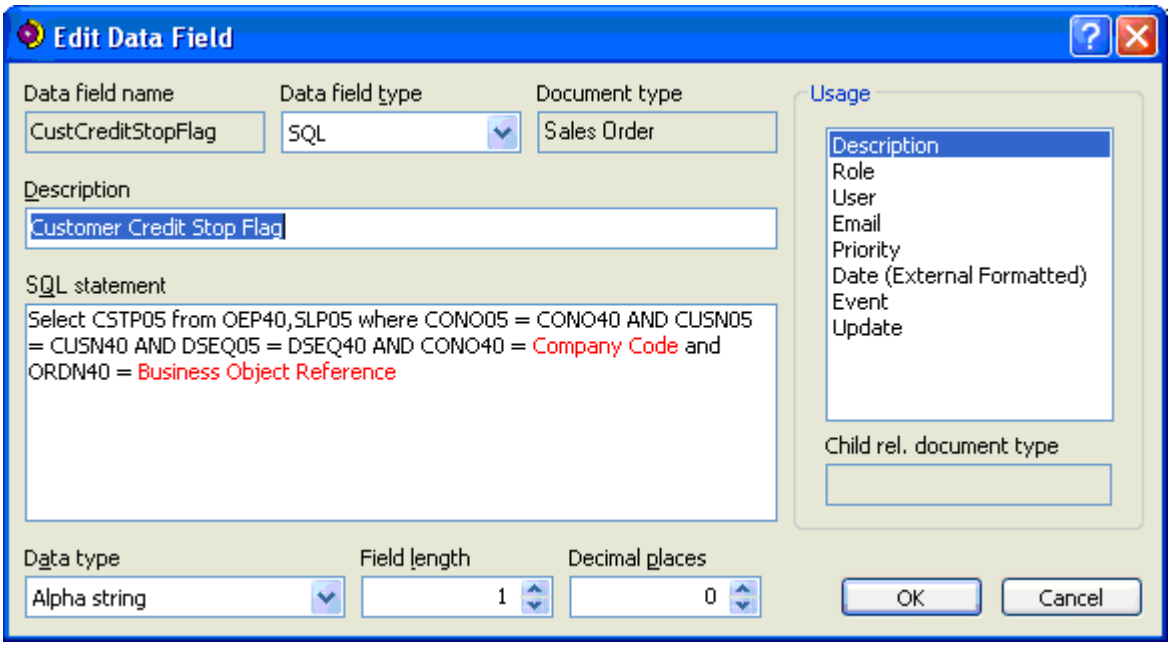
When using Child and Parent document types a data field is used to link a parent and a child document type. The Data Field usage is set to Child Relationship.

The *Child Rel. Document Type* is only used in the above circumstance. The appropriate Document Types must be created before a Parent-Child Relationship can be defined, e.g. Sales Order and Sales Line.

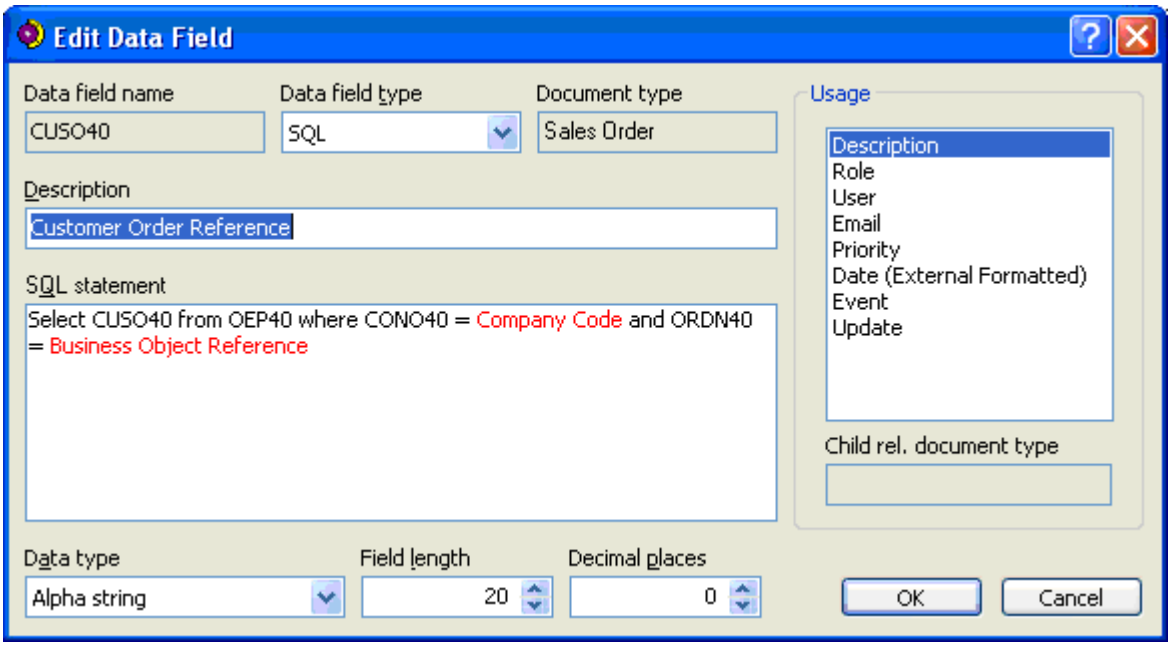
Exercise 10 – Create the Execution Model

Extend the software model into an execution model following these criteria…

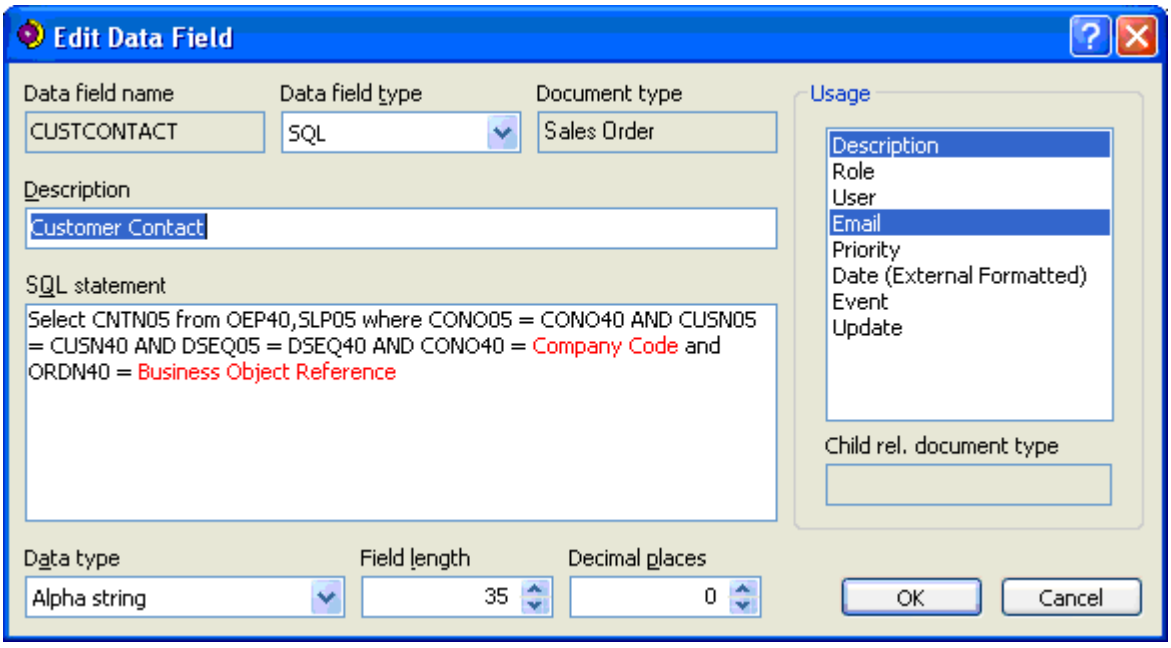
- The Document Type for the process will be a Sales Order (this should have been imported with the Elemental Activities but if it was not create it from scratch). The System21 Aurora Activities used will convert this into Document Types of *Pick Note* and *Invoice*.
- The roles in the Organisation Chart will need to be created within System21 Aurora Application Manager and imported into WFi Modeler.
- All User Activities will be converted to Action Agents.
- All errors in processing will send an error message to a role of *Administration*.
- Create a Data Field called *Customer Credit Stop Flag* that has the following properties…



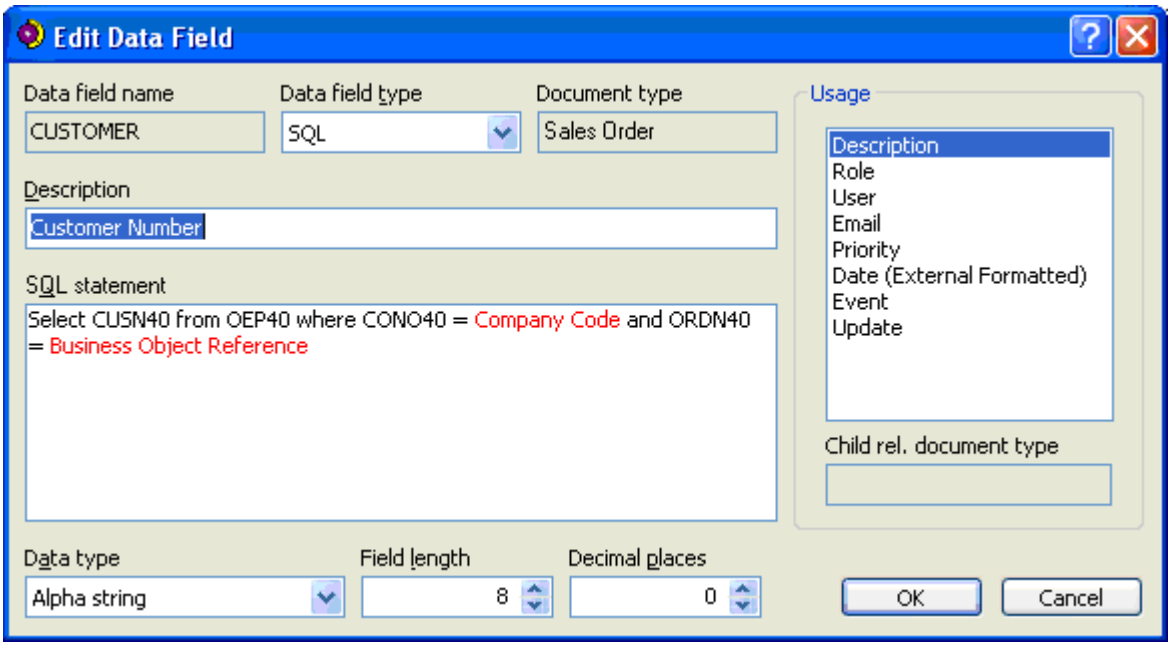
- Create a Data Field called *Customer Order Reference* that has the following properties…



- Create a Data Field called *Customer Contact* that has the following properties…

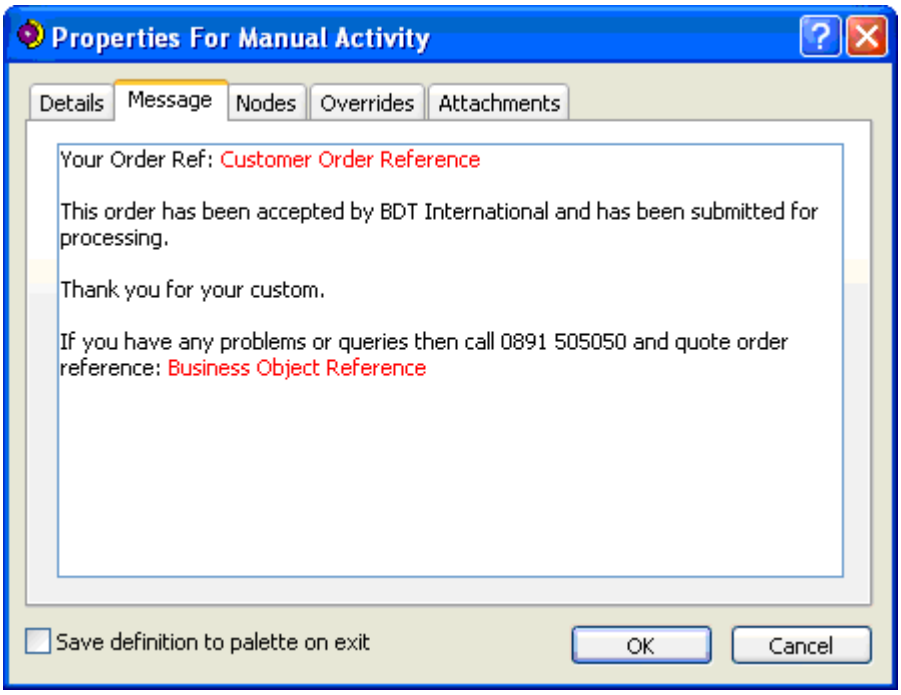


- Create a Data Field called *Customer Number* that has the following properties…



- The “Is There A Credit Issue?” element will become an Action Agent that will require a test against the *Customer Credit Stop Flag Data* Field to see if its value is **1** (which means the customer is on *credit stop*). The exit node that matches this condition should be called *Credit Issue* and linked to the Suspended Order Release activity. This activity should be sent to the role *Credit Controller*.

- Order Acknowledgements will be replaced by an automatically completing Manual Activity message that will be sent by email (to the address held in the field Customer Contact). Use the Customer Order Reference Data Field and the Business Object Reference Global Data Field within the message body. E.g.



- The “Is the Order for a Priority Customer?” element will become an Action Agent that will require a test against the *Customer Number* Data Field. For this example BDT International only has one priority customer whose number is GC01.

- The Picking Notes for a priority customer will be sent to a role of *Sales Clerk*. Other Picking Notes will be submitted for batch processing every hour (define a Schedule rule to do this).

- Replace the *Items Picked* External Activity with a Manual Activity that is sent to the role of *Picker*. Once the *Picker* has completed the order they can select **OK** to continue the process. Link the *Pick Note Created* nodes to this element. Link the Order Processed By Picking and Manual Pick Request nodes to an End Condition. Link the Failed to Create Pick Note to a Manual Activity message sent to the role of Administration.

- Replace the *Items Packed* External Activity with a Manual Activity that is sent to the role of *Despatcher*. Link this to *Confirmation Of Despatch* and set the recipient to *Warehouse Manager*.

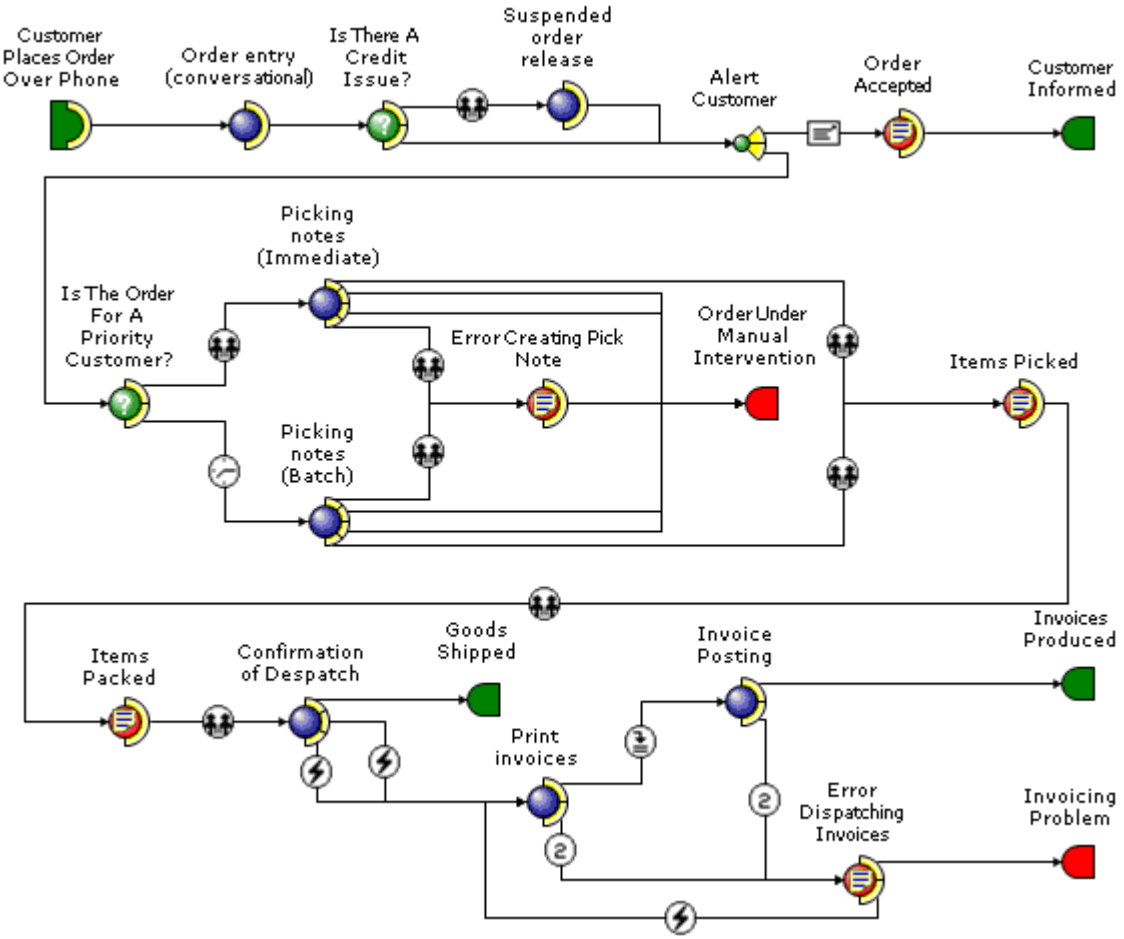
- Link the *Pick Note Despatched* node to an End Condition. Link all the other exit nodes into *Print Invoices*. Set their Execution Mode as Automatic Immediate.

- Link the *Invoice Printed* exit node from *Print Invoices* into *Invoice Posting* with an Execution Mode of Automatic Batch.

- Link the *Failed Invoice Print* and *Failed Invoice Posting* into a Manual Activity that allows the recipient to abort or retry the invoicing part of the process. Set the recipient of the message to the role *Financial Director* and *Account Clerk*.
-

Note: When creating the recipients for System21 Aurora Elemental Activities the required role may not be within the list. To alter the roles that are offered, select Roles and select the roles that apply to that activity.

On completion the process should look similar to the following…



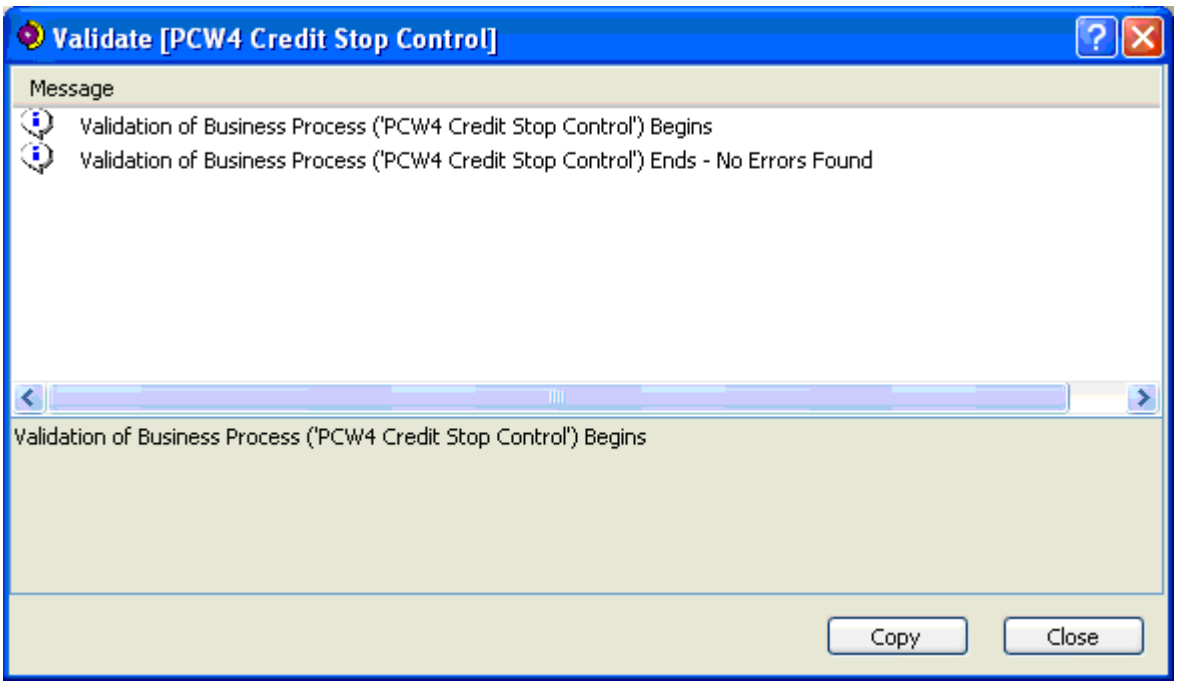
Activation

All processes created in WFi Modeler are theoretical creations until the activation step is completed. This uploads the process to the server so that it can be run using the WFi Engine.

Validate the Process

WFi Modeler can perform an error checking routine on the logical flow of a Business Process. Therefore by using the Validate routine, errors may be checked.

Appropriate error messages inform the user of what went wrong and where. Each of these errors needs to be rectified before the procedure can resume. A successful validation should result in a similar message to that shown.



An unsuccessful validation will give warnings that may be ignored and errors that must be corrected. All errors must be resolved until warning and information messages are all that remain.

Typical examples of errors that may occur are where there are exit nodes that do not have a forward path, or links do not have appropriate execution modes.

Here are some common errors that can occur…

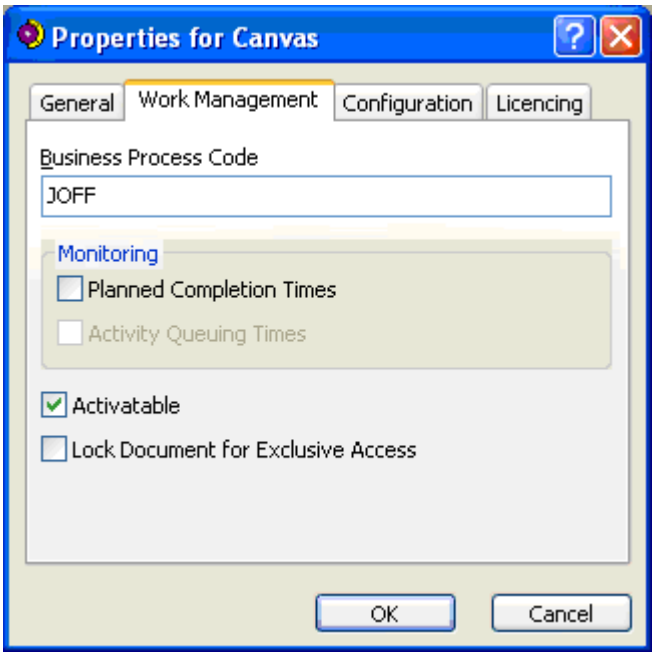
Modelling Element	Common Errors
Links	All Elemental activities, with the exception of initial activities, must have an appropriate Execution Mode preceding them. All Manual/XML Activities must have at least one recipient.

Document Types	Document types used in the process must follow a logical pattern. It is essential that all document types exiting one activity and entering the succeeding activity correspond therefore all inputted and outputted Document Types are checked.
Initial Activity	Only Elemental Activities and Events are valid initial activities unless the Start Condition's Start Mode is set to User Requested. If the Start Condition's Start Mode is Automatic Monitor then the initial activity must be an Event Agent.

Tip: To check the flow of the process a Walkthrough may be performed. This follows the flow of the process and displays the steps involved at each stage. A Walkthrough may be performed on the whole process or from a selected point. Walkthroughs are initiated using the Walkthrough button on the toolbar or from the *Tools* menu. Walkthroughs can be used from a higher-level process through each tier of embedded processes or they may be used at a single tier only.

Enabling a Process to be Activated

Before a process may be activated it must be flagged as Activatable. Open the process and displaying the process properties window by right clicking on the Canvas and selecting the Properties menu item do this. The *Work Management* tab may be selected and a process code must be entered and the *Activatable* check box selected.



The *Business Process Code* uniquely identifies the Business Process to the WFi Engine, unlike the Business Process name that identifies the entity to WFi Modeler only.

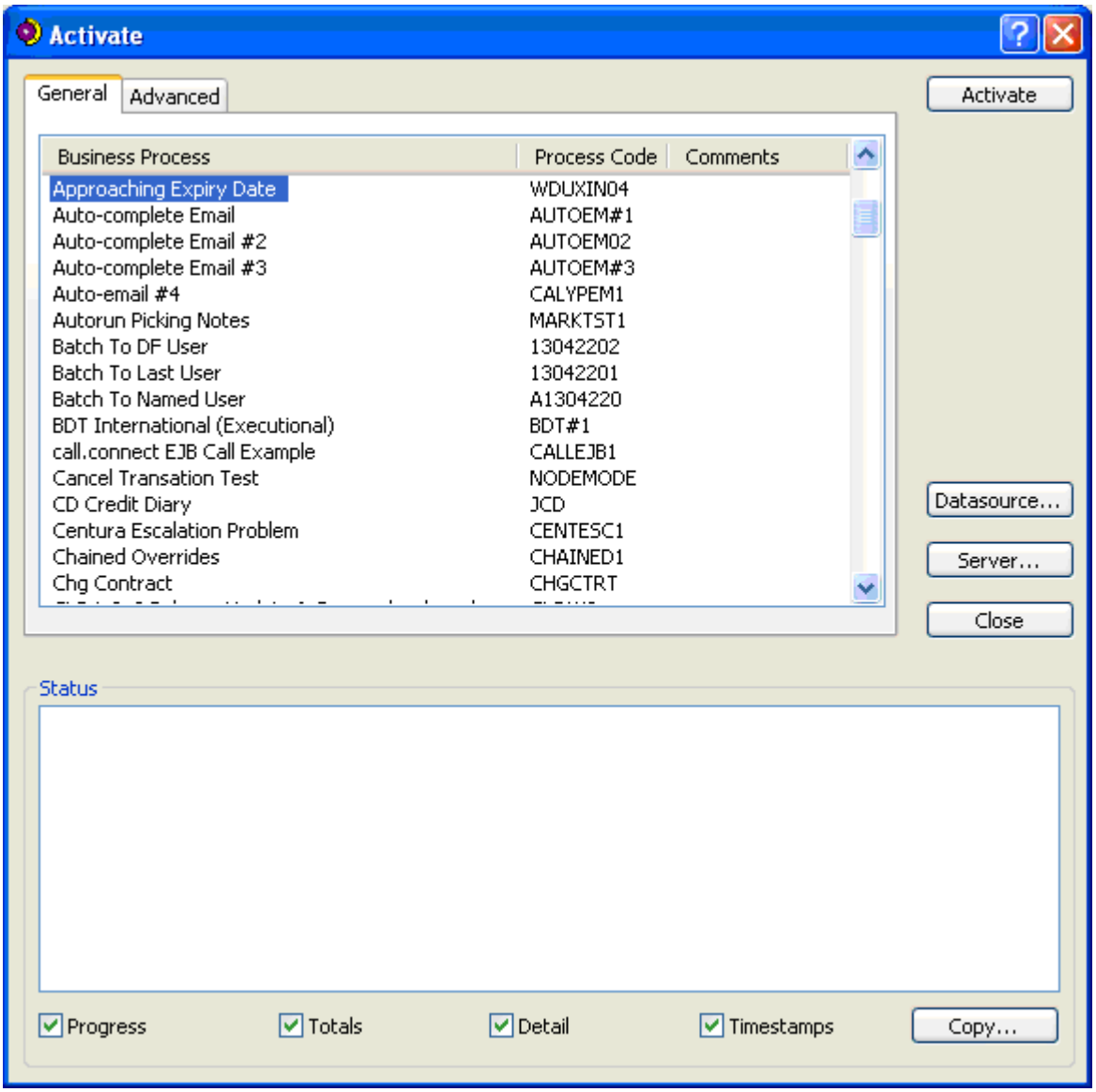
Warning: Care should be taken when choosing a Business Process Code that a different, current, Business Process does not already use it.

The activated Business Processes are version controlled on the server. For a Business Process Code that is new to the server the Process is saved as Version 001, subsequently if the code is reused the version number increments after activation. All versions are retained on the server, though, within WFi Modeler, only the latest edition is available unless previous versions are saved under new names.

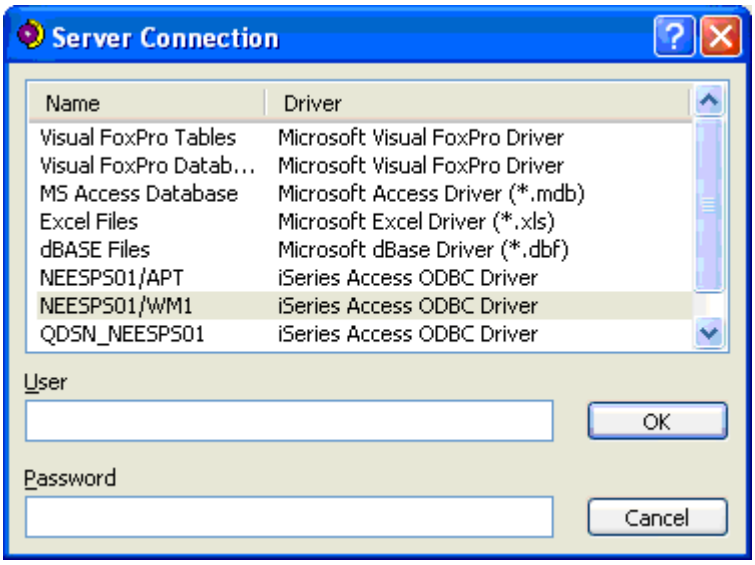
The *Configuration* tab then becomes visible and may be used to set effectivity periods for the process (i.e. how long the process will be valid for).

Activating the Process

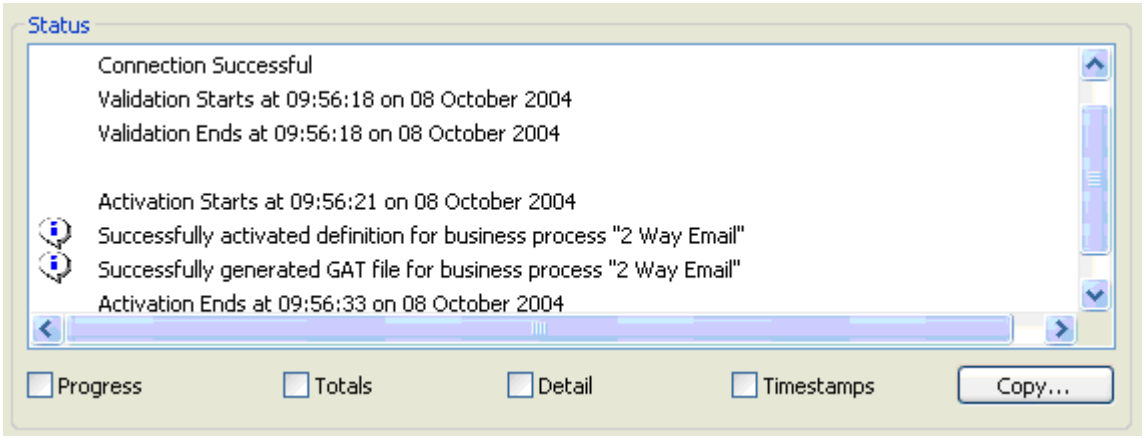
Selecting *Configure, Work Management, Activate* displays the Activation window that may then be used to select the appropriate process for activation. By selecting the appropriate Business Process and selecting **Activate** the operation will begin.



Before the activation can start, however, a server must be selected and a valid user name and password entered, the server selection window appears automatically after the **Activate…** is selected or by clicking on **Server…** prior to selecting **Activate…** .



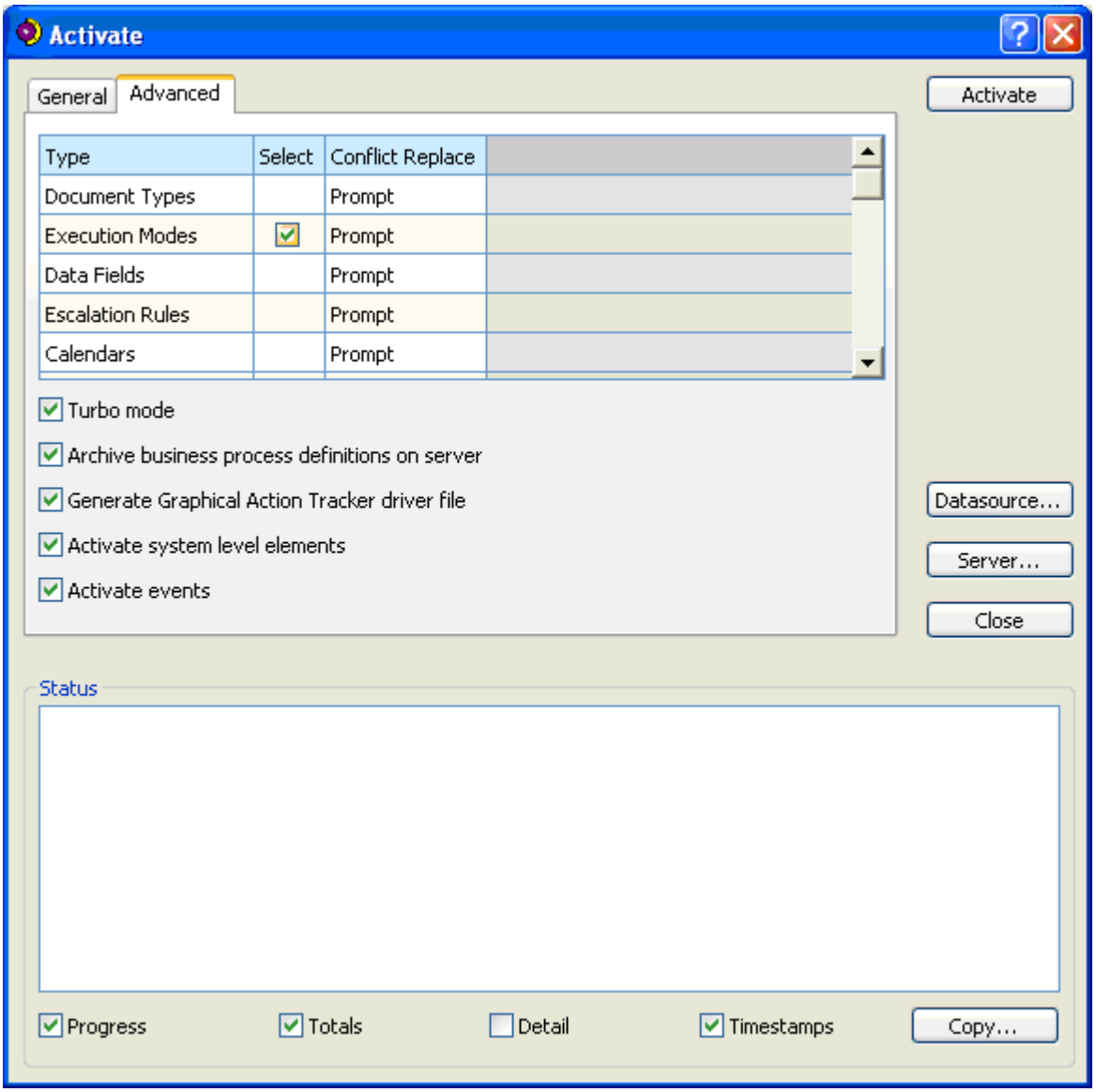
The Status field displays messages concerning, and the current progress of the process activation. The various checkboxes limit the amount of information displayed.



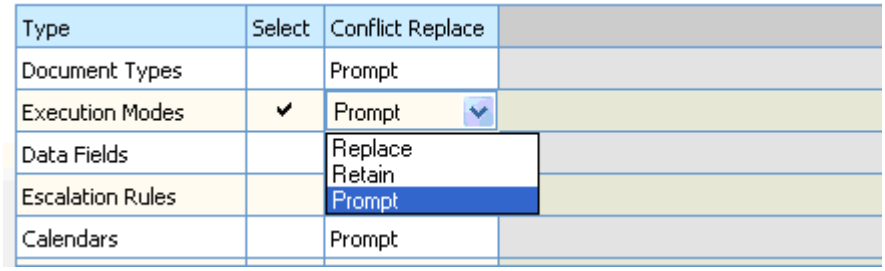
On successful completion of the activation process, System i Workspace v2012 may be used to launch the relevant activities.

Advanced Activation

The Activate Window also has a number of advanced features that may be ignored if only a simple Business Process is being activated. The advanced panel, however, allows a designer to individually activate Document Types, Execution Modes, Data Fields, Escalation Rules and Schedule Rules.



By choosing to update Data Fields etc. the changed values are not just seen by the current user, but by all users of the server, hence care should be taken to prevent unauthorised updates of server components.



By selecting a type and specifying whether that type should be retained, replaced or should the user be prompted for each member of the type, the designer can be specific as to what changes should occur on the server.

Note: Schedule Rules are always replaced; the other options are not available for this type.

Note: The Turbo Mode option is for compatibility with older ODBC releases. You should leave this option checked.

A Business Process may also be archived on the server for retrieval by other users of the server. This allows a Business Process to be shared across a number of workstations without the physical importing and exporting of the appropriate files. The retrieval of these processes is discussed in the chapter on Server Management.

Graphical Action Tracker Driver files may also be generated during activation. This allows processes to be viewed graphically outside WFi Modeler (via the Process Viewer).

System Level Elements must be activated at least once, as these are the elements that the WM Engine requires including Workflow type Data Fields and Role Menu Descriptions. By default this option is switched on but as long as it has completed successfully it may be switched off for subsequent Activations to the same server to speed up the process.

Exercise 11 - Activate the process

Activate the BDT International process to the IBM i server that is running Work Management and enter an order. To do this…

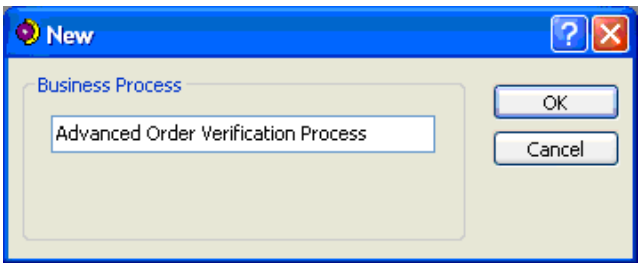
- Give the process a unique process code.
- Validate the process.
- Save the process.
- Create an ODBC connection to the IBM i server.
- Use the Activation dialog to activate using the ODBC connection and enable the process.
- Start your WFi Engine.
- Enter an order using Order Capture or Order Entry (Conversational) through System i Workspace.

Track the flow of the process using Action List and Action Tracker within System i Workspace v2012.

Editable Manual Activities Tutorial

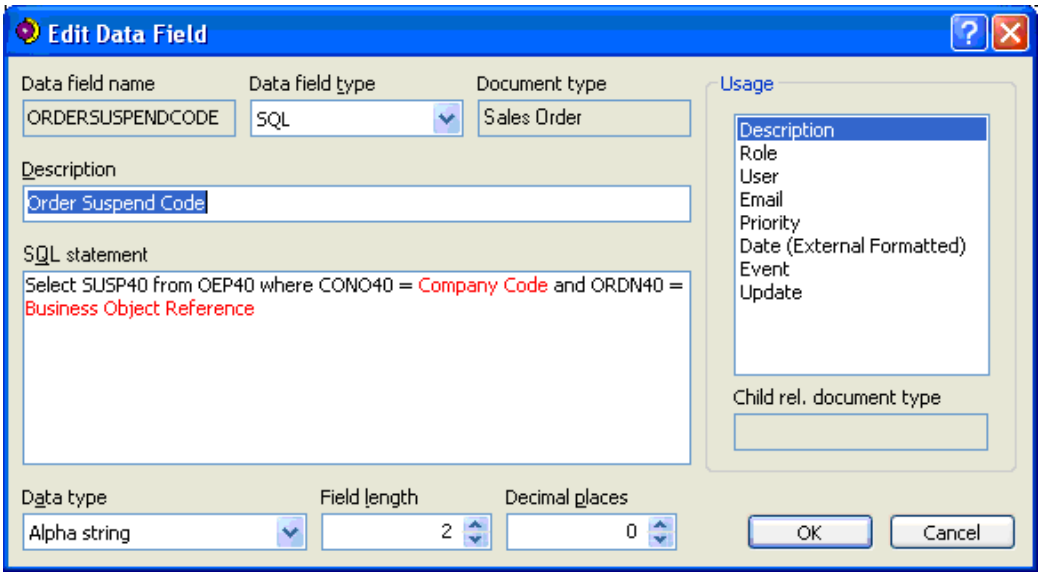
Note: This tutorial uses the System21 Aurora Sales Order Processing components. These must be installed and correctly configured on your IBM i server, along with any roles, for use with Work Management. If in doubt, consult your Infor representative.

1. Create a new process within WFi Modeler. E.g.



2. Set the initial activity to be the Advanced Order Entry option (1/AOP) so that on entering an order the process automatically starts.

3. Create a new SQL Data Field to get the order suspension code. E.g.

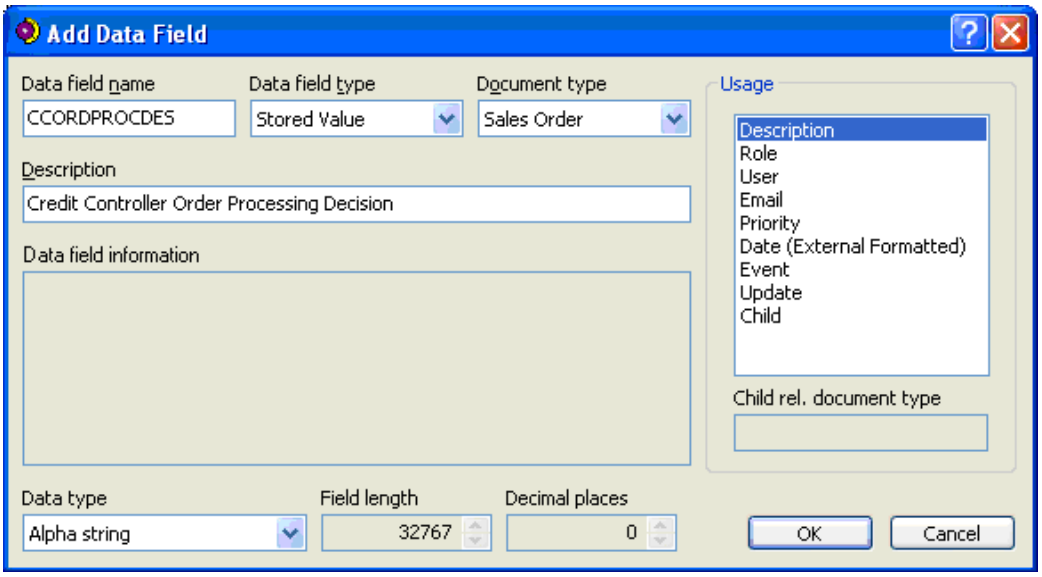


4. Create a new Action Agent and connect it to the Advanced Order Entry element. Open the properties and define the tests based on the following rules.

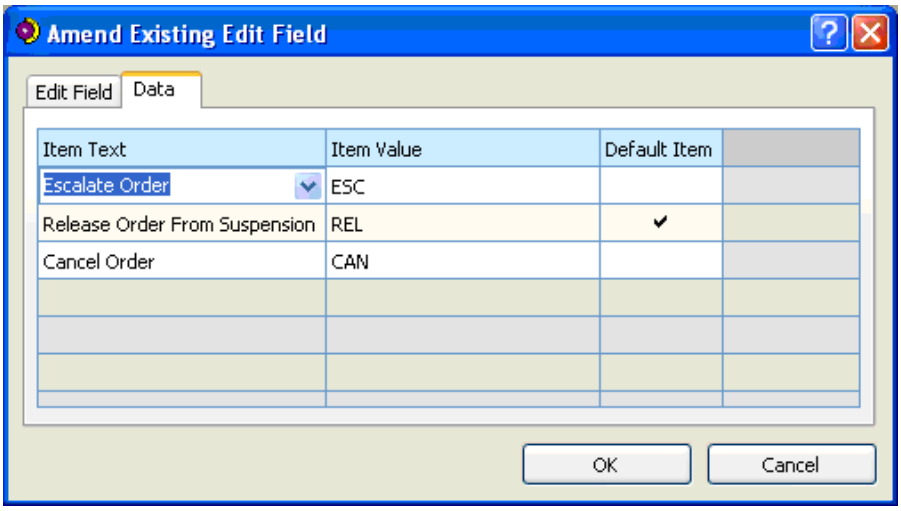
Suspension Code	Resultant Action
CH, CL, CP, CS, CT, CU, HL, HP, HS, HT, HU, LT	Credit Exception
NP, FP, NV	Pricing Exception
Blank	No Problem
Not blank	Other Exception

5. The Action Agent should now have four exit routes. Create a new Manual Activity element and connect it to the Credit Exception exit route. Set the recipient to the Credit Controller role.

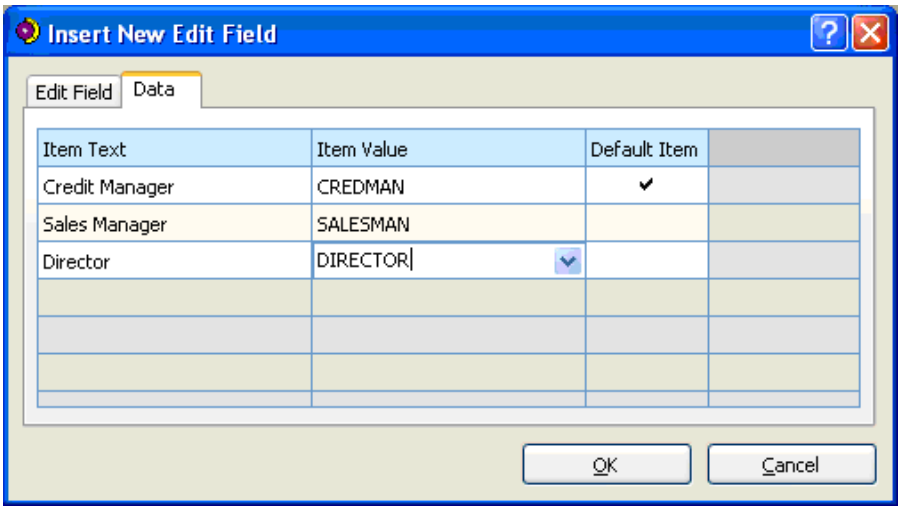
6. In the message, add text to ask the Credit Controller to review the order and enter some information. Define a new Stored Data Field to hold the Credit Controller's decision on how to proceed. Edit Fields can only be stored to Data Fields of type Stored Value, E.g.



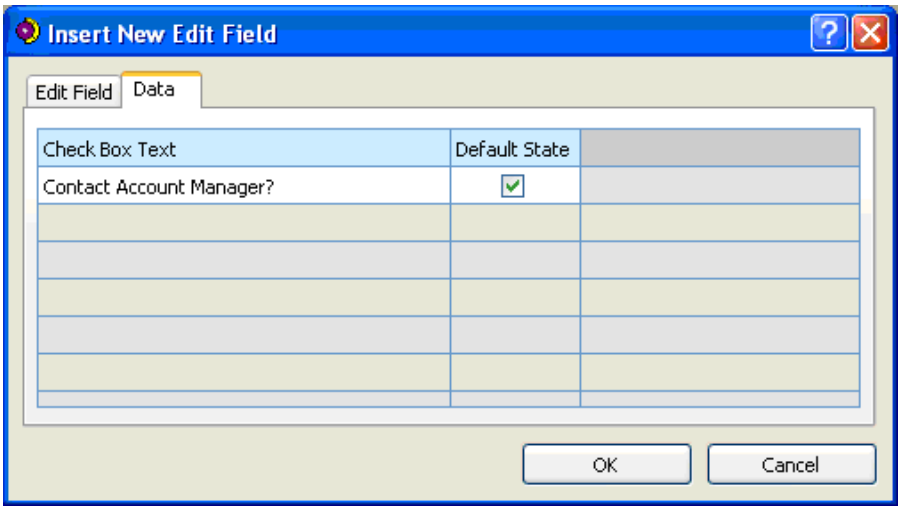
7. We now need to ask the Credit Controller how to proceed with the order processing. To do this, create a new Radio Button Group Edit Field. Send the result to the Data Field created above then alter the Data tab so that it that contains the following items…



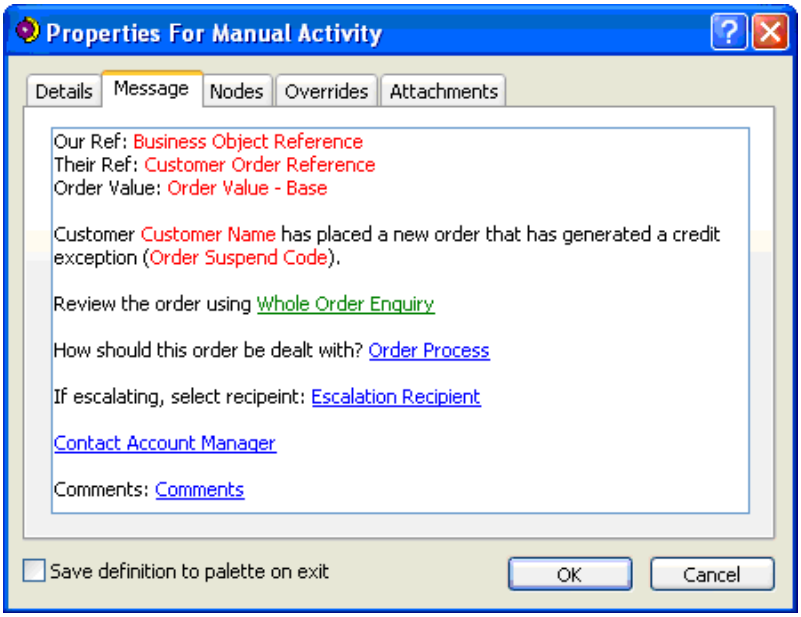
8. To allow the Credit Controller control over whom the order is escalated to, give them a list of choices. For this, create another Data Field (for storing the escalation recipient) that has a usage type of Role, and then create a new List Edit Field. Send the result to the new Data Field then alter the Data tab so that it contains the following items…



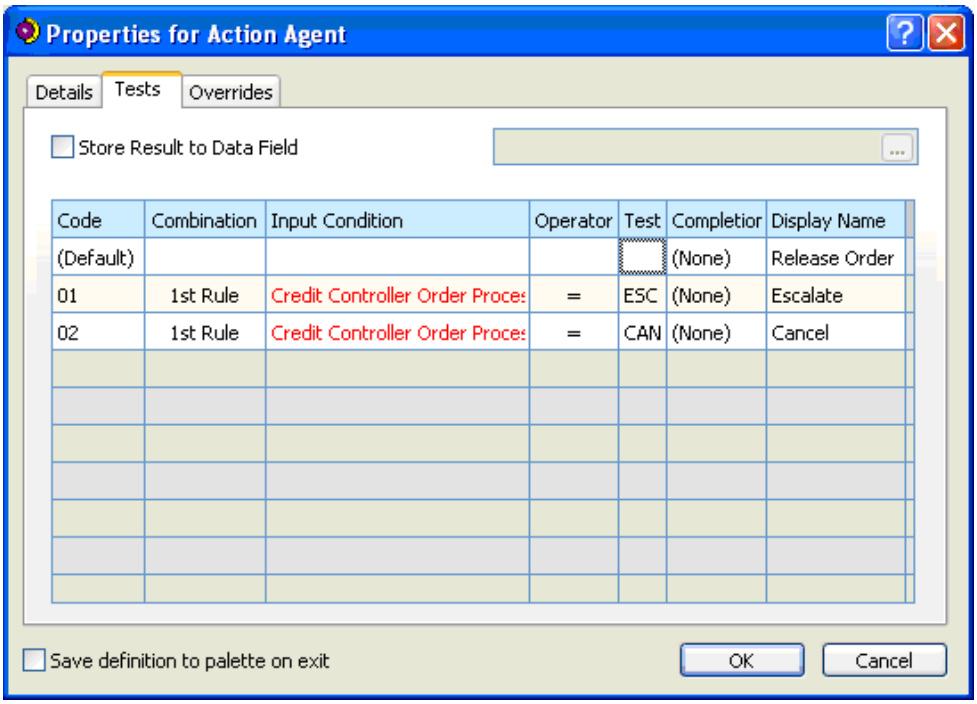
9. To allow the Credit Controller to decide whether the customers account manager needs to be informed of the problem create another Data Field (for storing a checkbox option) and then create a new Check box Edit Field. Send the result to the new Data Field then alter the Data tab so that it contains the following information…



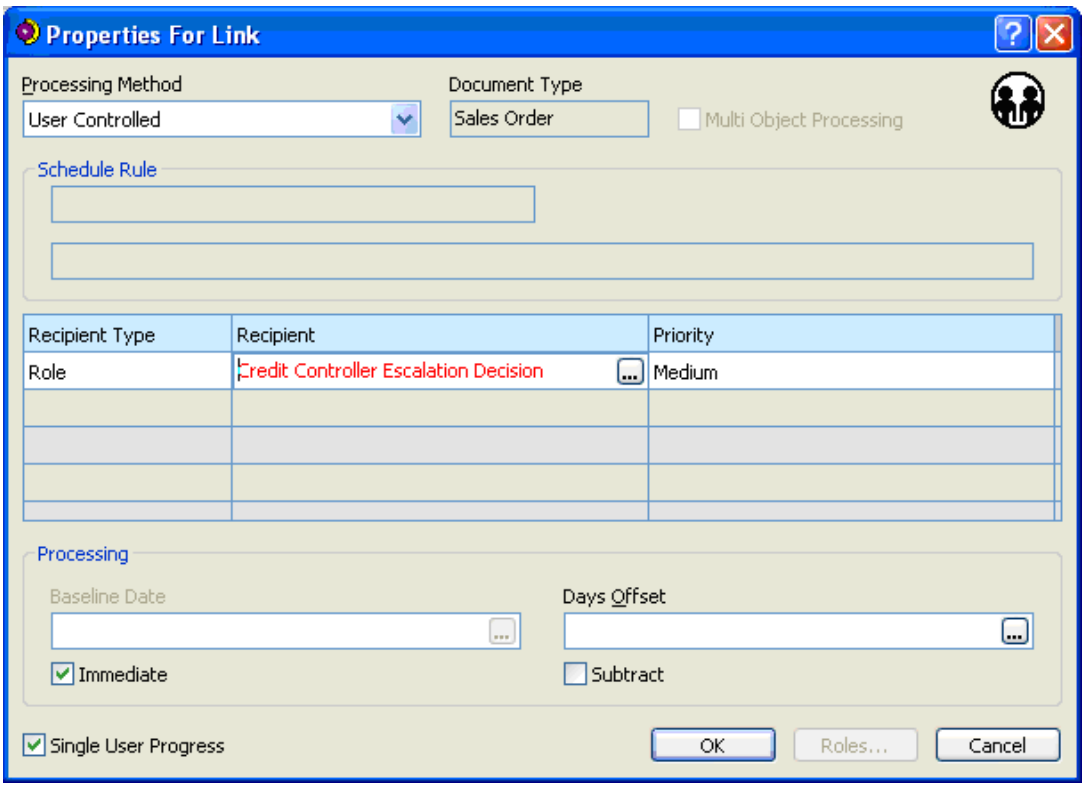
10. The final field allows the Credit Controller to add text comments that can be passed on to others. Create another Data Field (for storing the text) and then create a new Text Edit Field. Send the result to the new Data Field. The resulting message should look similar to this…



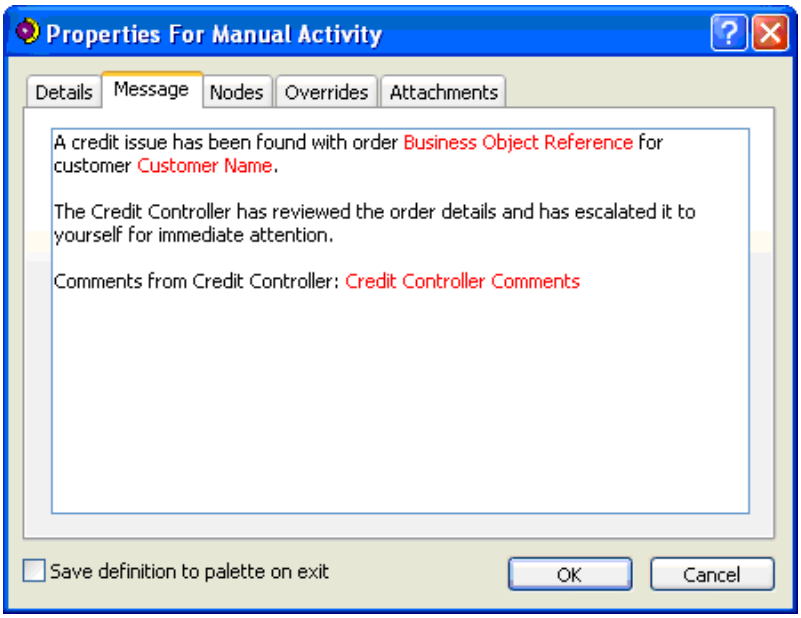
11. Create a new Action Agent and connect it to the message. We can now use the data entered by the user to perform different actions. In the Action Agent use the "Order Process" Data Field to select a different exit path based on its value.



12. Create a new Manual Activity and connect it to the Escalate option. Set the recipient to the role that was stored in the “Escalation Recipient” Data Field. E.g.

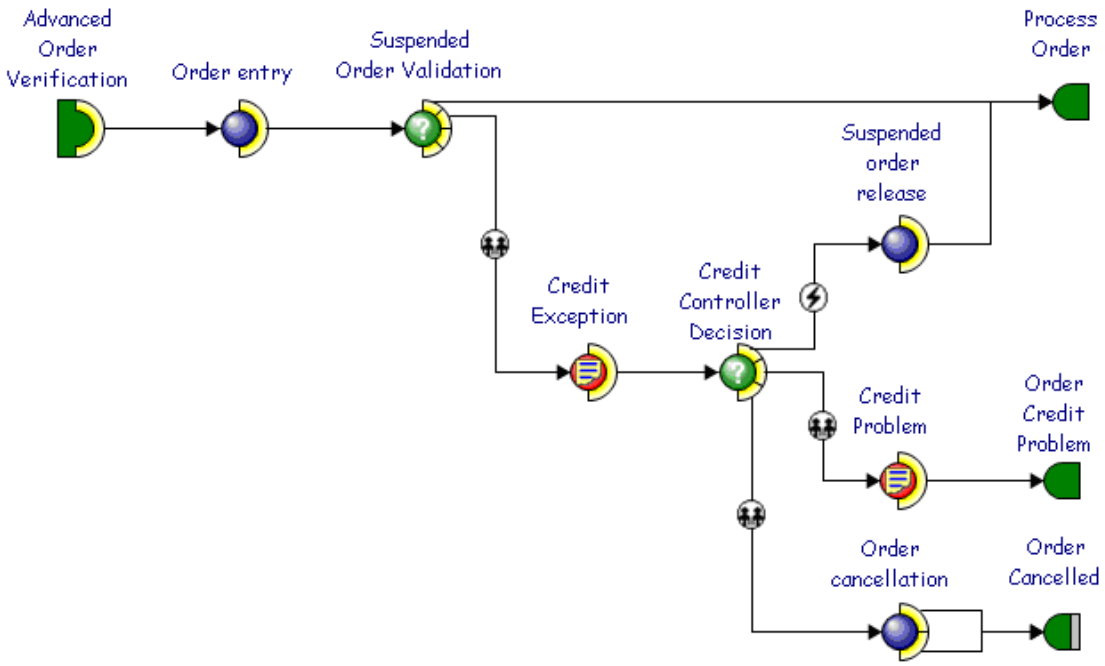


13. In the Manual Activity, set some appropriate text and embed the “Credit Controller” comments variable within the message body. E.g.



14. Connect the “Cancel” exit route of the Action Agent up to the System21 Aurora Order Cancellation option and send this to a recipient of Order Entry Clerk. Connect the “Release” exit route of the Action Agent up to the System21 Aurora Suspended Order Release option and set the Processing Method to Automatic Immediate. Connect the exits of these tasks to appropriate end nodes.

15. Your model should now look similar to the following…



17. Complete the model by…

- Insert a test between the “Credit Exception” and “Credit Controller Decision” that uses the check box field (value of 1 for checked) to decide whether to send a Manual Activity message to the Account Manager.
- Complete the “Pricing Exception” and “Other Exception” paths from the Suspended Order Validation activity. Use edit fields to get information from the user that can be used within the process.
- Use the Walkthrough option to review the process.
- Use the Validate option to check the process is correct
- Activate the process to your Work Management installation.
- Start an instance of the process by entering an order (preferably with a suspension code).

Email Event Tutorial

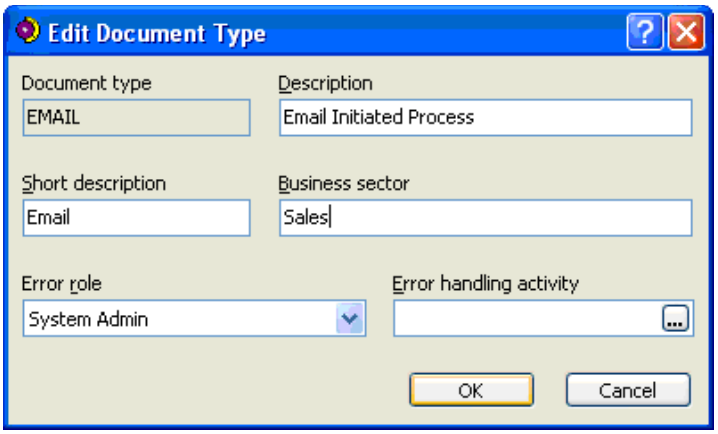
Companies typically have specific support/contact addresses (e.g. sales@my_company.com). Using Email Events a process can be initiated for each mail that arrives at the support address.

In this tutorial we will use the System21 Aurora Trading Partner Contacts file to determine whether the email sender is a known contact and then Accounts Payable Customer Address file to determine more information about the customer.

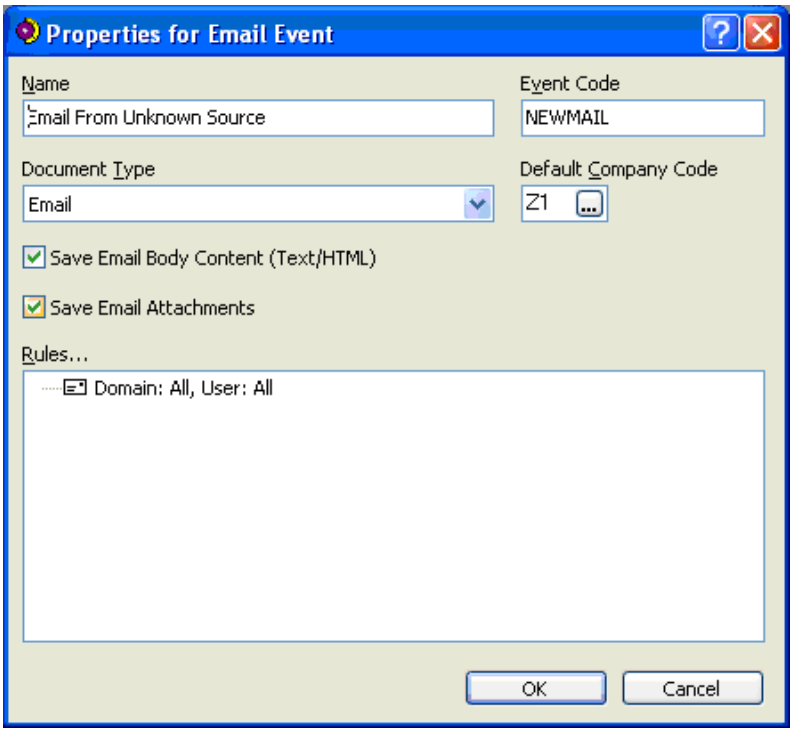
Note: The process described below is supplied as part of your WFi Modeler installation within the Samples\Processes sub-directory.

1. Create a new process (File, New, Business Process)

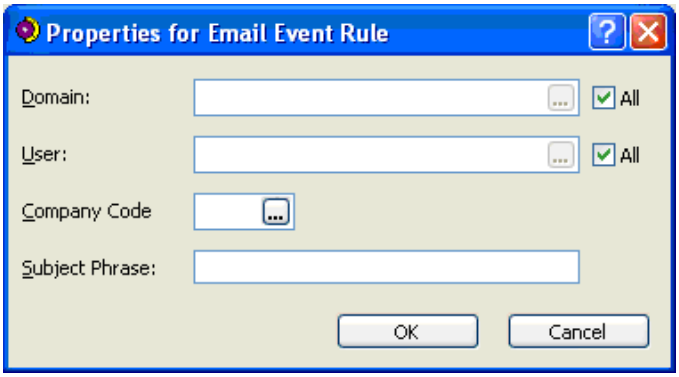
2. Create a new Document Type called Email…



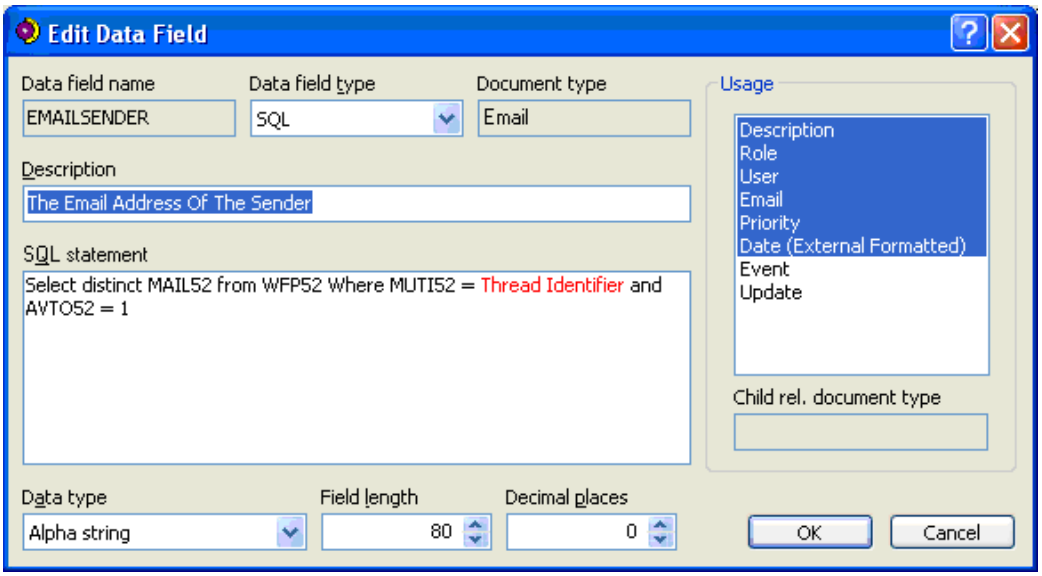
3. Drag an Email Event from the Controls Palette onto the Canvas. Enter its properties...



Add a new rule that matches against any incoming email address…

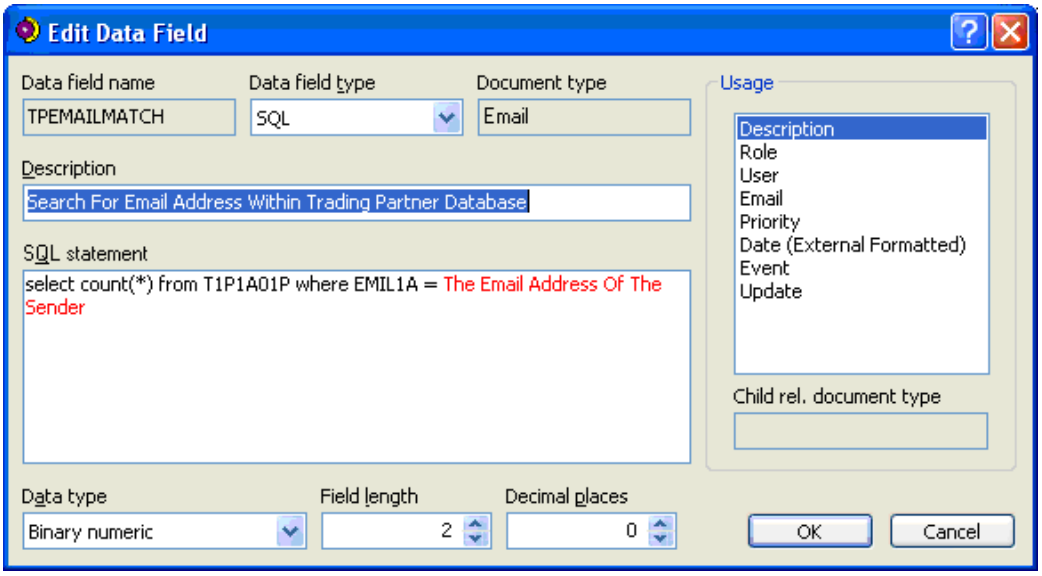


4. We now need to create some data fields to retrieve information about the email. Open the Data Fields dialog and add a new Data Field with the following properties…

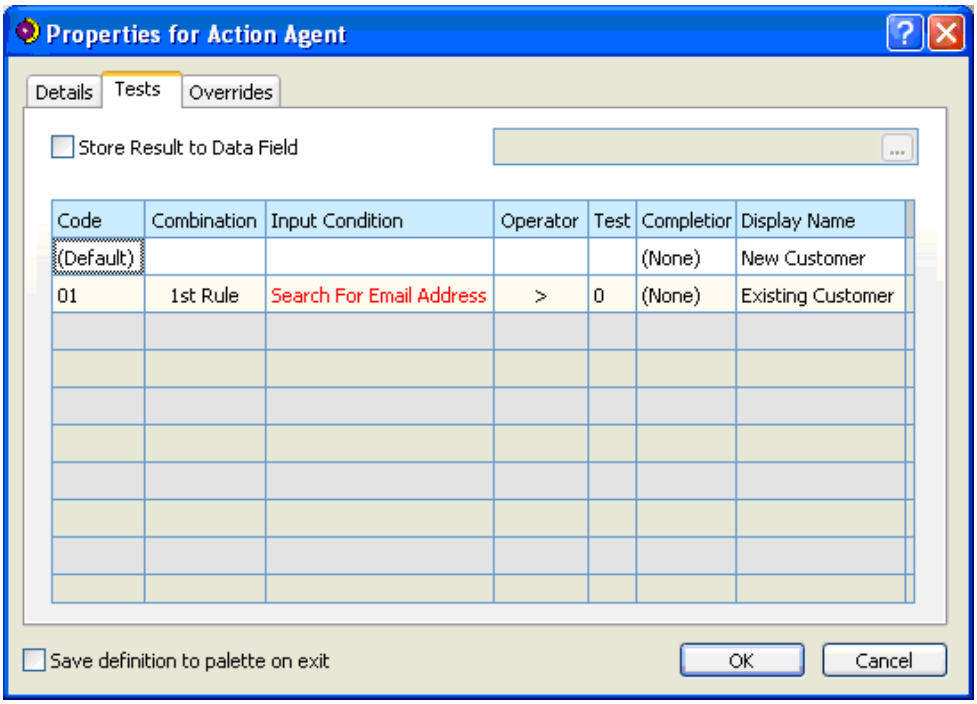


5. The mail address is stored within the Action Tracker file within Work Management. It is stored against the Email Event so it will always be the initial activity (AVTO52 = 1).

6. The Trading Partner Contacts database (T1P1A01P) contains a list of contacts and their email addresses. We can use this to match against the incoming email address using the data field we have just created…



7. Create a new Action Agent. Connect it to the Email Event and set the following test values…



8. If the incoming email address matches an address in the Trading Partner Contacts database the Data Field will return a non-zero value.

9. Create a new Manual Activity and link it to the “New Customer” exit node of the Action Agent. Alter the message so that the incoming email subject and body are displayed for the recipient to view. Allow the user to either add the sender to the contacts database or to ignore the email.

Note: You will need to create two new Data Fields to pick up the information. The email subject (TTYP50 = 'A’) and body (TTYP50 = 'D’) are stored in the file WFP50 using the same multi-thread ID (MUTI50) and activity number (AVTO50) values used to get the email address from WFP52. The text is held in a field called STXT50

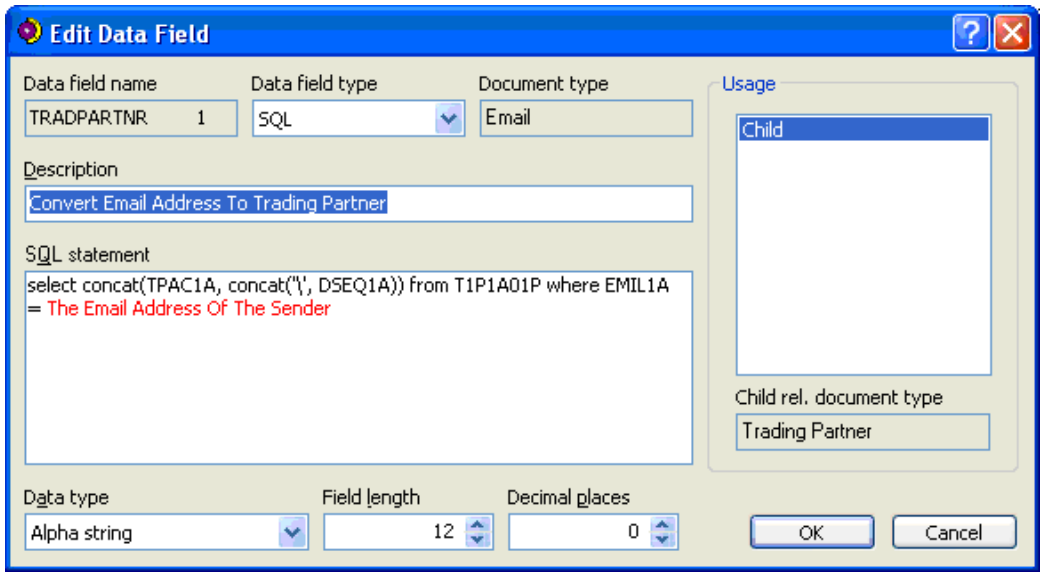
10. The link from the “ignore” option should be connected to an End Condition to terminate the process.

11. The link from the “add” option should link to another Manual Activity that contains a button that starts the Customer Address & Maintenance option (4/ARM). This option can be used to add a new customer/contact to the Trading Partner database.

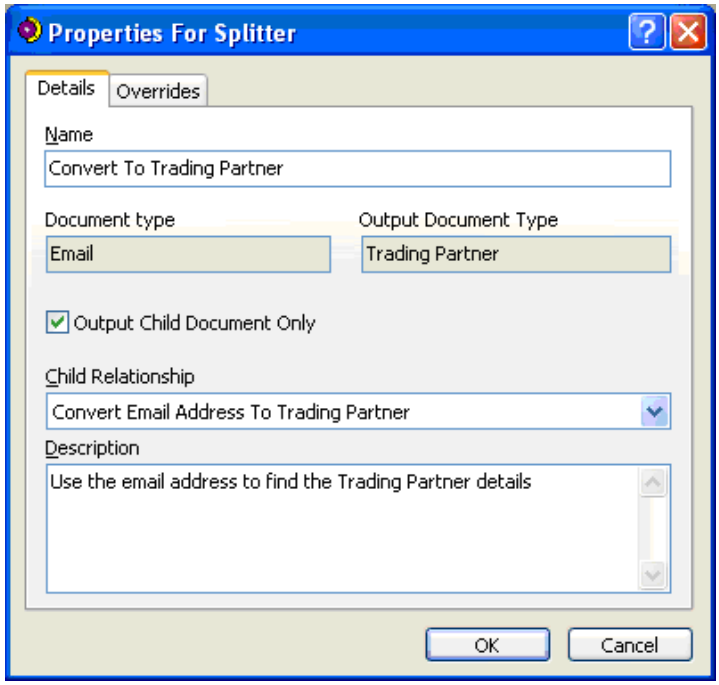
12. Now, our remaining exit nodes should point to a valid customer within the Trading Partner Contacts database. To emphasise this we can use a Document Splitter Activity to change from the Document Type of Email to a new Document Type of Trading Partner.

Tip: You need to create a new Document Type called Trading Partner in the same way as we created the Document Type Email.

The new Trading Partner document reference is made up from the customer code (TPAC1A) and sequence (DSEQ1A). Here is a Data Field that can be used…



There should only be one match for the email address per Trading Partner within the Trading Partner Contacts database so the Splitter will result in a single child process. Here is the Splitter Properties to use…



Connect the free exit nodes to the new Splitter.

13. Now create a new Manual Activity that can be used to notify a Sales Administrator that an unsolicited email from a Trading Partner has arrived. The message should include the subject and body from the original email.

Tip: You will need to create two new Data Fields within the Trading Partner Document Type. You do not need to create these from scratch though. Select the Data Fields you created previously within the Email Document Type for subject and body in turn. Use the Clone option to duplicate and simply change the Document Type to Trading Partner and select **OK**.

Tip: You can use the new document reference to create a Data Field that reads the customer name from SLP05. Here is the SQL statement to extract that data (other Data Fields are marked in red).

```
select CNAM05 from SLP05 where CUSN05 = Level Reference
1 (Alpha) and DSEQ05 = Level Reference 2 (Alpha)
```

14. The new Manual Activity should contain a text edit field so that the Sales Administrator can enter a reply to the customer. See the section Editable Manual Activity section above for more details on how to do this.

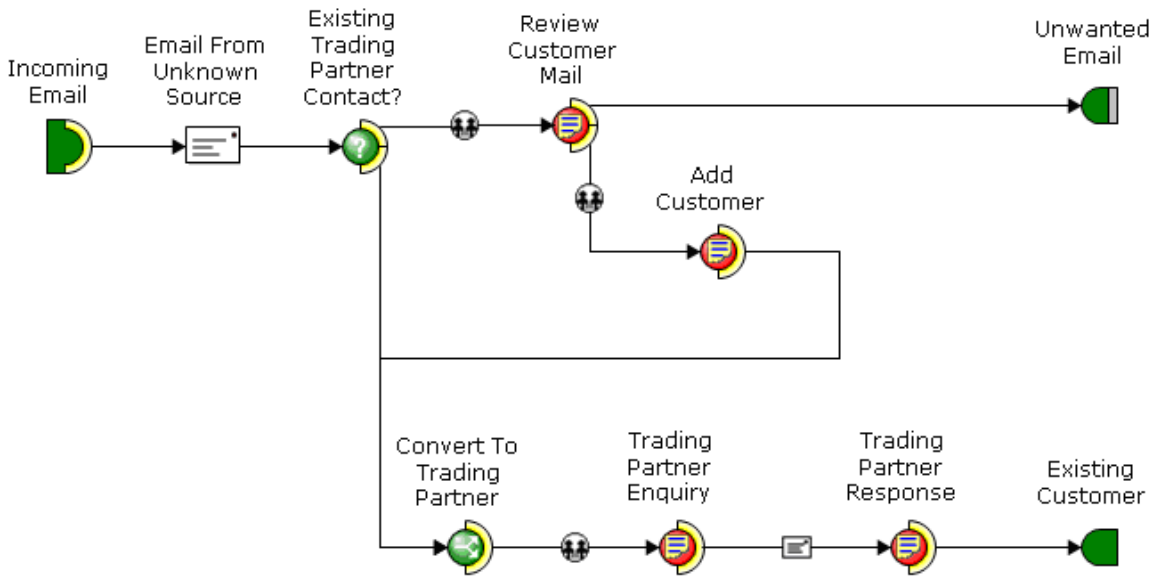
15. Once the Sales Administrator has created a reply we can automatically send it back to the customer. Create a new Manual Activity. Set its properties to Automatically Complete. Its contents should contain the reply the user entered in the previous Manual Activity.

Tip: The Trading Partner Contacts database contains a “Correspondence Name” field (CRNM1A) that can be used at the top of the reply email. Here is the SQL statement to extract that data.

```
select CRNM1A from T1P1A01P where TPAC1A = Level
Reference 1 (Alpha) and DSEQ1A = Level Reference 2
(Alpha) and EMIL1A = The Email Address Of The Sender
```

16. Connect the Manual Activity to an End Condition, add a Business Process Code and save. Your process should now be ready to Validate, and if OK, Activate to your IBM i server.

Here is the model that you should have created.


Incoming Email
Email From Unknown Source
Existing Trading Partner Contact?
Review Customer Mail
Unwanted Email
Add Customer
Convert To Trading Partner
Trading Partner Enquiry
Trading Partner Response
Existing Customer

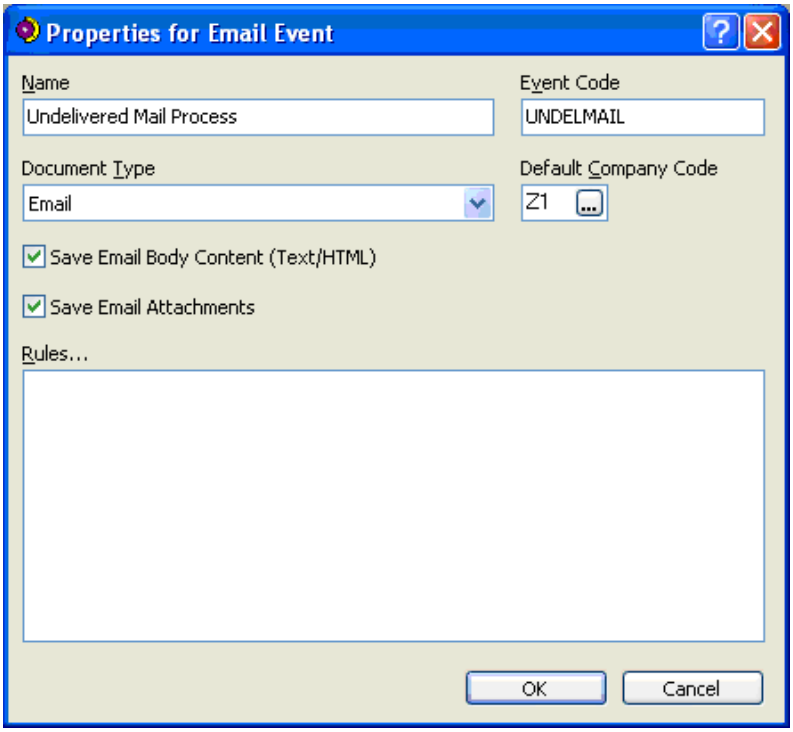
Undelivered Mail Email Event Tutorial

There are occasions when mail cannot reach its intended recipient (e.g. network/mail server problems, invalid email address). When this occurs the mail server will send an *Undelivered Mail* message back to the account that dispatched the email message. The message usually has a fixed format subject and address and usually contains the original email as an attachment.

Using the Email Events you can intercept these Undelivered Mail messages and pass a suitable message onto an administrator so they can deal with the problem. This tutorial shows an example of such a process.

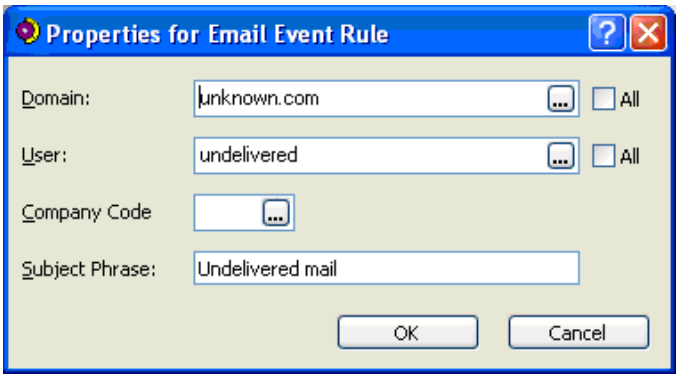
Note: This example was produced using the CMailServer 5.2 from YoungZSoft. This is a free mail server for up to 5 users. The example should work equally well against mail servers from Microsoft and Lotus but you may need to adjust the values for the user, domain and subject that are passed back as part of the Undelivered Mail email message

1. Create a new Business Process and add a new Email Event. Set its properties to the following…

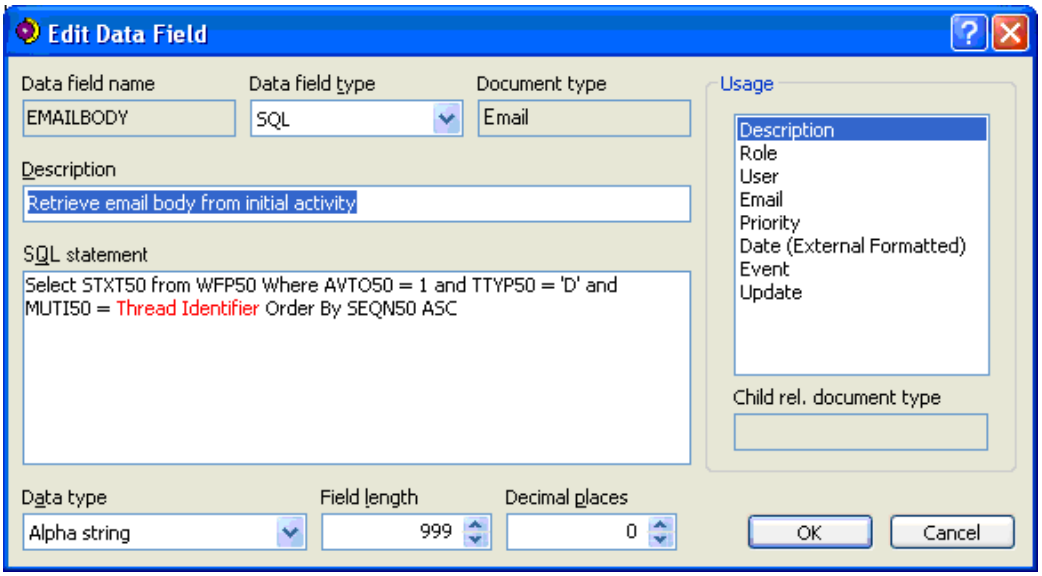


We save the body and attachments so they can be passed on to the administrator to help them understand which mail message did not reach its target.

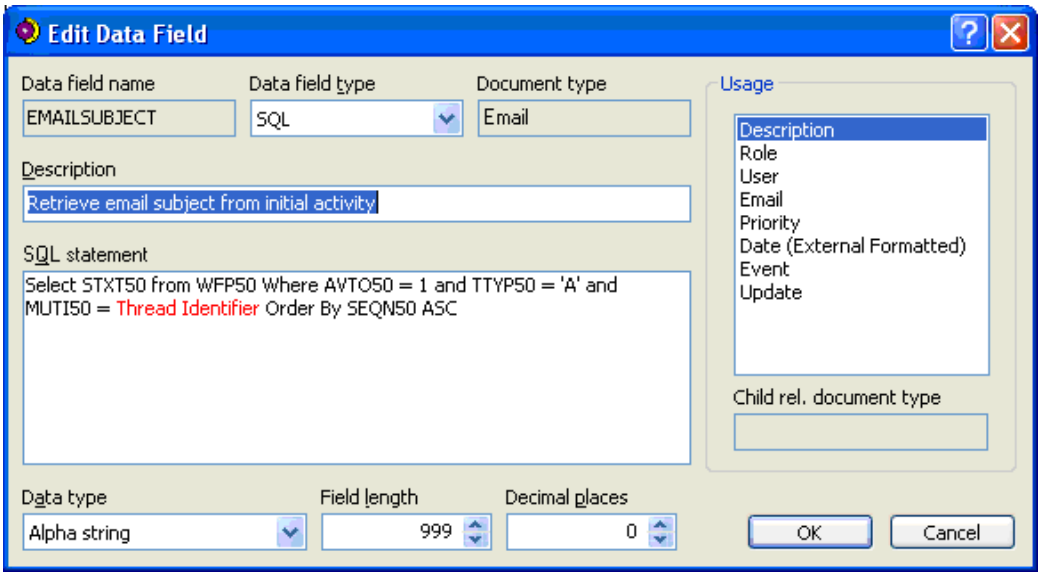
2. Add a rule to match against the default undelivered mail subject, domain and user…



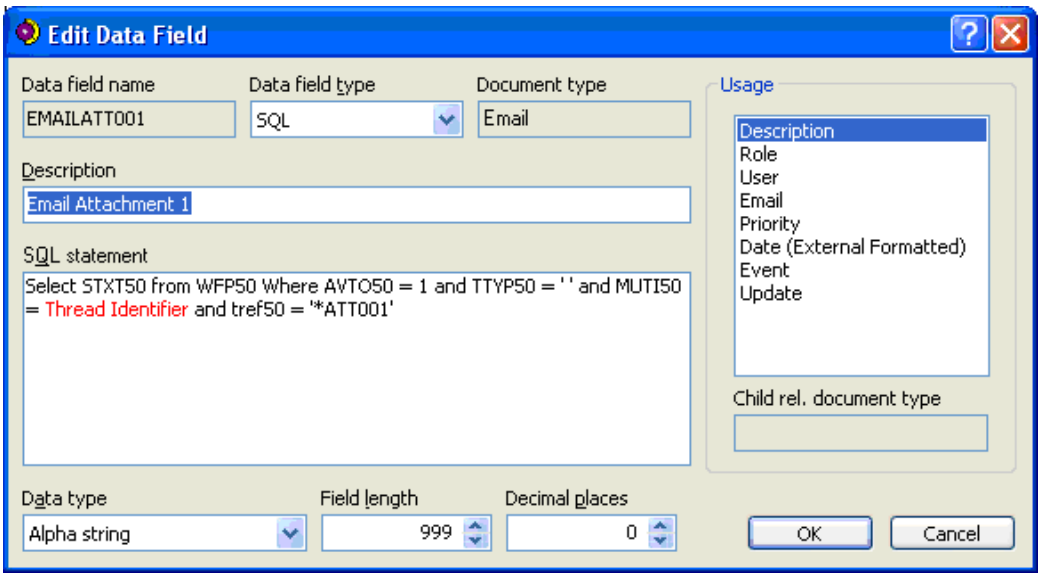
3. Create two new Data Fields (under the Email document type) to receive the Email message body…



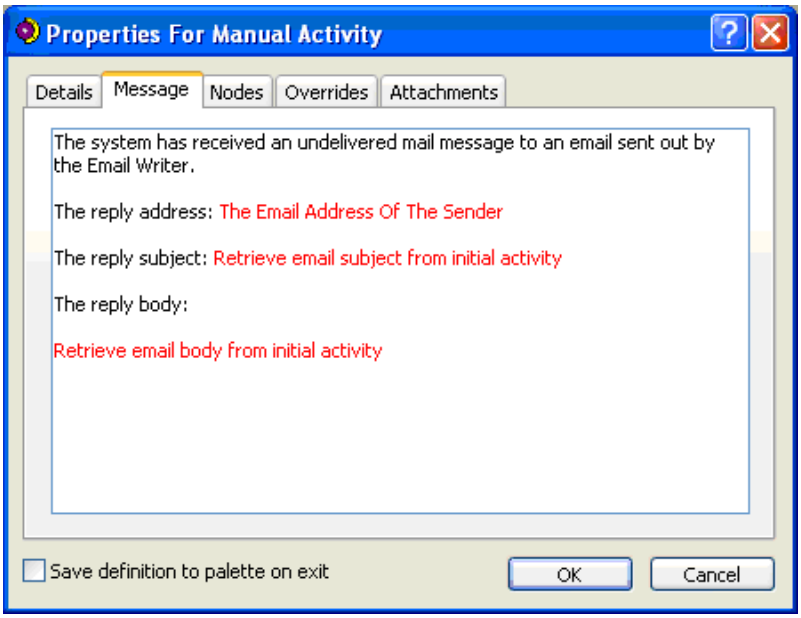
The Email subject…



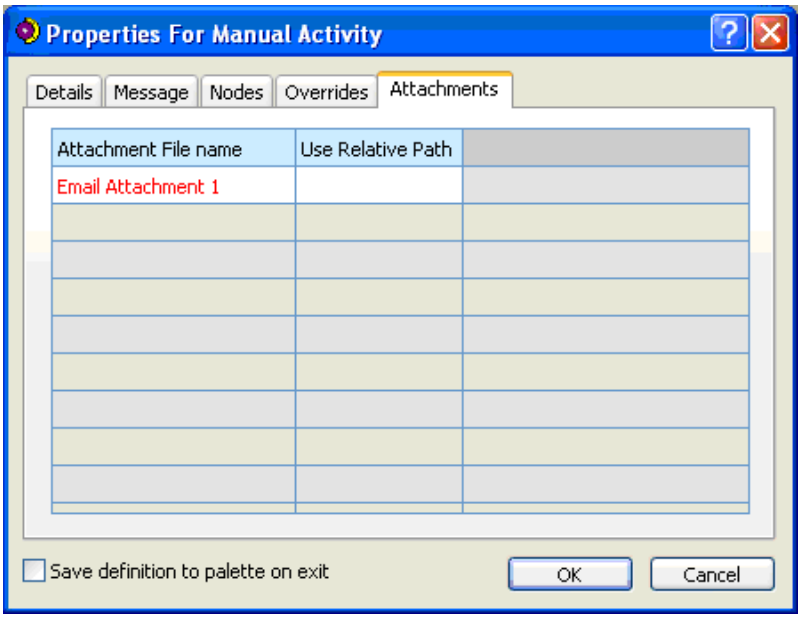
The 1st attachment reference associated with the incoming Email (the original message)…



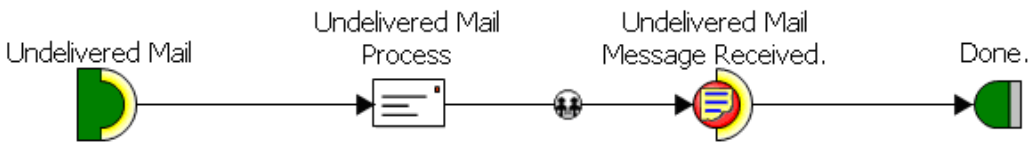
4. Create a new Manual Activity. In the message, use the body, subject and address (from the previous tutorial) data fields to give the recipient some information on the undelivered mail message. E.g.



5. In the Attachments tab, link to the original mail attachment. E.g.



6. Link you activities together, send the message to a suitable recipient, add a process code, and then validate. Your process should look similar to this…



7. Activate the process to your server, generate an undeliverable mail message (E.g. create a process that sends an email to a fictitious email address) and start your Email Reader.

Note: The Email Reader must run over the same account that you use in the Email Writer to send email from as this is the account that the mail server will post back to.

8. In System i Workspace v2012 you will get a new Action List entry showing the undelivered email and its detail. Selecting the attachment opens the original message in a new tab.