



Infor Mashup Designer User Guide

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What is Infor Mashup Designer?

Mashup is an industry term that is typically used to describe a web application that combines multiple services into a single source. A classic example is a web page for a business, such as a store or restaurant, that embeds a mapping service, such as Google Maps, into its page.

Infor Mashup Designer is Infor's development environment for creating mashups from Infor M3 and Infor Lawson and tools and from other sources.

Mashups are typically used to create custom views which result in a hybrid application that has the potential to look and feel completely different from the original source or sources. Mashups are created using XAML, the Microsoft markup language that is based on XML.

Note: Infor Mashup Designer provides a text editor for directly editing XAML. If you have XAML expertise, you can use the Designer to create or edit mashups. However, XAML expertise is not a requirement for using Infor Mashup Designer.

Important: This document describes controls available for creating a mashup. However, it does not provide detailed information about the applications (for example, an Infor Lawson program) upon which you are basing a mashup that you create. Application knowledge is assumed and required for using Infor Mashup Designer.

Working with Infor data in a mashup

In most cases, Infor program data used in a mashup is read-only. It cannot be updated directly through the mashup. However, the Infor program that updates the data can be called from the mashup and then the program data can be updated.

Document Archive Foundation is an exception to this. You can directly update items stored in Document Archive through a mashup.

Color choices and other personalizations that users make to their views of programs are retained in mashups.

The Infor Mashup Designer tool is available in English only. (Mashups that you create can be translated.)

For more information, see "[Creating translatable headers in a mashup](#)" on page 22.

Infor Mashup Designer terminology

This topic provides an overview of terminology that is associated with Infor Mashup Designer.

Term	Description
Application	A mashup that launches from Infor Smart Office.
Bookmark	<p>In Infor M3, a bookmark is a way to store a shortcut to a specific location in an Infor M3 component (typically, a program). A bookmark lets you access the component with pre-set values in your mashup.</p> <p>For a DetailPanel control, you must use bookmark-enabled components in your mashups. (For some other types of controls, you can use bookmark-enabled components but it is not necessarily required.)</p> <p>Infor delivers bookmark-enabled components. Many (but not all) programs have been bookmark-enabled.</p> <p>Another section of this document describes how you can tell if a component that you want to access in a mashup has been bookmark-enabled.</p> <p>"Identifying bookmark-enabled content" on page 22</p>
Control	An element such as a query or other input box, a selection button, a design element and so on that you add to a mashup application.
Deployment	You can deploy a mashup that only you can use or prepare it as an Infor application that your system administrator can deploy as a shared application for other users.
Infor Mashup Designer	<p>A development environment for creating mashups that includes:</p> <ul style="list-style-type: none">• A XAML editor• Ability to perform point-and-click formatting of controls• Project viewer: Add, remove files associated with a mashup project directly from the editor screen.• Preview feature: For viewing your in-progress mashup (for testing purposes).

Term	Description
Panel	<p>A type of control that functions as a view within your mashup application. The type of panel you create determines generally how controls appear in the mashup (or in a portion of the mashup).</p> <p>Various types of panels are available. More information is in other sections.</p>
Profile	<p>If the Mashup is installed through LifeCycle Manager, which is typical, the associated Infor Smart Office system profile is available to mashups. This means you can also include the associated URIs and scripts of the system profile to the deployed mashups.</p>
Project	<p>A logical structure for all files related to a mashup that you have created. These files have the extension ".manifest".</p>
Template	<p>Infor Mashup Designer delivers templates for creating mashup applications. When you select "New Application from Template" from the Infor Mashup Designer New menu, you will choose the appropriate tab and then select the template that is most similar to what you are trying to do.</p> <p>To create a new application from a template, from the Infor Mashup Designer main menu, select New > Application from Template, click the tab for the type of mashup you are creating (for example, Document Archive or Infor M3) and then select the template that most closely resembles what you are planning to create.</p> <p>You can also create a new application from scratch. From the Infor Mashup Designer main menu, select New > Application.</p>

Types of files associated with mashups

The following types of files are generated in the process of creating and deploying a mashup.

File extension	Description
.xaml	Mashups are created using XAML (Microsoft's markup language for XML) and have the extension .xaml.
.lawsonapp	An application that you have created in <i>Infor Mashup Designer User Guide</i> and deployed to run in Infor Smart Office as a stand-alone application has this extension.

File extension	Description
.manifest	Projects have this extension. A project file is a list of files, including .xaml files, that make up the project, a similar concept to a shipping manifest.
.mashup	After a mashup has been deployed, the deployed file has the extension .mashup.

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- "The Infor Mashup Designer XAML design interface" on page 11
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Creating a new XAML (application) in Infor Mashup Designer

This topic provides the basic steps for creating a new mashup application.

In Infor Mashup Designer terms, a "XAML" is a .xaml file, a part of a mashup application that performs a task. It can be the only .xaml file in a project or it can be one of many.

To create a new XAML from a template

- 1 Launch the Designer.

One way to do this is from Navigator, click Mashup > Tools > Mashup Designer.

You will be on a blank Designer canvas.

- 2 From the File menu, click New > New XAML from Template.

- 3 Click the tab that contains the types of templates you want to create.

Depending on your configuration, options might be Document Archive or M3.

- 4 Click the template that is most like the mashup you want to design and then click Create.

- 5 Assign a location and name to the resulting .xaml file.

For ease in locating the application later, it is a good idea to use a name that describes the task the application performs.

- 6 If you are presented with a dialog box prompting you to associate the new .xaml file with the current project, click Yes or No depending on your preference. You can assign or re-assign .xaml files with projects at any time.

You will be on the Designer canvas and can begin adding controls to your application.

To create a new application (no template)

- 1 Launch the Designer.

One way to do this is from Navigator, click Mashup > Tools > Mashup Designer.

You will be on a blank Designer canvas.

- 2 From the File menu, click New > New XAML

- 3 Assign a location and name to the resulting .xaml file.

For ease in locating the application later, it is a good idea to use a name that describes the task the application performs.

- 4 If you are presented with a dialog box prompting you to associate the new .xaml file with the current project, click Yes or No depending on your preference. You can assign or re-assign .xaml files with projects at any time.

You will be on the Designer canvas and can begin adding controls to your application.

The Infor Mashup Designer XAML design interface

Infor Mashup Designer includes an editor for creating mashups.

You can type XAML directly onto the Designer canvas or place controls onto the editor and then configure them using the control properties dialog boxes.

In most cases, you can also directly edit the XAML code. However, when adding and configuring a new control, using the properties dialog boxes is a good idea, even if you are familiar with XAML. This will ensure that you configure only properties that are supported by Infor Mashup Designer.

Designer toolbar

The toolbar that runs along the top of the Infor Mashup Designer XAML editor screen contains standard Infor Smart Office toolbar menu items, including File and Edit. There are also options for:

- Run: Run the XAML file that is currently open or select Open to locate a different XAML file.
- Deploy: Deploy (or undeploy) a private mashup.
- The gear icon opens a dialog box for configuring controls, either adding a new one to the mashup or editing an existing one.

- The word wrapping icon (to the left of the gear icon) toggles word-wrapping in your XAML editor. Turning word-wrapping on can enhance readability of code. At times you might want to turn it off, to, for example, prevent screen movement while you are working.
- Set preview icon toggles a preview of what your mashup will look like.
- Edit icon (pencil) that toggles the ability to use drag and drop tools and edit controls directly on the canvas. In combination with preview mode, you can immediately see the effects of changes you are planning to make.

Editor properties

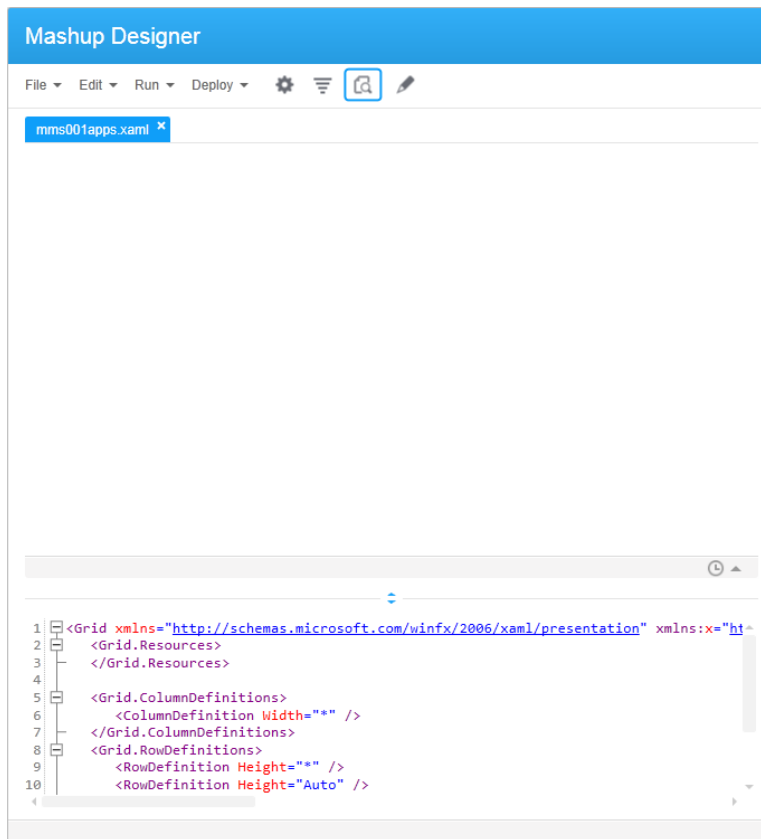
This section provides a brief overview of how to work with the Designer editing canvas.

The editor provides several methods for creating and editing a mashup application:

- Preview / edit mode, sometimes called "WYSIWYG": This method lets you drag controls visually onto the canvas as well as make edits to grid and control properties so that you can see their effects during design time. This is the method that many mashup designers will use most.
- XAML editor: The Designer includes a text editor that is optimized for XAML code creation. This is the method that XAML developers will typically find the fastest.
- Menu-driven editor: In this editing method, the grid and all controls are editable through a menu system.

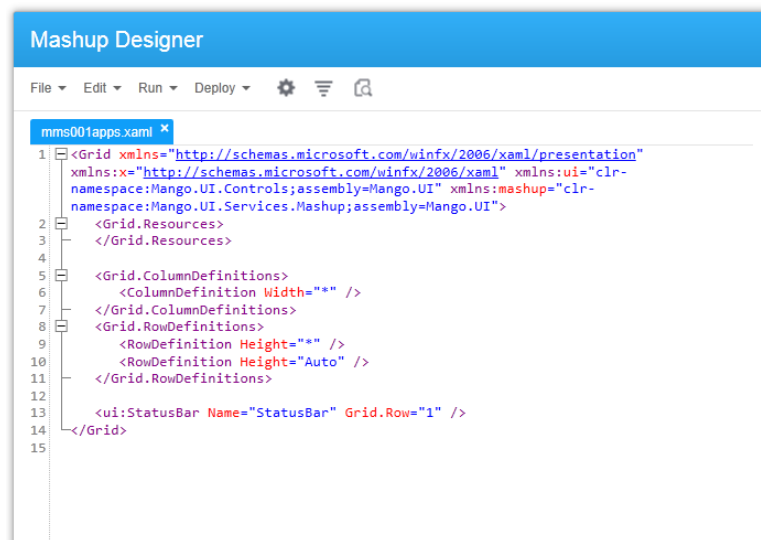
Preview / edit mode

When you start a new XAML application, the Designer opens a blank window in Preview mode with the XAML editor appearing in the bottom portion of the window. Click Edit (pencil icon) to launch Edit mode. Now you can drag controls from the Controls pane (bottom right) and edit rows and columns.



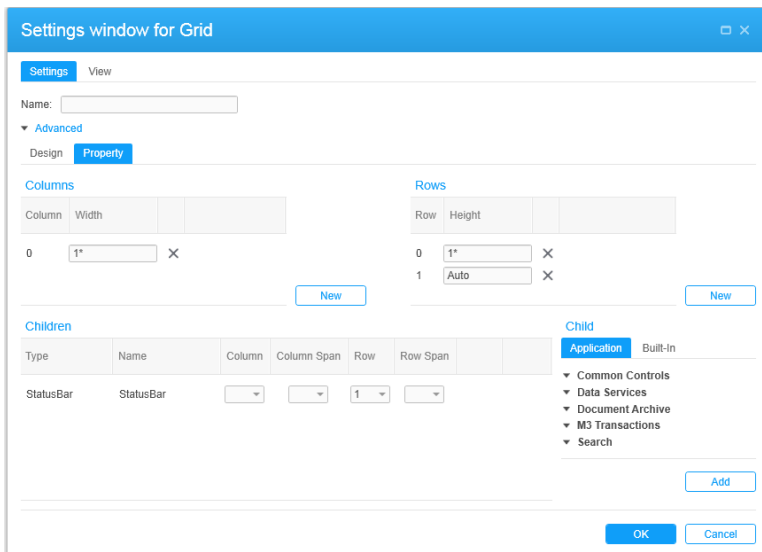
XAML editor

This is the default The editor provides color coding of properties and automatic indenting to help make your code readable.



Menu-driven editing of the grid

The grid is the space where you create your mashup application. You can use a menu-based method for placement of controls (text blocks, panels, links, input boxes, and so on).



Many of the examples in this document show the menu method for adding and placing controls. If you decide to use the menu method and are not familiar with its concepts, be sure to read additional information in this guide to provide background.

Properties dialog boxes

When you add a new control or select an existing control to be configured, a dialog box for the new control opens in a new window.

Properties tab (bottom-right pane)

When you move through the XAML code, the properties for each control appear along the bottom-right pane.

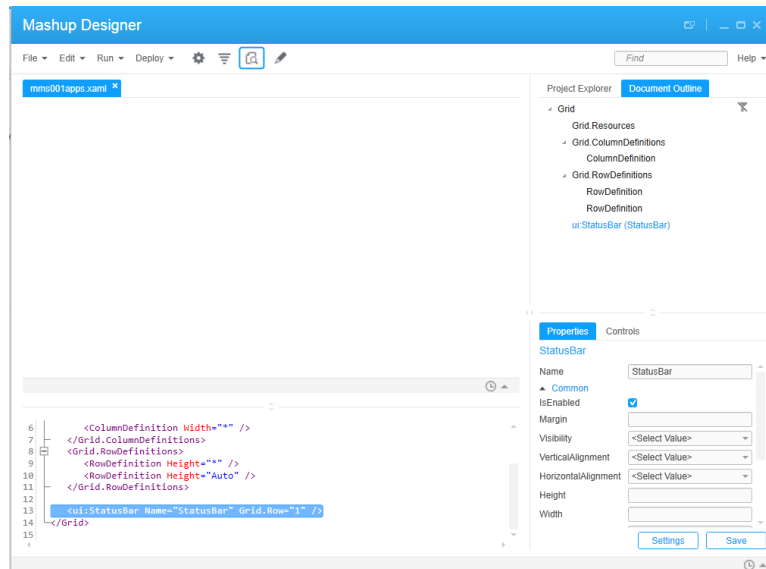
Controls tab (bottom-right pane)

Use this tab to add new controls to the mashup or to edit an existing control. (This works the same as the gear icon on the toolbar.)

Document Outline tab (top-right pane)

The Document outline tab shows a list of all controls used in the mashup. It provides a quick way to locate controls.

Figure 1. Screen capture: Mashup Designer canvas showing Document Outline mode



When you select a control in Document Outline, the XAML editor automatically moves to the section in your code where the control is used.

Project Explorer tab (top-right pane)

If the mashup you are currently designing is part of a project, the Project Explorer pane shows all files that are included in the Project.

If more than one .xaml file is included in the project, you can select one of the .xaml files to show its properties in the Properties tab (lower-right pane).

You can also add a .xaml file to the project. When the project name is selected, an Add button is available in the Profile section of the pane. (You might need to scroll to see the button.) Click Add to browse for the file to add.

The Create button is a quick way to save the .xaml file you are currently working on. It will automatically become part of the current project.

If a Delete button is available, you can remove the .xaml file currently showing in Path.

Using the Designer preview editing feature

Infor Mashup Designer includes a feature for manipulating elements on the Designer grid interactively that includes a drag and drop method for adding and moving controls.

The preview editing feature lets you:

- Drag controls onto the designer canvas at the location where you want them to be or move them after they have been placed
- Quickly add rows and columns or change their size and position on the grid

- Right-click a control to open a context menu that lets you quickly edit control properties or perform other actions.

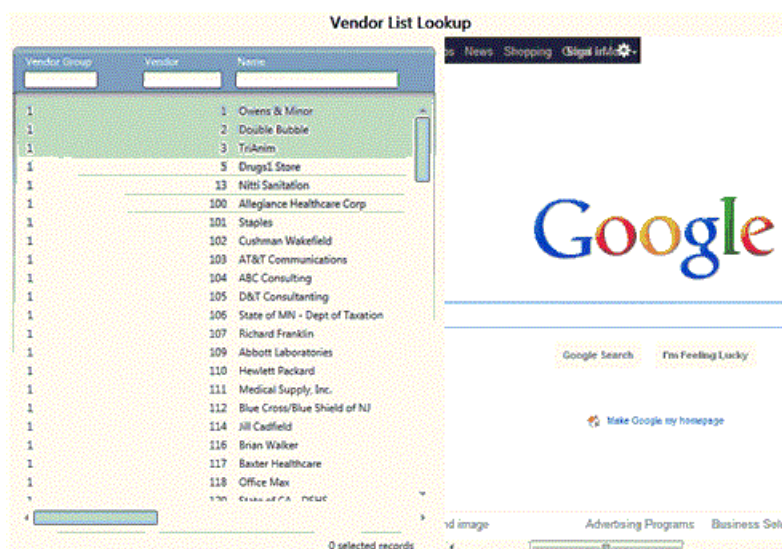
Most importantly, this method lets you see during design time the effect of changes you are currently making so you can change them "on the fly."

The menu method of adding controls to the designer canvas and manipulating its features is still available for you to use. Many mashup developers might choose to use a combination the drag and drop and menu-driven methods. For developers knowledgeable in XAML, editing controls directly through the XAML editor is also still available.

Simple drag and drop example: Combining a list of vendors and adding a call to a search engine

The following simple (and not particularly useful) mashup shows how to add controls to your designer canvas and manage the grid.

This mashup displays a list of vendors, from the Lawson AP10.1 application, and lets users run a Google search to locate additional information about a vendor without leaving the mashup.



The following sections describe the actions needed to create this mashup.

Create a new XAML file

From the Designer File menu, select File > New XAML and then add a name for the new mashup.

By default, files are stored in: My Documents\XAML\[name of XAML file]

Select "preview" mode

By default, when you start a new XAML application, the Mashup Designer canvas is in XAML source editing mode.

Click the Preview icon on the toolbar. A pencil icon for toggling editing mode appears on the toolbar. When you click it, the default screen changes so that you can begin adding controls.

The pencil icon must be selected in order for you to directly edit items on the canvas.

Editing a control

For our example mashup, we want the TextBox that currently Displays "Application Template" to say "Vendor List Lookup."

You can use the drag and drop feature to move controls to other positions on the Designer. For our example, we will move the title TextBox ("Application Template") which has been in the middle of row 2 to row 1. This works the same as when you add through drag and drop. Just click the TextBox and drag it to correct position.

To change the text on the TextBox from the default of "Application Template" to "Vendor List Lookup," simply right-click the text box. From the context menu, click Settings and then type the correct text.

Delete unneeded controls

By default, the Designer includes a status bar that our sample mashup does not need. In Preview mode, you can right-click a control to open up a context menu that includes a Delete option. When you click Delete, the currently selected control is removed.

Edit the grid for required number of rows and columns

Note: If you are not familiar with such concepts as specifying column height and width, another topic describes these things in the context of menu-driven grid editing. "[The Infor Mashup Designer grid](#)" on page 18

By default, the Designer allows for a single column. The field for changing number of columns is in the top right of the Designer. Type the number of rows that you want to use or use the arrow key to scroll up or down.

For our example, we need two columns one for the for the ListPanel and one for the WebBrowser.

By default, the Designer allows for three rows. The field for changing the number of rows is in the bottom right of the Designer. Type or select the number of rows that you need.

For our example, we need two rows, one for the TextBox that shows the application title ("Application Template" by default) and one for the side-by-side ListPanel and WebBrowser controls.

For column width, we will keep things simple for this example. We will type "400" for the number of pixels that should be used for each column.



Dragging and dropping controls

Now we are ready to add the ListPanel and WebBrowser controls.

For the ListPanel:

Note: For our example, we are working with a Lawson ListPanel.

- 1 From the Properties pane on the right side of the Designer canvas, click the Application > Lawson Transactions > ListPanel and drag the ListPanel to the canvas.

The ListPanel settings dialog box appears.

- 2 Assign a name to the ListPanel.
- 3 Select or type the name of the Token (form) that contains the list you want to use.
- 4 Assign or update other properties as needed. (You can return later to make updates; only Name and Token are required in this case.)
- 5 Click OK when you are finished setting properties.

For the WebBrowser:

- 1 From the Properties pane on the right side of the Designer canvas, click the Application > Common > WebBrowser and drag the WebBrowser to the canvas.

The WebBrowser settings dialog box appears.

- 2 Assign a name to the WebBrowser.
- 3 Type the URL. (In some cases, you might need to add protocol, for example, "http://".)
- 4 Assign or update other properties as needed. (You can return later to make updates.)
- 5 Click OK when you are finished setting properties.

The Infor Mashup Designer grid

The grid is the space where you create your mashup application. You can think of it as a piece of graph paper if you find that image helpful. It is, in fact, a table that keeps track of the placement of all controls (text blocks, panels, links, input boxes, and so on) that are used in your mashup.

The Grid settings dialog box is for making settings for the grid. To open it from the XAML design interface, position your cursor on the first line of the XAML code and then click Settings (gear icon) from the toolbar.

The concept of a grid will be familiar to experienced software developers. If you are not familiar, the brief information in this section should help. In addition, read the examples in this document. The step-by-step approach used in those sections will make the grid concept easy to understand.

Controls are considered children of the grid. In Infor Mashup Designer, you can configure settings for the grid as a whole and also for each child control.

When you click the gear icon, the Settings for Grid dialog box opens. The properties on the top of the Settings tab are also available to all controls and are described in another section.

The top portion of the Settings for Grid dialog box is for configuring the grid as a whole.

The Children portion is for selecting a control that has already been added to grid so that it can be configured. This includes the position of the control on the grid using the column and row combo boxes. You can also select a control, and, when it is highlighted, click the gear icon to open the dialog box of settings.

The Child portion is for adding selecting a control that has already been added to grid so that it can be configured.

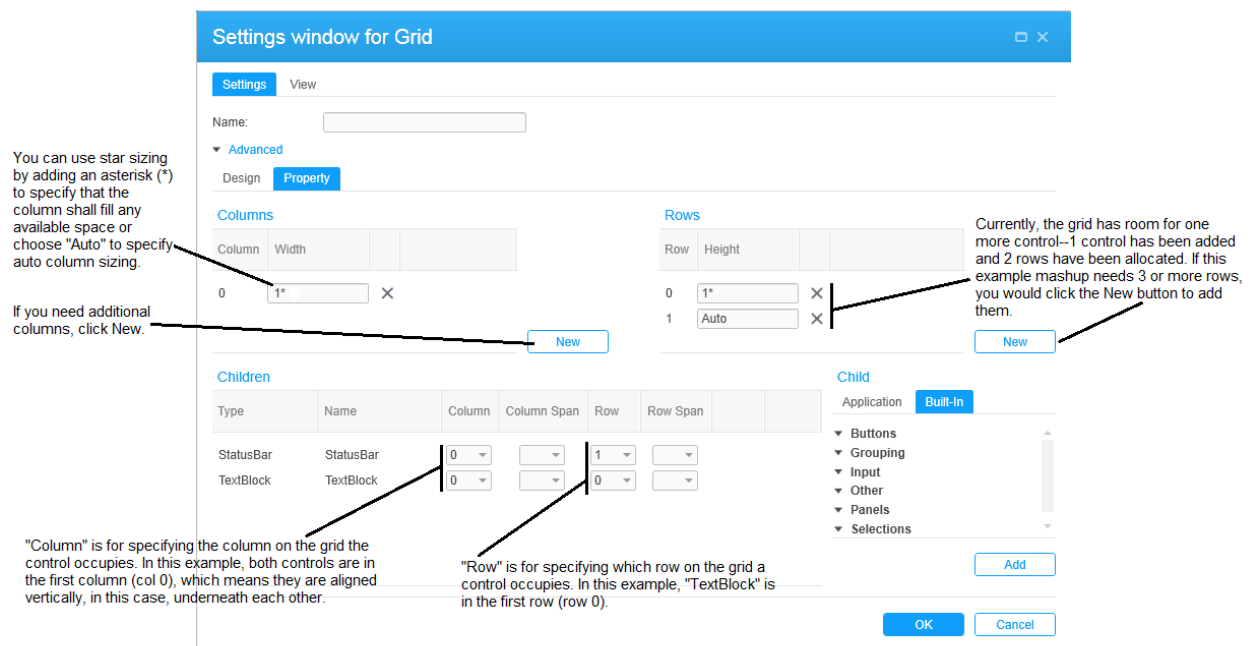
Click on either the Application or Built-in tab to gain access to the type of control you want to add. In general, the Application tab contains controls associated with a particular Infor application. The Built-in tab, in general, contains generic controls (selection buttons and combo boxes, input boxes, separators for visually enhancing a mashup, and so on) that are available to all mashups.

Placing children on the grid

This section describes how to use the grid to help you to determine where controls will be placed in relation to other controls.

The grid column numbers (starting with 0) are for horizontal placement; the row numbers (also starting with 0) are for vertical placement. The simple example below shows how to specify rows and columns for controls.

Figure 2. Placing controls on the grid



The table that follows describes the meaning of grid column and row properties for controls.

Setting	Description
Columns and Rows	

Setting	Description
Column Height	<p>For each column, you can type the height of the column using one of three sizing options.</p> <ul style="list-style-type: none">• Pixels: For example, "2"• Star sizing: For example "2*". <p>Note: For more information on star sizing, see "Using star sizing on the grid" on page 20</p> <ul style="list-style-type: none">• Auto: Type "Auto" to use this.
Row Height	<p>For each row, you can type the height of the column using one of three sizing options.</p> <ul style="list-style-type: none">• Pixels: For example, "2"• Star sizing: For example "2*". <p>Note: For more information on star sizing, see "Using star sizing on the grid" on page 20</p> <ul style="list-style-type: none">• Auto: Type "Auto" to use this.
Children	
Type	This the type of control.
Name	Optional. Type a custom name for the control.
Col	Select the column you want to configure from the drop-down list.
Col Span	If you want the control to span multiple columns, specify the number of columns.
Row	Select the row you want to configure from the drop-down list.
Row Span	If you want the control to span multiple rows, specify the number of rows.

Using star sizing on the grid

Star sizing indicates the distribution of available spaces in proportion to columns and rows of a grid. The term is derived from the fact that you can specify a size of a column or a row by adding an asterisk (*) to a value. For example, if you have a grid with three rows, you could set the height of the row to 2, 3, and 1. This means that the rows would occupy a ratio of 2:3:1 as shown in the following table:

Row A - 2*	2 star row
Row B - 3*	3 star row
Row C - *	1 star row

Adding or selecting existing controls in Infor Mashup Designer

This section describes how to add new controls onto the Designer canvas. It also describes how to select an existing control for editing.

Information about what each control does and how to configure it is in another section.

Adding a new control to the canvas

- 1 From the Designer canvas, click the Controls tab on the bottom-right pane

Or

Click the gear icon from the toolbar

A dialog box for selecting and configuring controls opens.

You can also right-click on the XAML editor and then click Insert Control. You are prompted to select the type of control from the context menus.

Note: If you receive an error message, the reason could be that your cursor is positioned inside another control. Move your cursor so that it is outside a close bracket ("/>").

- 2 Click the Built-in or Application tab to select the type of control you want to add.

In general (but not in all cases), the Built-in tab is for controls that affect the look and feel of the mashup and for enabling user input. They are available to all Infor Mashup Designer users.

The Application tab is, in general, for panels and other controls that perform an action that is available from an Infor product. Only users who have access to a specific product can create mashups based on the product.

Selecting an existing control for editing

- 1 If you want to make changes to a control that already exists, use one of the following methods to locate the control:

- With the XAML file that contains the control open, click the Document Outline tab (right pane), locate the control in the list, and then click the gear icon on the toolbar.
- From anywhere in the XAML file, click the gear icon.

A dialog box showing all controls appears.

Select the control and then click the gear icon to the right.

- On the XAML editor screen, right-click within the tags for the control you want to edit and then click Settings.

In all cases, a dialog box for changing properties for the control opens.

- 2 Make settings for the control's properties as needed.
- 3 Click OK when you are finished configuring properties.

Identifying bookmark-enabled content

In Infor M3 mashups, bookmarks are an important concept. They provide the access points to program components that will be used in a mashup.

In order to be able to create a DetailPanel control in Infor Mashup Designer, the Infor M3 components accessed must be bookmark-enabled. (Infor M3 components are bookmark-enabled.)

This topic describes one method for determining if a program you want to access in a mashup has been bookmark-enabled. You would perform this procedure in Infor Smart Office before you begin configuring a panel.

You can also check to see if a program has been bookmark-enabled when you configure a panel control in Infor Mashup Designer. An example application in this document shows how to do this.

For more information, see "[Adding and configuring a ListPanel](#)" on page 54.

- 1 From the Infor Smart Office canvas, open the program you want to access and move to a detail view.
- 2 Right-click the detail view. If Bookmarks appears as an option on the context menu, the program has been bookmark-enabled.

Creating translatable headers in a mashup

For Infor M3 DetailPanels, ListPanels and VisualizerPanels, mashup developers can ensure that headers are automatically translated into a user's local language.

After the configuration described here is performed, any time a user runs the translated mashup in Infor Smart Office, the header will display in the user's language.

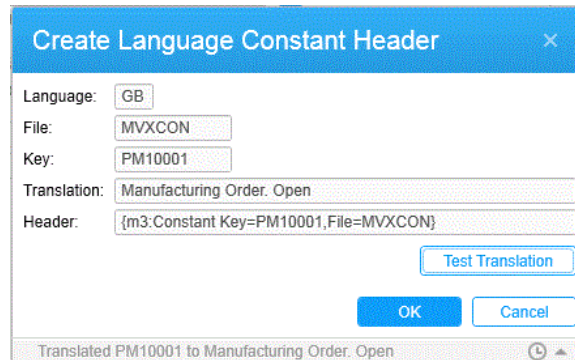
Important: These instructions assume you have experience with translating in Infor M3 BE.

- 1 From the Header setting of the panel, if you want to create a non-translatable header, simply type the header text.

The actual text you type displays in all cases. (This is the only way that customers can create headers.)

- 2 To create a translatable header, select "Use language constant" and then click the button to open a dialog box for specifying the constant.
- 3 In the Key field, type the variable for the header. (In our example, this is "PM10001".)
- 4 Populate the Language field with the two-letter code for the language you want to translate to.
- 5 Click Test Translation to make sure you have typed the variable and language code correctly.

When you are finished configuring, your Create Language Constant Header dialog box should look similar to the following.



The screenshot shows a dialog box titled "Create Language Constant Header". It has a blue header bar with a close button (X). The dialog contains the following fields and buttons:

- Language: GB
- File: MVXCON
- Key: PM10001
- Translation: Manufacturing Order. Open
- Header: {m3:Constant Key=PM10001,File=MVXCON}
- Test Translation button
- OK button
- Cancel button

At the bottom, there is a status bar that reads "Translated PM10001 to Manufacturing Order. Open" with a refresh icon on the right.

- 6 If the translation is what you expected, click OK.

- ["Built-in controls and properties" on page 24](#)
- ["Application controls \(organized by application type\)" on page 31](#)
- ["Advanced / common settings" on page 36](#)
- ["Creating custom templates for ListPanel controls \(Infor M3 only\)" on page 38](#)

Built-in controls and properties

This section is a master list of controls and properties available in Infor Mashup Designer. The list is arranged in alphabetical order and is intended to be used as a reference for looking up information about a control that you plan to use in a mashup.

This section is organized into the following sections:

- **Built-in controls:** Controls that are available to all types of mashups.
- **Application controls:** Controls that are available from the Application tab on the Properties pane of the design window. These are further organized by type of application. (Only applications used at your site are available for selection.)
- **Advanced properties:** Properties that are available to any (or most) controls and are available from any settings dialog box by expanding the Advanced button.

Control	Description	Location	Properties specific to this control
Button	Add a toggle (enable / disable) option to your mashup.	Buttons	<ul style="list-style-type: none">• Content: Use to type the text that appears on the label.• Is Cancel: Users can cancel a change they just made by pressing ESC.• Is Default: Users can activate this control by pressing the Enter key.

Control	Description	Location	Properties specific to this control
CheckBox	Add a control that can be selected and cleared by the user.	Buttons	<ul style="list-style-type: none"> Content: Use to type the text that appears on the label. Is Checked: The option is enabled.
ComboBox	A box that allows for a dropdown list for single selections.	Selections	<ul style="list-style-type: none"> Selected Index: Use this option to indicate the index of the child that should be the default. Zero (0) is the index of the first child in the list. ComboBoxItem: Click Add to add items that will be available for your user to select.
DockPanel	<p>A panel control in which child elements are added to the panel relative to the position of other elements.</p> <p>In general, a DockPanel needs more space than a StackPanel.</p>	Panels	Last Child Fill: Enable if you want the last child control added to the DockPanel to always fill the remaining space regardless of any other value that you set on the last child control. This ensures that controls are aligned visually on the panel.
Expander	Adds an arrow that, when clicked by a user, shows the control.	Grouping	Is Expanded: If enabled, the control name is visible under the expander.
Grid	<p>A type of panel control that opens a new grid panel control (in the current grid). You can then add other controls to the new grid.</p> <p>Grid panels have the most flexibility because items that you add are aligned along a horizontal or vertical grid.</p>	Panels	Specify the column width and row height for controls on this grid.

Control	Description	Location	Properties specific to this control
GridSplitter	Split the screen into two horizontal or vertical segments. The user can scroll within the segments.	Panels	<p>Select the type of splitter you want to use:</p> <ul style="list-style-type: none">• Horizontal• Vertical• Horizontal (Only Handle): Horizontally oriented splitter with no "handle" lines• Vertical (Only Handle): Vertically oriented splitter with no "handle" lines
GroupBox	Draws a box around another element.	Grouping	<p>On this settings window, select options for the border and for the child that will be contained within it.</p> <p>Click the Create button to add a child element. You will be prompted to select the type of control to add. This can be any available control. The name you type for new child control in the Name setting will automatically appear next to the type.</p> <p>Configure other settings for the control as needed.</p>

Control	Description	Location	Properties specific to this control
Image	<p>Add and format a graphic.</p> <p>Note: See the Microsoft Developer's Network (msdn.com) for additional information.</p>	Other	<ul style="list-style-type: none"> Source: Browse for the location of the graphic Stretch: Determines how the image should be stretched to fill its container. <p>Options are:</p> <ul style="list-style-type: none"> Uniform: The image is scaled so that it fits completely within the output area. The image's aspect ratio is preserved. Uniform to Fill: The image is scaled so that it completely fills the output area while preserving the image's original aspect ratio. Fill: The image is scaled to fit the output area. Because the image height and width are scaled independently, the original aspect ratio of the image might not be preserved. That is, the image might be warped in order to completely fill the output container. None: The image is not stretched to fill the output area. If the image is larger than the output area, the image is drawn to the output area. What does not fit is clipped. StretchDimensions: Determines how the image is scaled. Options are Both, UpOnly, DownOnly. In general, use "Both" for a small image, "DownOnly" for a large image.
Label	Add a label to an item on the screen.	Input	<ul style="list-style-type: none"> Content: Type the text that appears on the screen. Is Header: If enabled, this label will be formatted as a header.

Control	Description	Location	Properties specific to this control
ListBox	Add a list of options (multiple selections typically allowed).	Selections	<p>Selected Index: Use this option to indicate the index of the child that should be the default. Zero (0) is the index of the first child in the list.</p> <p>Click the Add button to add a ListBoxItem, an item for the list you are adding.</p>
ListBoxItem		Selections	Type the name of the item that will be available for your user to select.
Menu	Add a menu structure to launch from the toolbar of your mashup. Double-click the menu to add items.	Selections	Separator: Add a line to separate this menu from others.
Menu Item	Add individual items to a menu. These are the items that branch out from a menu and activate when a user mouses over them.	Selections	<ul style="list-style-type: none">Header: Add the name of the menuSeparator: Add a line to separate menu items
PasswordBox	Add an input box for users to type passwords.	Input	<ul style="list-style-type: none">Text: Type the text that appears on the password box.Max Length: Maximum number of password characters.
RadioButton	Add a single-choice-from-several-choices control in the round radio button format.	Buttons	<ul style="list-style-type: none">Content: Use to type the text that appears on the label.Is Checked: The option is enabled.GroupName: The name of the group that this option is associated with.

Control	Description	Location	Properties specific to this control
ScrollViewer	<p>A Scroll View enables content to be displayed in a smaller area than its actual size.</p> <p>When the content of the Scroll Viewer is not entirely visible, the Scroll Viewer displays scrollbars that the user can use to move the content areas that is visible.</p>	Grouping	<p>For each type of Scroll View that you are using, Horizontal or Vertical, select Scroll Viewer visibility:</p> <ul style="list-style-type: none"> • Auto: Scrollbars are visible if needed. • Visible: Scrollbars are always visible. • Hidden: Scrollbars are always hidden. • Disabled: Scrolling is disabled. <p>Note: 1) The Infor Smart Office Design System does not recommend using horizontal scroll viewers. You can use the "Hidden" or "Disabled" properties to make sure a type of scroll viewer does not appear in a mashup.</p> <p>2) The Microsoft Developer's Network web site (msdn.com) has additional information about scroll viewers</p>
Separator	Control that is used to separate items in items controls.	Other	Use Horizontal: By default, separators are vertical. If this option is enabled, the separator is horizontal.
StackPanel	<p>A type of panel in which controls are added in the same direction, either vertical or horizontal.</p> <p>When the size of the panel is a concern, a StackPanel can be a good choice.</p>	Panels	Orientation: Horizontal or vertical

Control	Description	Location	Properties specific to this control
Tab control	<p>A tab control is for Add a tab to a mashup.</p> <p>After the tab is added, you can then add any control as a child of the tab. To add a child control to the tab, highlight an option from either the Application or Built-in tabs and then click the Add button. The new control is considered a child of the tab control.</p> <p>To move a child up or down on the tab control, click it and then use the arrow icons to change position.</p>	Selections	<p>Configure the tab that should be selected by default. This tab should be "0". ("0" is the first option, "1" is the second and so on.)</p> <ul style="list-style-type: none">• Selected Index:• Selected Value Path:• Tab Strip Placement: Determines where on the grid the tab should be aligned. Choices are: Left, Top, Right or Bottom.• Hidden: Enable if you want the table to be hidden when not in use.
TextBlock	Add an input box for short textual information.	Input	Text: Type the text that appears on the TextBlock.

Control	Description	Location	Properties specific to this control
TextBox	Add an input box for users to add textual information. Typically, this would be for longer input. Word wrapping options are available.	Input	<ul style="list-style-type: none"> Text: Type the text that appears on the TextBox. Max Length: Maximum number of characters. Min Length: Minimum required characters of user input. Min Lines: Minimum required lines of user input. Max Lines: Maximum allowed lines of user input. Text Wrapping: Options for controlling text wrapping: <ul style="list-style-type: none"> NoWrapping: Text that is too long will be truncated. Wrap: Text is allowed to wrap. WrapwithOverflow: Text is allowed to wrap and any text that does not fit in the TextBox is hidden but available through scrolling.
WrapPanel	A panel control that positions child elements in sequential positions from left to right.	Panels	<ul style="list-style-type: none"> Orientation: Horizontal or vertical Item Width: Width of controls added to the panel. Specify "Auto" or a number in pixels. Item Height: Height of controls added to the panel. Specify "Auto" or a number in pixels.

Application controls (organized by application type)

This section describes application controls. It is organized by type of application. These controls are available from the XAML designer canvas when you click the Application tab (bottom-right pane) and then click the application type (Common Controls, Document Archive, M3, Lawson Transactions, and so on).

The properties and events for the application controls are documented in the Infor Smart Office SDK Documentation help file. To access SDK Documentation, click Mashup > Tools > Mashup Designer > Help > SDK Documentation.

Note: Only applications that you use at your site are available on the Application tab.

Common Controls

This section describes controls grouped with Common applications. They can be used by any mashup.

Control	Description
ApplicationMessageControl	Sends and receives messages in a Mashup.
Dialog	A dialog control for showing modal dialogs
FileViewer	<p>Add a viewer for files that can be viewed in the mashup. The location can be specified as a URI or a location on a computer.</p> <p>Supported file types include .rtf, xps, xml and the common image types. Microsoft Office and Adobe PDF files are not supported.</p> <p>Note: This control is not intended to display an .html page. Use the WebBrowser control for that purpose.</p>
MashupInstance	<p>Add a link to an existing mashup to the current mashup.</p> <p>If the mashup you are creating is fairly complex, you might use this control to break it up into several files to make each one easier to manage. After the additional files are created, you can add them through a link to your main mashup file.</p>
MashupWebControl	Use to launch web mashups controls when the mashup is deployed as a web mashup.
MessageBoxControl	Shows messages in a dialog, in a status bar, or both.
NavigationTree	<p>Create a custom data view in a tree format.</p> <p>When you configure the control, you add Members and a Uri to each member.</p>
NetBrowser	<p>Add a link to a web page that invokes the Infor Lawson Single Sign-on feature.</p> <p>Infor Lawson example: If you want to create a mashup that includes a call to Employee or Manager Self-Service applications, you would use this control.</p>

Control	Description
PrintControl	<p>Add any of the following print-related functionality to a mashup:</p> <ul style="list-style-type: none"> • Print: Prints the contents of the current screen • Preview: Previews the printer output on screen • PrintToFile: Sends the printer output to a file. <p>You can specify a file name in an event parameter called Filename or leave the parameter blank to prompt user for a file name.</p>
StatusBar	Adds a status bar that shows the progress of the mashup.
TextEditor	Add a simple text editor to a mashup.
Timer	<p>Used in conjunction with Start and/or Stop events to control when an action should start or stop.</p> <p>The timer is visible only in the xaml code (not in the mashup application).</p>
WebBrowser	Add a link to a web page.

Data Services

This section describes controls grouped with Data Service applications.

Control	Description
DataDetailPanel	Add a panel for displaying detail data retrieved from a source outside M3 applications using a data service protocol.
DataListPanel	Add a panel for displaying a list of data retrieved from a source outside M3 applications using a data service protocol.
DataPanel	Add a panel for displaying data retrieved from a source outside M3 applications using a data service protocol.

Document Archive

This section describes controls grouped with Document Archive. You must use Document Archive Foundation in order to use these controls.

Control	Description
ListPanel	Displays a search results list from Document Archive Foundation

Control	Description
Detail Panel	Display an object stored in Document Archive Foundation.
SearchPanel	Add a search box for executing a search of Document Archive. This panel should be combined with a ListPanel for showing the results.
AddPanel	Add a panel for adding items to Document Archive. For example, you might use this control if you are creating a mashup that lets a user create records that will be added directly to DocumentArchive.
NotesPanel	Add a panel for Notes related to an application and program.

M3 Transactions

This section describes controls grouped with M3 applications.

Note: Personalizations in Mashups are only supported for the ListPanel and not for the DetailPanel.

Control	Description
DetailPanel	Add an M3 DetailPanel to a mashup.
ListPanel	Displays a search results list from M3 Transactions
VisualizerPanel	Add a visualization (chart view) to a mashup
MIPanel	Add a panel for automating an M3 transaction through an M3 API call.
MIComboBox	Add a box for an M3 API call which can be inserted into an M3 mashup.
MIListPanel	Add a box for an M3 API call which can be inserted into an M3 mashup.

Search

This section describes controls grouped with Enterprise Search. You must use Enterprise Search to use of these controls.

Control	Description
SearchPanel	Add a search box for executing a search through Enterprise Search. This panel should be combined with a Search Result Panel for showing the results.
SearchResultPanel	Combine with an Enterprise Search Panel to show results of search.

Process Server

This section describes the TriggerPanel control which is for use with the process automation product.

Control	Description
TriggerPanel	Add a panel for triggering a process.

Lawson applications

This section describes controls that can be used with Lawson applications.

Control	Description
DataPanel	<p>Add a query to a mashup. This is similar to the Infor Lawson (S3) Info Browser widget in Infor Smart Office in that you can create a specific query for some data that you often need to retrieve and save it to a location where you can access it easily.</p> <p>Security settings are applied when the query is processing.</p> <p>Lawson DataPanels must reference the data definition XML file. The definitions are contained in:</p> <p>\$LAWDIR\portapersist\lawson\SmartOffice\mashups</p> <p>They are not exported from Infor Mashup Designer when the mashup is deployed. You must copy them manually to the sever where you are deploying.</p>
DetailPanel	Add a detail area (from a form) to a mashup
FormPanel	For creating a panel based on an Infor Lawson form. You could use this control to, for example, create a simplified version of a form.
ListPanel	Add a list to a Lawson mashup.
ReportPanel	Add a completed report to a mashup.

Control	Description
AttachmentsPanel	Responds to events from a ListPanel, FormPanel, or DataPanel (if a token is specified) for tokens with header level attachments
FtpPanel	Wraps the functionality of the File Transfer Wizard
TelnetPanel	Wraps the Telnet launcher application
DrillSelectTextBox	Add a control that enables drill select or the Drill Around feature.
TreeView	Use to create a custom view of Lawson data in a tree format.

Lawson custom chart options

If you are formatting a Lawson panel and want to make use of custom features, you can do so by enabling the Include chart definition flag on the settings dialog box for panels that support charts. A dialog box for selecting custom options appears.

- Chart Type: Select the format for the graph: Pie, bar, or line
- Value Field: Data name of the field from which to take values.
- Label Field: Data name of the field to use for chart labels.
- Group by Field: Data name of field to use for grouping.
- Height: Optional. Height in pixels for ChartOnly visualization. Default is 400
- Width: Optional. Width in pixels for ChartOnly visualization. Default is 250
- Chart only: If enabled, only the chart, not the data, is rendered on the user's screen. Disabled by default.
- Show settings: If enabled, the Settings area is expanded so you can make custom settings for a chart.
- GroupBySum: If enabled, the GroupByType visualization is set to Sum. Disabled by default.

Advanced / common settings

This section describes controls that are available to all controls. When you expand the Advanced button on the settings dialog for a control or if you expand the Common tab from the XAML editor window (bottom-right pane), the settings described in this section appear.

In general, these settings are for making absolute settings for an individual control. If, for example, you have a control that must be in a specific location on the mashup screen, you can specify a location that will override an automatic setting. (Not all advanced / common settings apply to all controls.)

Advanced settings are also available for the grid as a whole, as appropriate, if they are expanded on the Settings for Grid dialog box.

Setting	Description
Name	Type a name to uniquely identify this control within the mashup.
Is Enabled	This flag determines if the control currently being configured is currently active in the mashup.
Margin	<p>Controls the margin settings (left, top, right, bottom). If you want all four settings to be the same, simply type the number one time (for example, "1"). If you want to specify each margin separately, separate each setting with commas. Specify the margin settings in this order: Left,Top,Right,Bottom</p> <p>Example:</p> <p>This configuration...</p> <p>"1,1.5,2,0.5"</p> <p>...has the following effect:</p> <p>Left margin = 1</p> <p>Top margin = 1.5</p> <p>Right margin = 2</p> <p>Bottom margin = 0.5</p>
Visibility	<p>This setting is commonly used with controls such as scrollbars to determine when they should become visible to the user.</p> <p>Options are:</p> <ul style="list-style-type: none">• Visible: Control is always visible (even if no data is available for display)• Hidden: Control is always hidden• Collapsed: Control can be seen by users but is collapsed unless the user clicks it.
Vertical Alignment	<p>Determines vertical placement of the control as a whole, that is, where the control is placed within the grid.</p> <p>Options are:</p> <ul style="list-style-type: none">• Top: The control is aligned to the top of the grid.• Center: The control is centered within the grid.• Bottom: The control is aligned to the bottom of the grid.• Stretch: A (child) control fits the space that the parent control has allocated.

Setting	Description
Horizontal Alignment	<p>Determines horizontal placement of the control as a whole, that is, where the control is placed within the grid.</p> <p>Options are:</p> <ul style="list-style-type: none"> • Left: The control is right-aligned in relation to the grid. • Center: The control is centered within the grid. • Right: The control is left-aligned in relation to the grid. • Stretch: A (child) control fits the space that the parent control has allocated.
Height	Height of the element of the control.
Width	Width of the control in pixels. Specify by typing "Auto" or a number plus asterisk (for example, "2*").
Min height	The minimum height of the control.
Min width	The minimum width of the control.
Max height	The maximum height of the control.
Max width	The maximum width of the control.
Tooltip	Type mouseover help text for the element.
Tag	An object that can be used to store information specific to this control.

Creating custom templates for ListPanel controls (Infor M3 only)

This topic describes how you can create a template for producing lists for Infor M3 ListPanel mashups. You might use this feature if your mashup is intended to generate highly formatted output.

For example, suppose you wanted to create a list of employees that looked similar to this...



Using a custom template would help you to format the information about each employee the way you want to see it.

Custom templates have the following requirements / limitations:

- The list is displayed as a single column with no header and no position fields.
 - The bookmark used to start the ListPanel must always set correct values for the position fields to get a consistent behavior. (Blank is allowed.)
 - The list context menu supports options, related options, links and copy to clipboard. All other menu items are removed.
 - No personalizations are applied to the list. Any formatting must be done in the template.
- 1 To use a custom template with a ListPanel, on the ListPanel Settings dialog box, select "Template" for the List Style option.
 - 2 In "Templates indexes/names," you can specify a comma-separated list of zero-based column indexes or column names or a combination.

Examples:

ITNO,ITDS,STAT

0,1,4,7

Click Generate when you are ready to begin creating the template.

A dialog box for specifying formatting the index data appears.

- 3 On the Generate template dialog box, specify how you want your list items to look.
You will be prompted to make sure you want to save the template when you click OK. This is because only one template can be stored in the ItemTemplate location so your new template will overwrite an existing (if one existed).
- 4 If you need to edit formatting of a ListPanel that has been added through a template, you can do so by configuring the XAML code in the mashup.

- ["Configuring events for mashups" on page 40](#)

Configuring events for mashups

Events determine mashup behavior by defining when a control's action should occur. Controls that are able to make use of events, typically panels, have an Events tab among their configuration properties.

Configuring an event: general

This section provides general information about how to configure an event. Information about events available to the type of panel you are configuring are in the sections that follow.

Available events depend on the control that is being configured.

A list of additional events that can be used with specific controls is in another section.

For more information, see ["Default events" on page 44](#).

- 1 From the control that you are working with, click the Events tab.
- 2 If an event that you want to use is available for selection, select it.

Or

If you want to create a new event, click New.

A dialog containing settings for an event appears.

- 3 Make selections for settings as needed.

Setting	Description
Event information	

Setting	Description
Source	<p>Select:</p> <ul style="list-style-type: none">• Global: Triggered by the execution of the window as a whole (not a single event).• Current Control: Triggered by the execution of the control you are currently configuring. If the current control has a name, the name will be available for selection.
Source event	<p>Source events tell what action or status change to listen for in another event.</p> <p>All controls that use events have the source event Startup available to them. This event tells the control to execute when a user activates it. (For the</p>
Target	<p>Select:</p> <ul style="list-style-type: none">• Global: Controlled by the execution of the window as a whole (not a single event).• Current Control: Controlled by the execution of the control you are currently configuring. If the current control has a name, the name will be available for selection.• Close <p>The only events here are "Close" which closes the window and "None" which means that no target control exists, this event is used for the Activate and the Visibility* properties on the Event which makes it possible to change the "visual" state of a control.</p> <p>Select the control you want the parameters to be loaded to (if any). "Current Control," the default, means the parameters will be loaded to control you are currently configuring.</p> <p>Global means that event execution is controlled by the window as a whole.</p> <p>Returns:</p> <ul style="list-style-type: none">• Closed: Closes the window• None: No target control exists. This information is used by the Activate and Visibility properties, if set, to change the visual state of the control. <p>Returns Close, which closes the window.</p>

Setting	Description
Target event	<p>Target events are used to store the source event so that it executes a specific action with the data retrieved from the source event.</p> <p>All controls that use events have the target events, Clear and Refresh.</p> <p>Clear means perform a Clear action when the control completes.</p> <p>Refresh means perform a Refresh action when the control completes.</p> <p>Populate this event only if it is not the default event for the target.</p>

Parameters for the event

Source Key	Populate with the name of the source or with a Value. (Do not use both.)
Target Key	The name that the target control will use for the value. Leave blank if you want to use the default of "Source Key."
Value	<p>Insert a value instead of a source key name. (Do not populate both Source Key and Value.) To insert values from the current panel, surround key names with curly braces {}.</p> <p>Enable the checkbox to the right of this field if you want to send an empty attribute to the XAML for the control instead of a null result. (Different controls will behave differently when this flag is enabled.)</p>
Default Value	<p>Optional. Insert a value to be used if the actual value is null or empty. To insert values from the current panel, surround key names with curly braces {}.</p> <p>Enable the checkbox to the right of this field if you want to send an empty attribute to the XAML for the control instead of a null result. (Different controls will behave differently when this flag is enabled.)</p>
Data Type	Select data type: String, Numeric, or Date.

Conditions (parameters for conditions, if used)

Note: Conditions are optional and can be used for filtering data to determine when an event occurs.

Source Key	Populate with the name of the source or with a Source Value. (Do not use both.)
Target Key	The name that the target control will use for the value. Leave blank if you want to use the default of "Source Key."

Setting	Description
Source Value	<p>Insert a value for source instead of a source key name. (Do not populate both Source Key and Source Value.) To insert values from the current panel, surround key names with curly braces {}.</p> <p>Enable the checkbox to the right of this field if you want to send an empty attribute to the XAML for the control instead of a null result. (Different controls will behave differently when this flag is enabled.)</p>
Target Value	<p>Optional. Insert a value to be used for the target if the actual value is null or empty. To insert values from the current panel, surround key names with curly braces {}.</p> <p>Enable the checkbox to the right of this field if you want to send an empty attribute to the XAML for the control instead of a null result. (Different controls will behave differently when this flag is enabled.)</p>
Operator	If your condition is a value based on a comparison, select the operator to be used.
Advanced	
Activate	<p>Type a comma-separated list of names of controls that should be activated when the event is executes.</p> <p>The setting is available for all controls. For TabItem and Expander controls, it sets focus to the controls.</p>
Always load	<p>By default an event is executed only when the target control is executed. This is to maximize performance.</p> <p>If an event should always be visible even if the target is not executed, enable this setting.</p>
Link Uri	If you want to link to a Uri when the event occurs, configure the location here. This can be either an external web page or a link to another mashup or server location.
Debug	When checked, a message dialog is displayed when the event is executed with all the values loaded into the event.
Visible	<p>This setting makes one or more specified controls visible.</p> <p>Typically you would use this event with Hidden. For example, you can specify an event that should be set to Visible for a control and then specify another event to hide the control.</p>

Setting	Description
Hidden	This setting makes one or more specified controls hidden. Typically you would use this event with Visible. For example, you can specify an event that should be set to Visible for a control and then specify another event to hide the control.
Collapsible	Select an available control, such as a status bar, that is visible or hidden on the control per the user's selection.
External	Enable this setting for an absolute Uri, if you want users to be able to open the link as an external window outside of Infor Smart Office.

The tables that follow describe available target events grouped by type, for example, Infor M3, Data Service, Infor Lawson (S3) and so on. If no events are listed, it means that the control (or the type of control) either uses only default controls or it does not support events.

Default events

The events in the following table are available to most controls.

Event	Description
Startup	Source event: Executed at startup of the control.
Clear	Target event: Executes when the control completes its action.
Refresh	Target event: Executes the last event again.

Common controls events

Event	Description	Supported targets
Elapsed	Fires when the timer control reaches its value.	Timer
Get	Retrieves the file. (Default event. This will be used if another event is not specified.)	FileViewer

Event	Description	Supported targets
LoadFile	Use to specify the file that should be opened in the editor. TextEditor can also make use of source event, CurrentItemChanged, to fire every time a new file has been loaded into the editor.	TextEditor
Open	Open the file in a modal dialog.	FileViewer
Print	Prints an element to a printer.	PrintControl
Preview	Shows a print preview for an element in a new window.	PrintControl
PrintToFile	Prints an element to a file in the XPS file format. The name of the file can be set using an event parameter called Filename. If the Filename parameter is missing a file chooser dialog will be displayed for the user.	PrintControl
Start	Use to indicate when a timer control should start executing.	Timer
Stop	Use to indicate when a timer control should stop executing.	Timer

Data Service events

Event	Description	Supported targets
UpdateComplete	Use to indicate that all updates to a record have been completed. Use when multiple updates can be made.	DataDetailPanel

Document Archive events

In this table, the controls listed in the "Available to" column are those associated with DocumentArchive.

Event	Description	Supported targets
Get	Tells the target to perform a fetch for the specified data.	DetailPanel
Add	Tells the target to add a detail line with the specified data.	DetailPanel
SearchPanel	Target event. Use when a Document Archive search panel executes a search event.	ListPanel
FreeText	Target event. Performs a free text search.	ListPanel
Attribute	Target event. Performs an attribute search.	ListPanel
XQuery	Target event. Performs an XQuery search.	ListPanel

Enterprise Search events

Enterprise Search controls support the default events.

Infor M3 events

The following target events are available for controls based on Infor M3 applications and the MI API.

Event	Description	Supported targets
Apply	Target event. Use to indicate when a user clicks Apply.	
Create	Target event. Use to indicate when a user creates a new record.	MIPanel
CurrentItemChanged	Source event. Listens for a Document Archive search panel to activate.	ListPanel DetailPanel
Delete	Target event. Use to indicate that a delete has occurred.	ListPanel MIPanel
FillForm	Target event. Use to indicate that a user has completed filling out a form.	MIPanel

Event	Description	Supported targets
Get	Target event. Use to indicate that data has been retrieved.	MIPanel
List	Target event. Use to indicate that list has been displayed.	ListPanel MIListPanel
ListOption	Target event. Use to indicate that a user has made a selection from a list.	ListPanel
RefreshPanel	Target event: Use to indicate that a panel refresh has been processed.	ListPanel
Running	Source event. Use to indicate when a control is finished loading its data. For example, in a Visualizer panel, when a user clicks in a list to select a record and then data loads, this event is active.	ListPanel VisualizerPanel
Search	Target event. Use when a search is performed.	ListPanel
Update	Target event. Use to indicate a record has been updated.	MIPanel

Infor Lawson (S3) events

In addition to the default events, the following events are supported by Infor Lawson panels.

A list of all available fields is provided in the Source or Target keys drop-down on the Events tab of a Settings window for a control.

Event name	Description	Supported targets
DetailRowSelected	Triggered by a FormPanel after the user has selected a detail row. Parameters: KeysData (required), Value (optional) Example: KeysData = "DetailName" Value="DT0"	FormPanel
FormActionRequested	Triggered by a panel when the user attempts to perform an action on a form. Parameter: Function Code. The value must be an action code supported by the panel. Examples: A for Add, C for Change, and so on.	FormPanel ListPanel
FormDataInvalidated	Triggered by a FormPanel when the screen is cleared or on a successful Delete transaction. Typically, you would target another control's Clear event.	FormPanel
FormDataUpdated	Triggered by a FormPanel after a successful transaction. Parameter: KeysData. Typically passed from a FormPanel to a DetailPanel with key values required to filter the DetailPanel. The event may also pass one or more individual field values.	DetailPanel FormPanel ReportPanel
FormKeySelected	Triggered by a panel when an item in the list is selected. Parameter: FormKey. This parameter is passed a structured string that is the "hidden key" values. Each panel must understand how to build and parse the FormKey.	DataPanel FormPanel ListPanel
FormScriptActionFailed	Triggered by a form script method.	FormPanel
FormScriptActionSucceeded	Triggered by a form script method.	FormPanel
ListFiltered	Triggered when a user filters a list. No parameters are required. May be used with the Clear event to reset the state of a panel	DataPanel DetailPanel ListPanel

Event name	Description	Supported targets
PanelLoadFailed	Triggered if a mashup panel fails to load.	DataPanel Detail Panel FormPanel ListPanel ReportPanel
ResultsExported	<p>Triggered by a ListPanel after the list is filtered (if ExportResults = True).</p> <p>Parameter: ExportedURI: A file URI naming the location of the exported file.</p> <p>This event would typically be used by a browser control with a URI looking to consume the exported file.</p> <p>Example:</p> <p>Sending address information to a browser URI in order to obtain a Google map.</p>	WebBrowser NetBrowser LbiBrowser
SetFormFieldData	Supply field data without triggering a transaction.	FormPanel

Process Server events

The events described below can be used with the TriggerPanel control.

Event	Description
Apply	Target event. Use to indicate when a user clicks Apply.
Clear	Target event. Use to indicate when a user clears a form.
FillForm	Target event. Use to indicate that a user has completed filling out a form.
TriggerFlow	Target event. Indicates that a process (also called a flow) has been triggered.

- ["Infor M3 Example: Creating a list and detail panel mashup using data from Item Master \(MMS001\)" on page 50](#)
- ["Infor Lawson Mashup Example: Selecting a purchase order from a list and displaying it" on page 60](#)

Infor M3 Example: Creating a list and detail panel mashup using data from Item Master (MMS001)

The example in this section walks you through creating a simple but powerful application for viewing a list and then, when the user clicks on a record in the list, being able to view details.

There are several ways to create the example shown here. For example, you could perform many of the steps shown here by working directly with xaml code. However, this section assumes that the reader is not an experienced software developer. The emphasis in this section is on helping the reader to understand how to do something by providing a significant amount of detail so that you will be successful when attempting to create your own mashup.

It is not necessary to perform all the steps in the order we shown them here. For example, creating a project does not have to be the first task when you build a mashup. You could create a XAML file now and then later associate it with a project. Again, the emphasis here is on explaining the reasons so that you can be successful on your own later.

The example is presented in several iterations, each one adding some complexity.

Note: The examples in this section demonstrate the menu-driven method for editing the grid. You can do many of these procedures using the Preview / Edit method.

Creating the list and detail panel: Version 1, using default behavior of controls

This section describes the simplest version of the mashup we plan to create. It uses default behavior of controls.

Create a new project

- 1 From the Designer File menu, click New / New Project.
You are prompted to supply a name for the project.
- 2 Type a name that briefly identifies what you want the mashup as a whole to do.
This file will be an organizer for all other files (.xaml files, images and so on) associated with the mashup. It will be saved with the extension .manifest
- 3 When you are finished typing the project name, click Save.
The Designer canvas opens.
- 4 In the Properties tab in the bottom-left of the designer, populate the following fields as needed:
 - Name: Assign a name to the project. This is an important field. It contains the name that is used to associate all XAML files with the project and it follows the project throughout its lifecycle.

Be sure to assign a name that is meaningful to you and others who need to use the mashup. Use alphanumeric characters only, no white spaces and no special characters. Do not include versioning information here.
 - Author: Type your name, initials or other identifier
 - Description: Type a textual description of the project to provide quick, explanatory information.
 - Version: Type a version level for the project. Use two to four numbers only, for example, 1.0, 1.0.0, or 1.0.0.0
 - Profile: Select the Lawson Smart Reports Designer profile that is associated through LifeCycle Manager

Click Add to select an existing profile or Create to create a new one. If you select Create, you will be prompted to assign a name to the profile.

By default, profiles are stored on your local machine in
YourDocumentLocation\XAMLprofile.xml
- 5 Click Save from the toolbar when you are finished selecting options. By default the .manifest project file will be stored in C:\My Documents\XAML. You can select a different location when you save the project.

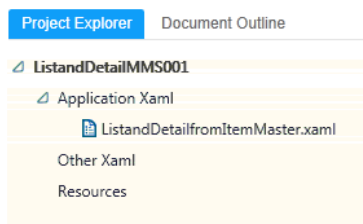
Create a new XAML application

Now we are ready to create the new application or .xaml files. .Xaml files contain the instructions (code) that tells your mashup how to behave. You might have several .xaml files in a project.

- 1 From the Designer File menu, select New / New XAML
You could also select New / New Xaml from Template but for this example, we are creating the .xaml application without a template.
- 2 At the prompt, type a name for the .xaml file. By default, it will be saved to
C YourDocumentLocation\XAML.

- 3 Because we have a project open, we will be prompted to add the new .xaml file to the project. For our example, we will respond Yes here.

The new .xaml file will be added to the list of files in Project Explorer (top-left pane of the designer canvas.)



A .xaml must be associated with a project in order to be deployed, but this can be done at any time. You could respond No to this prompt.

We are now on the Designer canvas. Some boilerplate .xaml code has been added.

```

28March_XamlExamp... X
1 <Grid xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation" xmlns:x="http://schemas.microsoft.com/winfx/2006/
2   <Grid.Resources>
3   </Grid.Resources>
4
5   <Grid.ColumnDefinitions>
6     <ColumnDefinition Width="*" />
7   </Grid.ColumnDefinitions>
8   <Grid.RowDefinitions>
9     <RowDefinition Height="Auto" />
10    <RowDefinition Height="*" />
11    <RowDefinition Height="Auto" />
12  </Grid.RowDefinitions>
13
14  <!-- An example of an optional menu bar, could be removed if no menu bar will be used -->
15  <!--
16  <StackPanel Grid.Row="0" Grid.Column="0" Orientation="Horizontal" HorizontalAlignment="Stretch" Height="40"
17    Style="{DynamicResource styleBackgroundApplicationBarMashup}">
18    <Menu>
19      <MenuItem Header="_File">
20        <MenuItem Header="_New" />
21        <Separator />
22        <MenuItem Header="_Save" />
23      </MenuItem>
24    </Menu>
25  </StackPanel>
26  -->
27
28  <TextBlock Text="Application Template" Grid.Row="1" Grid.Column="0" HorizontalAlignment="Center" VerticalAlignment="Ce
29
30  <ui:StatusBar Name="StatusBar" Grid.Row="2" Grid.Column="0" />
31 </Grid>
32

```

We are ready to add and configure controls for the mashup.

Designing the mashup

The sub-sections that follow describe how to add and configure controls for the mashup. But, first, we need to understand the concept of the grid.

The grid is a table or a chart -- you could even think of it as an electronic sheet of graph paper if that helps you visualize -- in which you tell your application where to place each control that you want to use in your mashup.

When we click Tools (the gear icon) from the toolbar, a grid appears in a new window above the .xaml code. When you access the grid for the first time in a new application, a few commonly used controls will be on the Designer canvas initially. In our case, we already have StatusBar.

In addition to the default controls, the Designer also automatically adds a column and two rows to the canvas.

Figure 3. Screen capture: Starting a new application initial screen

Even when it is not required, it is always a good idea to name the components of a mashup that have a Name field. Because we are creating a new application, we start on a new grid. We will assign the name "MyGrid." (Name fields are alphanumeric but cannot include spaces or special characters.)

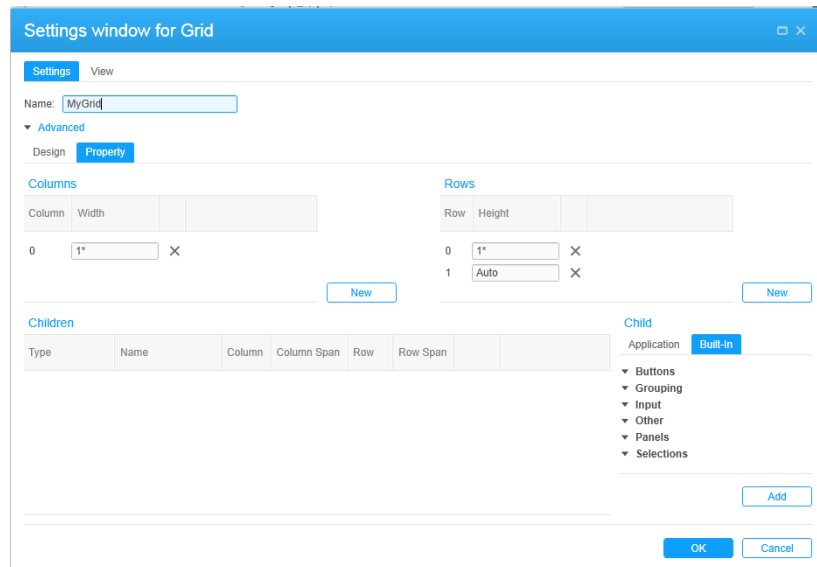
We will start by deleting any controls placed on the grid by default that we do not want to use. In our case, we will delete the StatusBar. To delete the StatusBar, click in the StatusBar control row. When the control is highlighted and the context menu appears to the right of the control, click the X to delete the control.

Children

Type	Name	Column	Column Span	Row	Row Span	
StatusBar	StatusBar			1		⚙️ X

The sections that follow describe adding and configuring other controls needed for our mashup application.

Figure 4. Screen capture: Infor Mashup Designer screen showing a new grid, ready for controls to be added



Adding and configuring a ListPanel

To add a ListPanel control to your application, click the Application tab, click M3 Transactions, and then double-click ListPanel.

You will automatically be on the screen for configuring the ListPanel. There are a number of options that can be manually configured but for our simple initial application, we will configure only a few. Even so, the resulting mashup will be complex and powerful while being quick and easy to create.

For our application, we will:

- Populate the Name field to differentiate this ListPanel from any other ListPanels this application might use. (We will use the name "MyListPanel".)
- Move to the capture portion of the screen (bottom right), type the name of the program our new ListPanel is based on (MMS001) and then click the Start Capture button.

Figure 5. Screen capture: ListPanel settings screen showing Show Capture button (before bookmarks have been created)

The screenshot shows the 'Settings window for ListPanel' with tabs for Settings, Events, and View. The 'Settings' tab is active, displaying 'List Panel Settings' and 'Bookmark Settings'.

List Panel Settings:

- Name: MyListPanel
- Advanced:
 - List type: Standard
 - Personalization type: Standard
 - Header: [Text Field] ...
 - ☐ Use language constant
 - Show list header: ☐
 - Read-only list header: ☐
 - Expand list header: ☐
 - Enable Sorting order: ☒
 - Enable View: ☒
 - Enable basic options: ☒
 - Enable related options: ☒
 - Include options: [Text Field]
 - Exclude options: [Text Field]
 - Enable Text option: ☒
 - List style: Standard

Bookmark Settings:

- Program: [Text Field] [Get]
- Table: [Text Field] [Get]
- Key names: [Text Field]
- Field names: [Text Field]
- Parameter names: [Text Field] ...
- Panel: [Text Field]
- Panel sequence: [Text Field]
- Start panel: [Text Field]
- Include start panel: ☐
- Sorting order: [Text Field]
- View: [Text Field]
- Focus field: [Text Field]

Capture:

- Program: MMS001 [Start Capture]

Buttons: OK, Cancel

It can take several seconds to process. You will be on a new window where you must navigate to an MMS001 detail screen. Click on a field and then, from the toolbar at the top of the screen, click Create Bookmark.

Figure 6. Screen capture: Capturing Infor M3 bookmark information for a mashup

The screenshot shows the 'M3 Item. Open - MMS001/B Infor master Company M3 BE ATE-MNB...' window. The 'Capture Mode' tab is active, showing a 'Create Bookmark' button and a 'Selected fields' dropdown.

Table Data:

Item	Item number	Name	Sts
00	9501	Mattias test222222	20
00	9502	Soft test	20
00	COMMODITY01	COMMODITY CODE TEST 1	20
00	COMMODITY02	COMMODITY CODE TEST 1	20
00	COMMODITYFE1	FECOMMODITY CODE TEST 1	20
00	COMMODITYFE2	FECOMMODITY CODE TEST 1	20
00	D TEST	D test	20
00	MLSALLOC1	MLS allocation test	20
00	MLSALLOC10	MLS allocation test	20
00	MLSALLOC11	MLS allocation test	20
00	MLSALLOC12	MLS allocation test	20
00	MLSALLOC13	MLS allocation test	20
00	MLSALLOC2	MLS allocation test	20
00	MLSALLOC3	MLS allocation test	20

Buttons: Close, Browse, Basic Information, F, G, H, Next >

- Close the MMS001 window when you see the "Created Bookmark" message. You will be returned to the Designer with required fields populated in your settings window.

Figure 7. Screen capture: Panel settings window after bookmark information has been captured

The screenshot shows the 'Settings window for DetailPanel' with tabs for Settings, Events, and View. The 'Settings' tab is active, showing 'Advanced' settings. On the left, 'Detail Panel Settings' include: Name (MyDetailPanel), Header (with a checkbox for 'Use language constant'), Layout mode (Default, with a checkbox for 'Override default layout mode'), Include fields (text input), Column count (text input), and Enable scrolling (checkbox). On the right, 'Bookmark Settings' include: Program (MMS001, with a 'Get' button), Table (MITMAS, with a 'Get' button), Key names (MMCONO,MMITNO), Field names (text input), Parameter names (text input with a dropdown arrow), Panel (E), Panel sequence (text input), Start panel (text input), Include start panel (checkbox), Sorting order (1), View (text input), and Focus field (text input). At the bottom right, there is a 'Capture' section with Program (MMS001) and a 'Start Capture' button. At the very bottom are 'OK' and 'Cancel' buttons.

- Accept defaults for the rest of the options on the settings window. Click OK to return to the Designer canvas.

Adding and configuring a DetailPanel

For the DetailPanel, we will perform almost the same steps that we did for the ListPanel.

- Populate the Name field to differentiate this DetailPanel from any other DetailPanels this application might use. (We will use the name "MyDetailPanel".)
- Click the "Enable scrolling" flag (right side of the DetailPanel settings window). This is necessary because a DetailPanel might contain so much information that it cannot fit in the mashup application window without scrolling.
- Type "MMS001" in the bookmark capture program name field and then click Capture.
- Move to the capture portion of the screen (bottom right), type the name of the program our new DetailPanel is based on (MMS001) and then click the Start Capture button.

It can take several seconds to process. You will be on a new window where you must navigate to an MMS001 detail screen. Click on a field and then, from the toolbar at the top of the screen, click Create Bookmark.

You will be returned to the panel control dialog box with required fields populated.

- Move to the capture portion of the screen (bottom right), type the name of the program our new ListPanel is based on (MMS001) and then click the Start Capture button.

It can take several seconds to process. You will be on a new window where you must navigate to an MMS001 detail screen. Click on a field and then, from the toolbar at the top of the screen, click Create Bookmark.

- Close the MMS001 window when you see the "Created Bookmark" message. You will be returned to the Designer with required fields populated in your settings window.
- Accept defaults for the rest of the options on the settings window. Click OK to return to the Designer canvas.

Note that:

- Using bookmark data is required for a DetailPanel. (It is optional for a ListPanel but, in our application, we chose to use it.)
- In our example, we are accessing bookmark data from the MMS001 program for both the ListPanel and the DetailPanel. However, that is not a requirement. We could have, for example, obtained bookmark data for the ListPanel from one program and bookmark data for the DetailPanel from another program.
- Only panels that have been enabled for bookmarking can be used in mashups that require bookmark data. Information about how to determine if a panel has been enabled for bookmarks is another section.

For more information, see "[Identifying bookmark-enabled content](#)" on page 22.

Add a separator control to your screen

This step is not necessary but for purposes of this example, we will add a Separator to the mashup. For now, we will just add it. In a later step, we will tell the mashup where it and other controls should be physically placed on the mashup.

From the Designer canvas, click the Built-in tab and then open the Other controls. Add the Separator control by double-clicking (or by clicking once and then clicking the Add button). We will accept all defaults for the Separator control by clicking OK.

The Separator is now added to "Children" portion of the Designer canvas. We now have four controls on our screen even though only three have been allowed for by the grid defaults. We need to add a row for this control which we will do in a later step.

Adding an event

Now we need to tell the ListPanel when to display the DetailPanel.

We do this from the ListPanel settings window. From the Designer canvas, double-click the ListPanel control to open the settings window. Now click the events tab and then click New.

In the Source Event field, select "Startup." This tells the mashup that when a user selects a record in the ListPanel, the DetailPanel for that record opens.

You can leave other settings per defaults. Click OK to return to the Designer canvas.

Placing the controls in the appropriate locations on the grid

We will now do the following things:

- **Add a row to the grid to accommodate the Separator control.**
Do this by clicking the New button that appears nearest the Row portion of the designer screen.
- **Place the objects in the rows in which we want them to appear.**

We want the controls to appear in this order shown below, where "0" is assigned to the first control in the list, "1" is assigned to the second control, and so on.

- MyListPanel = 0
- MySeparator = 1
- MyDetailPanel = 2
- MyStatusBar = 3

When we are finished configuring, the Children portion of the designer should look like this:

Figure 8. Screen capture: Controls lined up in the correct rows for the example application

Children

Type	Name	Column	Column Span	Row	Row Span
StatusBar	StatusBar	0		3	
ListPanel	MyListPanel	0		0	
DetailPanel	MyDetailPanel	0		2	
Separator		0		1	

Figure 9. Screen capture: Designer view after all controls have been added and placed in the correct locations

Settings window for Grid

Settings View

Name: MyGrid

Advanced

Design Property

Columns

Column	Width
0	1* X

Rows

Row	Height
0	1* X
1	Auto X
2	Auto X

Children

Type	Name	Column	Column Span	Row	Row Span
StatusBar	StatusBar	0		3	
ListPanel	MyListPanel	0		0	
DetailPanel	MyDetailPanel	0		2	
Separator		0		1	

Child

Application Built-In

- Business Intelligence
- Common Controls
- Data Services
- Document Archive
- M3 Transactions
- Process Server
- Search

Add OK Cancel

Previewing the mashup

At any time, you can click the Preview tab to view your application. If you notice things you want to change, you can click the Edit icon (pencil) to return to the designer. If you are a XAML developer, you can also click the Code tab to directly manipulate the XAML code.

Creating the .lawsonapp

The final step is making the application (.lawsonapp) that makes your new mashup available for deployment to other users by your system administrator. These steps are in another section.

Creating the list and detail panel: Version 2, selecting bookmark fields manually

This section continues with the same sample application but, in this case, instead of using the capture feature to default in bookmark information, we will specify the fields we want to use.

To do this in a real-world application, you would have to be knowledgeable enough about the program to know which fields are required in addition to knowing which non-required fields you want to appear in your mashup.

In this case, on the panel control settings window, simply type a comma-separated list of fields you want to have in your mashup in the Key Names and Field Names fields.

If you are not sure about the field names to use, open the Infor M3 program that you want to use in Infor Smart Office, Right-click in a field that you want to include and then select Field Help from the context menu. The field name appears in the lower right corner in parentheses, for example, "(MMITNO)".

Creating the list and detail panel: Version 3, customizing the layout

This section again continues with the same sample application but introduces the idea of custom layout through a simple example.

Customizing the mashup screen layout is a feature for advanced users, for example, for software developers who have experience in designing complex screens. For simple applications, Infor Mashup Designer provides significant flexibility without changing what Infor Mashup Designer calls the "layout mode." In this example, we will show one of the simpler layout customizations you can make, changing the number of columns over which a DetailPanel displays. You might do this if you want to display more fields than would be possible without scrolling. For our example, we will display the DetailPanel information across two columns.

Figure 10. Screen capture: Single column (default) display of Price INFO data in a mashup



The image shows a screenshot of a web application interface titled "Price INFO". It contains four input fields arranged vertically. The first field is labeled "Item number:" and contains the text "11953-1A-LAR". The second field is labeled "Purchase price:" and contains the number "0". The third field is labeled "Sales price:" and contains the number "10.0". The fourth field is labeled "Currency:" and contains the text "SEK" followed by a link labeled "Swedish krona".

Specifying dual column display for a DetailPanel

From the DetailPanel settings window, type "2" in the Column Count field.

Figure 11. Screen capture: Changing the column layout for a DetailPanel

Settings window for DetailPanel

Settings Events View

Name: MyDetailPanel

▼ Advanced

Detail Panel Settings

Header: ...

☐ Use language constant

Layout mode: Default

☐ Override default layout mode

Include fields:

Column count: 2

Enable scrolling: ☐

Figure 12. Screen capture: Price INFO in mashup after two-column setting

Price INFO

Item number: 11953-1A-LAR Sales price: 10.0

Purchase price: 0 Currency: SEK Swedish krona

Infor Lawson Mashup Example: Selecting a purchase order from a list and displaying it

This topic walks you through creating an application that lets a user select a purchase order from a list and display it. The form that maintains the purchase order is related to the list so that any changes made through the list are also updated in the form.

This example would be fairly complex to code directly through XAML. With Infor Lawson Mashup Designer lets you create this application in a few minutes.

Note: This example demonstrates the menu-driven method for editing the grid. You can do many of these procedures using the Preview / Edit method.

Creating the new Infor Lawson (S3) project and application

Create a new project

- 1 From the Designer File menu, click New / New Project.

You are prompted to supply a name for the project.

- 2 Type a name that briefly identifies what you want the mashup as a whole to do.

This file will be an organizer for all other files (.xaml files, images and so on) associated with the mashup. It will be saved with the extension .manifest

- 3 When you are finished typing the project name, click Save.

The Designer canvas opens.

- 4 In the Properties tab in the bottom-left of the designer, populate the following fields as needed:

- Name: Assign a name to the project. This is an important field. It contains the name that is used to associate all .xaml files with the project and it follows the project throughout its lifecycle.

Be sure to assign a name that is meaningful to you and others who need to use the mashup. Use alphanumeric characters only, no white spaces and no special characters. Do not include versioning information here.

- Author: Type your name, initials or other identifier
- Description: Type a textual description of the project to provide quick, explanatory information.
- Version: Type a version level for the project. Use two to four numbers only, for example, 1.0, 1.0.0, or 1.0.0.0
- Profile: Select the Smart Office profile that is associated through LifeCycle Manager

Click Add to select an existing profile or Create to create a new one. If you select Create, you will be prompted to assign a name to the profile.

By default, profiles are stored on your local machine in
YourDocumentLocation\XAMLprofile.xml

- 5 Click Save from the toolbar when you are finished selecting options. By default the .manifest project file will be stored in *YourDocumentLocation\XAML*. You can select a different location when you save the project.

Create a new XAML application

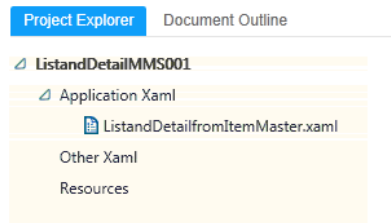
Now we are ready to create the new application or .xaml files. .Xaml files contain the instructions (code) that tells your mashup how to behave. You might have several .xaml files in a project.

- 1 From the Designer File menu, select New / New XAML

You could also select New / New Xaml from Template but for this example, we are creating the .xaml application without a template.

- 2 At the prompt, type a name for the .xaml file. By default, it will be saved to *C:\YourDocumentLocation\XAML*.
- 3 Because we have a project open, we will be prompted to add the new .xaml file to the project. For our example, we will respond Yes here.

The new .xaml file will be added to the list of files in Project Explorer (top-left pane of the designer canvas.)



A .xaml must be associated with a project in order to be deployed, but this can be done at any time. You could respond No to this prompt.

We are now on the Designer canvas. Some boilerplate .xaml code has been added.

```

28March_XamlExamp... X
1 <Grid xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation" xmlns:x="http://schemas.microsoft.com/winfx/2006/
2   <Grid.Resources>
3   </Grid.Resources>
4
5   <Grid.ColumnDefinitions>
6     <ColumnDefinition Width="*" />
7   </Grid.ColumnDefinitions>
8   <Grid.RowDefinitions>
9     <RowDefinition Height="Auto" />
10    <RowDefinition Height="*" />
11    <RowDefinition Height="Auto" />
12  </Grid.RowDefinitions>
13
14  <!-- An example of an optional menu bar, could be removed if no menu bar will be used -->
15  <!--
16  <StackPanel Grid.Row="0" Grid.Column="0" Orientation="Horizontal" HorizontalAlignment="Stretch" Height="40"
17    Style="{DynamicResource styleBackgroundApplicationBarMashup}">
18    <Menu>
19      <MenuItem Header="_File">
20        <MenuItem Header="_New" />
21        <Separator />
22        <MenuItem Header="_Save" />
23      </MenuItem>
24    </Menu>
25  </StackPanel>
26  -->
27
28  <TextBlock Text="Application Template" Grid.Row="1" Grid.Column="0" HorizontalAlignment="Center" VerticalAlignment="C
29
30  <ui:StatusBar Name="StatusBar" Grid.Row="2" Grid.Column="0" />
31 </Grid>
32

```

We are ready to add and configure controls for the mashup.

Designing the mashup

The sub-sections that follow describe how to add and configure controls for the mashup. But, first, we need to understand the concept of the grid.

The grid is a table or a chart -- you could even think of it as an electronic sheet of graph paper if that helps you visualize -- in which you tell your application where to place each control that you want to use in your mashup.

When we click Tools (the gear icon) from the toolbar, a grid appears in a new window above the .xaml code. When you access the grid for the first time in a new application, a few commonly used controls will be on the Designer canvas initially. In our case, they are a TextBlock and StatusBar.

In addition to the default controls, the Designer also automatically adds a column and two rows to the canvas.

Figure 13. Screen capture: Starting a new application initial screen

Even when it is not required, it is always a good idea to name the components of a mashup that have a Name field. Because we are creating a new application, we start on a new grid. We will assign the name "MyGrid." (Name fields are alphanumeric but cannot include spaces or special characters.)

We will start by deleting any controls placed on the grid by default that we do not want to use. In our case, we will delete StatusBar. To delete the StatusBar, click in the StatusBar control row. When the control is highlighted and the context menu appears to the right of the control, click the X to delete the control.

Children

Type	Name	Column	Column Span	Row	Row Span	
StatusBar	StatusBar			1		⚙️ X

The sections that follow describe adding and configuring other controls needed for our mashup application.

Figure 14. Screen capture: Infor Lawson Mashup Designer screen showing a new grid, ready for controls to be added

Designing the interface

We are now presented with a grid, a table that we use to specify where the application's columns and rows should be placed.

Even though we have created the application without a template, a few commonly used objects will be on the designer initially. These are one column and two rows as well as a StatusBar control.

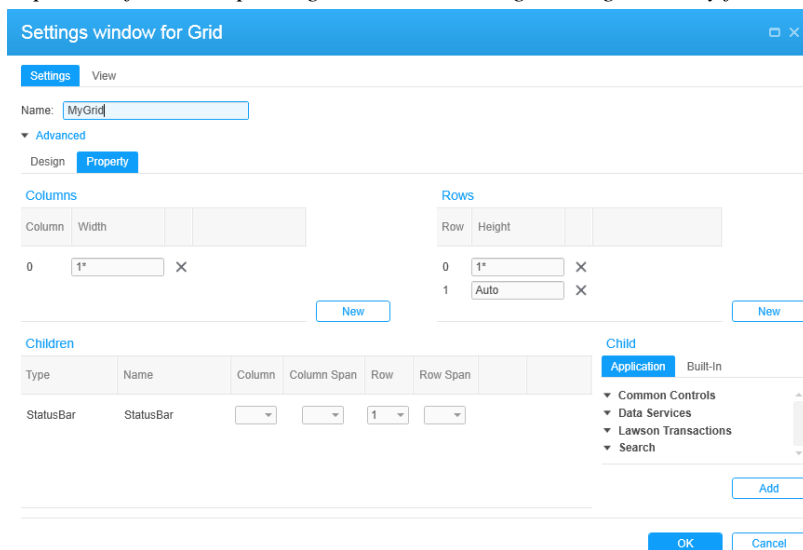
Figure 15. Screen capture: Starting a new application initial screen

First steps

Even when it is not required, it is always a good idea to name the components of a mashup that have a Name field. Because we are creating a new application, we start on a new grid. We will assign the name "MyGrid." (Name fields are alphanumeric but cannot include spaces.)

By default, one control, StatusBar, is added to a new application. For our application, we will keep the StatusBar, which we do want to use. The sections that follow describe adding and configuring other controls needed for our mashup application.

Figure 16. Screen capture: Infor Mashup Designer screen showing a new grid, ready for controls to be added



Configuring the TextBlock control

In this case, the TextBlock displays the title of the application as a whole. Double-click the TextBox to open the configuration options. Assign a Name to the TextBlock; this is to differentiate from any other TextBlocks that might be included in the application. For our example, we assigned the name "MyTextBlock".

In the Text field, type what you want to appear for a title of the panel. For our example, we will type, "Select a PO from the list".

Adding and configuring a ListPanel control

"ListPanel" is the Infor Mashup Designer term for a list object. To add one to your application, open the Application tab, click Lawson Transactions, and then double-click ListPanel.

You will automatically be on the screen for configuring the ListPanel. These are, for the most part, the information that identifies the data you want to appear in your mashup. For this example, we will select only a few of the fields. Complete information for the options available for configuring in this document are in another section of this document.

In most cases, information about fields is also available in the Designer interface. When an "i" in a circle appears next to a field, it means you can click to view the application online help for the field.

For our application, we want to configure the following:

- Name: A name for this ListPanel to differentiate it from any other ListPanels this application might use. (We will use the name "MyListPanel".)
- Token: The name of the form that contains the fields we want to appear in the list.
- Data area: You can leave this blank if you want to use the user's default data area.
- Max Records: The maximum number of records that should be retrieved in a fetch. We will set this to 300.
- Include chart definition: We want to use a chart so make sure this field is enabled.
- Chart options: We will make selections for the following chart options:
 - Chart type: Pie (default)
 - Value field: VENDOR
 - Label field: VENDOR
 - Group by field: VENDOR

Figure 17. Screen capture: Lawson ListPanel for vendor list after configuration

Settings window for ListPanel

Settings Events View

Name: MyListPanel

Advanced

Token: PD20.1 *i* ☒ Read only

Data area: *i* ☐ Show toolbar ☐ Disable personalization

Max records: 300 *i* ☐ Delayed load ☐ Export results

Display fields: *i* Choose Clear

Criteria: *i* Choose Clear

☐ Show chart ☒ Include chart definition

Chart Definition

Chart type: Pie ☐ Chart only

Value field: VENDOR *i* ☐ Show settings

Label field: VENDOR *i*

Group by field: VENDOR *i* ☐ Group by sum

Personalizations: Import... Select... Conditional Styles...

Deployment file: Add Deployment File View Deployment File Delete Deployment File

☐ Add files for all controls in XAML file

OK Cancel

Adding a FormPanel to the mashup

Because we want to be able to launch the form from the list, the form, called a FormPanel control in Infor Mashup Designer, must be added to the form.

Open the Lawson group of controls and then click Form Panel. You will be on the dialog box for configuring a FormPanel.

For our application, we want to configure the following:

- Name: A name for this FormPanel to differentiate it from any other FormPanels this application might use. (We will use the name "MyFormPanel".)

- Token: The name of the form that contains the fields we want to appear in the list, in our case, PO20.1
- Data area: You can leave this blank if you want to use the user's default data area.

Adding an event to the mashup

An event is needed to relate the list to the form. The event in our example tells the list to update itself when the specified event, in our case a user key press, occurs.

On the Events tab we will configure a new event.

- For Event Information, select the following:
 - Source: Type of select, "MyList", the list we have created for this mashup.
 - Source Event: Select "FormKeySelected", one of the events that is always available for forms.
- For Parameters, select:
 - Source Key: Select "_HK", the Lawson name for a key press.

Figure 18. Screen capture: Configuring a simple event for a Lawson mashup: key press launches a list

The screenshot shows the 'Settings window for FormPanel' with the 'Events' tab selected. The 'Event' dropdown is set to '<New>'. Under 'Event Information', 'Source' is 'MyList' and 'Source Event' is 'FormKeySelected'. 'Target' is '<Current Control>' and 'Target Event' is '<Available Events>'. The 'Advanced' section is expanded, showing 'Parameters'. A table with columns 'Source Key', 'Target Key', 'Value', 'Default Value', and 'Data Type' contains one row with 'Source Key' set to '_HK'. Below the table is a 'New' button. The 'Conditions' section is also expanded, showing a table with columns 'Source Key', 'Target Key', 'Source Value', 'Target Value', and 'Operator', with a 'New' button below it. At the bottom are 'OK' and 'Cancel' buttons.

Adding a GridSplitter to the mashup

In order to make the visual transition between the PO and the form more graceful on our mashup, we will add a horizontal GridSplitter control to our mashup. A GridSplitter also lets a user control sizing of the list view or form within the new application.

To add a GridSplitter, click the Built-in tab on the designer screen and then select GridSplitter (Horizontal). Notice that the GridSplitter control is added to the screen. Notice also that we now have four controls on our screen even though only three have been allowed for by the grid defaults. We need to add a row for this object which we will do this in the next step.

Placing the controls in the appropriate locations on the grid

We will now do the following things:

- **Add a row to the grid to accommodate the GridSplitter control.**

Do this by clicking the New button that appears nearest the Row portion of the designer screen.

- **Place the objects in the rows in which we want them to appear.**

We want the controls to appear in this order shown below, where "0" is assigned to the first control in the list, "1" is assigned to the second control, and so on.

- MyTextBlock = 0
- MyListPanel = 1
- MyGridSplitter = 2
- MyFormPanel = 3

When we are finished configuring, the Children portion of the designer should look like this:

Figure 19. Screen capture: Controls lined up in the correct rows for the example application

Children

Type	Name	Column	Column Span	Row	Row Span
StatusBar	StatusBar	0		0	
ListPanel	MyListPanel			1	
FormPanel	MyFormPanel			3	
GridSplitter	MyGridSplitter			2	

- **Setting row height for the list view and form.**

We want to ensure that both the list view and the form have enough display room on the application, so we will set the height for each at "400" (in pixels). Do this by typing "400" in the Row Height field for the controls.

For many controls, it often works well to use the "Auto" selection which means that the designer places the control in the next position in the grid.

Figure 20. Screen capture: Configuring row height for a control

Rows

Row	Height			
0	Auto	×		
1	400	×		
2	Auto	×		
3	400	×		

Previewing the mashup

At any time, you can click the Preview tab to view your application. If you notice things you want to change, you can click the Edit icon (pencil) to return to the designer. If you are a XAML developer, you can also click the Code tab to directly manipulate the XAML code.

Creating the .lawsonapp

The final step is making the Infor Lawson application (.lawsonapp) that makes your new mashup available for deployment to other users by your system administrator. These steps are in another section.

- ["Creating a new project or adding files to an existing project " on page 70](#)

Creating a new project or adding files to an existing project

A project can be thought of as a container for all files related to a particular mashup. All files needed to run the mashup are grouped with the project which has the extension `.manifest`.

When you create a new project, you provide high-level information including project name and author, a description and a version level.

You do not have to create a project before you create the `.xaml` files that will be associated with it. You can assign `.xaml` files to a project at any time.

To create a new project in Infor Mashup Designer

- 1 From the Designer toolbar menu, click New Project.

You are prompted to supply a name for the project.

- 2 Type a name that briefly identifies what you want the mashup as a whole to do.

This file will be an organizer for all other files (`.xaml` files, images and so on) associated with the mashup. It will be saved with the extension `.manifest`

- 3 When you are finished typing the project name, click Save.

The Designer canvas opens.

- 4 In the Properties tab in the bottom-left of the designer, populate the following fields as needed:

- **Name:** Assign a name to the project. This is an important field. It contains the name that is used to associate all `.xaml` files with the project and it follows the project throughout its lifecycle.

Be sure to assign a name that is meaningful to you and others who need to use the mashup. Use alphanumeric characters only, no white spaces and no special characters. Do not include versioning information in the Name field.

- **Author:** Type your name, initials or other identifier

- Description: Type a textual description of the project to provide quick, explanatory information.
- Version: Type a version level for the project. The version level must be two to four numbers.

Examples of acceptable versions:

- 1.0
 - 1.0.0
 - 1.0.0.0
- Profile: If the mashup is deployed through LifeCycle Manager, available Infor Smart Office profile/s are available for selection. Advantages to having an Infor Smart Office profile associated with a mashup is that you can share URIs and strings that are available to Infor Smart Office.

You could click Add to select an existing profile.

You could also save a profile to a local location. By default, profiles are stored on your local machine in *YourDocumentRoot\XAML\profile.xml*

- 5 Click Save from the File men when you are finished selecting options. By default the .manifest project file will be stored in *YourDocumentRoot\XAML*. You can select a different location when you save the project.

Projects are auto-saved each time the Designer is closed or the mashup is executed from the Designer.

Adding .xaml files or other resources to a project that has already been created

- 1 Open the project in Infor Mashup Designer.
- 2 If you want to add a new .xaml file, from the File menu, select Add Existing.
Or if you want to add another type of file, such as an image, select Add Resource.
- 3 At the prompt, navigate to the location of the file or resource you want to add and, when you find it, click Open.

.xaml files will appear in Project Explorer grouped with Other Xaml.

Resources will appear in Project Explorer grouped with Resources.

Adding localization to a project

It is now possible to localize your mashups. This is done by adding localization files to the project and then using the mashup:Constant markup extension where you want the translation in the mashup. All languages loaded into Smart Office is available in the Add Localization context menu. The important part is that the key in the extension matches the entry name in the localization files.

- 1 Open the project in Infor Mashup Designer.
- 2 Select the Project Explorer tab.

- 3 Right click the name of the project. Select Add Localization.
- 4 Select a language that you want to create a localization.
- 5 Under Localization, click the xml of the language you have created.
- 6 Click Launch Externally.
- 7 Modify the entries for MyHeader and MyText or add new ones.
- 8 Click File > Save.
- 9 Close the xml file. Open it again and verify the edited entries.

To use this localization logic in your mashup, you can set the text or content attribute of an element to a markup extension.

Editing text attributes of an xml

- 1 Click the Built-in tab.
- 2 Select Input > TextBlock.
- 3 In the Settings window for TextBlock, use the following guidelines to enter additional field values:

Name	Enter a name for the setting.
Text	Enter {mashup:Constant Key=MyHeader}

- 4 Click OK.

- ["Deploying mashups for testing and individual use" on page 73](#)

Deploying mashups for testing and individual use

There are several ways to deploy mashups to make them available for users to work with.

- **Private deployment:** This type of deployment is only for the person who developed the mashup. Typically, you would privately deploy a mashup for testing purposes.

Instructions for creating a private deployment are in this section.

- **Local deployment:** In this type of deployment, an application (.lawsonapp) file, created by a mashup developer, exists and is copied onto a user's local machine. After the user deploys it, through the Show menu, it is available for selection in Infor Smart Office Navigator in the Mashups menu group.

This method of deployment can be used for testing and for private mashups that have been purchased through Infor Marketplace.

Instructions for creating a .lawsonapp and for local deployment are in this section.

- **Enterprise deployment:** This is how mashups are typically distributed to users.

In this case the .lawsonapp is deployed in LifeCycle Manager.

This document does not provide instructions for enterprise deployment. Those instructions are in the *Infor Smart Office Administration Guide*.

- **Web mashup deployment:** This type of deployment is only available in the Designer if the Mashup Server is registered in the active Smart Office profile. The Web Deploy will do the exact same things as a Private Deploy from the Mashup Server Admin Client, but also display compilation results for the mashup developer about unsupported controls, parameters, events, etc.

Deploying a mashup privately

Private deployment means only you as the creator of the mashup can see it. Typically, you would privately deploy a mashup when you are doing development testing. An application (.lawsonapp) does not need to exist for this type of deployment.

- 1 From the project XAML file toolbar, click Deploy/Private.

A message that the mashup has been deployed privately appears.

The mashup is now available for your use through Infor Smart Office Navigator / Mashups.

- 2 You can Uninstall a local mashup at any time.

From the project XAML file toolbar, click Deploy/Private Undeploy.

Creating a .lawsonapp file for deployment

This topic describes how to create a .lawsonapp file which is a necessary step in the deployment process to make mashups available to users.

The procedure described here creates a file with the extension .lawsonapp.

- 1 From the Infor Mashup Designer toolbar, click File > Generate Package > Smart Office > Lawson Application.

- 2 On the File Deployment Window, use the following guidelines to enter additional field values:

Name	Name of the application
Description	Provide a description for the application.
Version	Version number

- 3 Click Save.

The default Save to location will be the location where you created the mashup but you can save it to another location.

- 4 The .lawsonapp file generates.

You or your system administrator can now deploy the mashup application so that is available through Infor Mashup Designer.

Creating a .webmashup file for deployment

This topic describes how to create a .webmashup file which is a necessary step in the deployment process to make mashups available to the Mashup Administration Client users.

The procedure described here creates a file with the extension .webmashup.

- 1 From the Infor Mashup Designer toolbar, click File > Generate Package > Web Mashup.

- 2 On the File Deployment Window, use the following guidelines to enter additional field values:

Name	Name of the application
Description	Provide a description for the application.
Version	Version number

3 Click Save.

The default Save to location will be the location where you created the mashup but you can save it to another location.

4 The .webmashup file generates.

The system administrator will deploy the web mashup through the Mashup Administration Client. The web mashup will be both available via the Mashup Administration Client and by navigating to the mashup url directly in the browser.

Deploying a mashup locally

1 Copy the .lawsonapp file onto the local machine.

If you are not sure where to copy the file from, contact your system administrator.

2 From the Infor Smart Office Show menu, click Local Mashups and then click Install.

You will be prompted to browse to a location on your local machine.

3 Select the .lawsonapp file you want to deploy and then click Open.

The mashup will be available from Infor Smart Office Navigator/Functions tab/Mashups menu group.

Enabling Mashups via Mashup Administration Client

8

The Mashup Administration Client can be accessed using a browser and can be found on the url template: `http://<mashup_server>:<port>/mashup/admin`. The Admin client contains several features, including deploying a mashup, listing all Public/Private mashups, setting role based security on a mashup, undeploying a mashup, and displaying details of a mashups applications and resources. It also functions as a way to find and execute mashups (also directly in debug mode if wanted). It also has features for deploying/registering systems (a system is a system that supports web mashup controls, such as M3 H5 or Infor Document Archive), listing registered systems, enabling/disabling systems, changing the base url of a system, displaying details about the controls, parameters and events of the system, as well as undeploying the system.

- ["Deploying an application" on page 76](#)
- ["Undeploying an application" on page 77](#)
- ["Maintaining an application" on page 77](#)
- ["Deploying a system" on page 77](#)
- ["Undeploying a system" on page 78](#)
- ["Maintaining a system" on page 78](#)

Deploying an application

- 1 From the Mashup Administration Client homepage, click Mashups > Deploy.
- 2 Click Browse and locate the .webmashup file that you want to deploy.
- 3 Select Public or Private.
 - Public - This option allows you to share the application that you will be deploying.
 - Private - This option allows you to deploy an application for personal use.

Based on the Role (Grid Role) you set, the availability of the mashup can be controlled for different users. Leaving the Role blank will make the mashup available for all users who have access to the grid application.

4 Check Enabled.

5 Click Deploy.

The following table shows a general description of the available options in using Mashup Administration Client after deploying an application:

Option	Description
View All	View the list of deployed applications by you and other users, including applications that you have deployed privately
View Public	View the list of deployed applications made available for public use
View Private	View the list of deployed applications which you have deployed privately
Raw XML Public	View the shared application in raw XML format
Raw XML Private	View the private application in raw XML format

Undeploying an application

- 1 From the client homepage, click Mashups > View All.
- 2 Click Undeploy this mashup on the application that you want to undeploy. Click Yes.

Maintaining an application

To maintain an application, click Mashups > View All and:

- Access more details by clicking View Info to show the Id, Description, and Resources
- Enable or disable an application by clicking the checkbox beside Enabled
- Change a role by typing in a new name in the Role text field and clicking the Set button

Deploying a system

Before you start Make sure you have downloaded the installation package containing the Mashup Systems .zip file. Extract the contents of the .zip file to a temporary directory.

A system deployed here is a profile XML file which describes the controls, parameters, events, and location of the system.

- 1 From the client homepage, click Systems > Deploy.
- 2 Click Browse and locate the folder where you unzipped the contents of the Mashup System file. Select a system profile XML file that you want to deploy.
- 3 Click Deploy.

The following table shows a general description of available options in using Mashup Administration Client after deployment:

Option	Description
View All	View the list of systems deployed
Raw XML	View the application in raw XML format

Maintain the system after deploying it. For more information, see "[Maintaining a system](#)" on page 78.

Undeploying a system

- 1 From the client homepage, click Systems > View All.
- 2 Click Undeploy this system on the system that you want to undeploy.

Maintaining a system

To maintain a system, click Systems > View All and:

- Access more details by clicking View Info to show the Controls and Description, including the parameters and events of the feature
- Enable or disable a system by clicking the checkbox beside Enabled
- Change the BaseUrl by editing the link in the text field and clicking the Set button