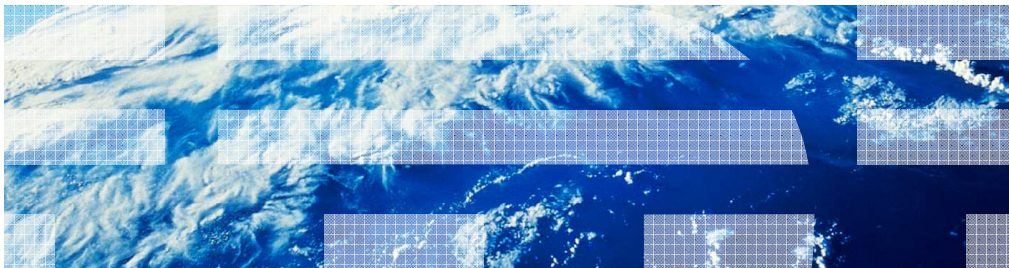

Business Process Management

IBM Business Process Manager

Process Designer Overview



This presentation will give you an overview of Process Designer as an authoring environment of the IBM Business Process Manager product.

Agenda

- Process Designer at a high level
- Designer view
- Inspector view
- Common toolbar items



You will first learn about the Process Designer tool at a high level. The presentation will then describe different UI components of the tool and user interactions with these components to perform day to day tasks.

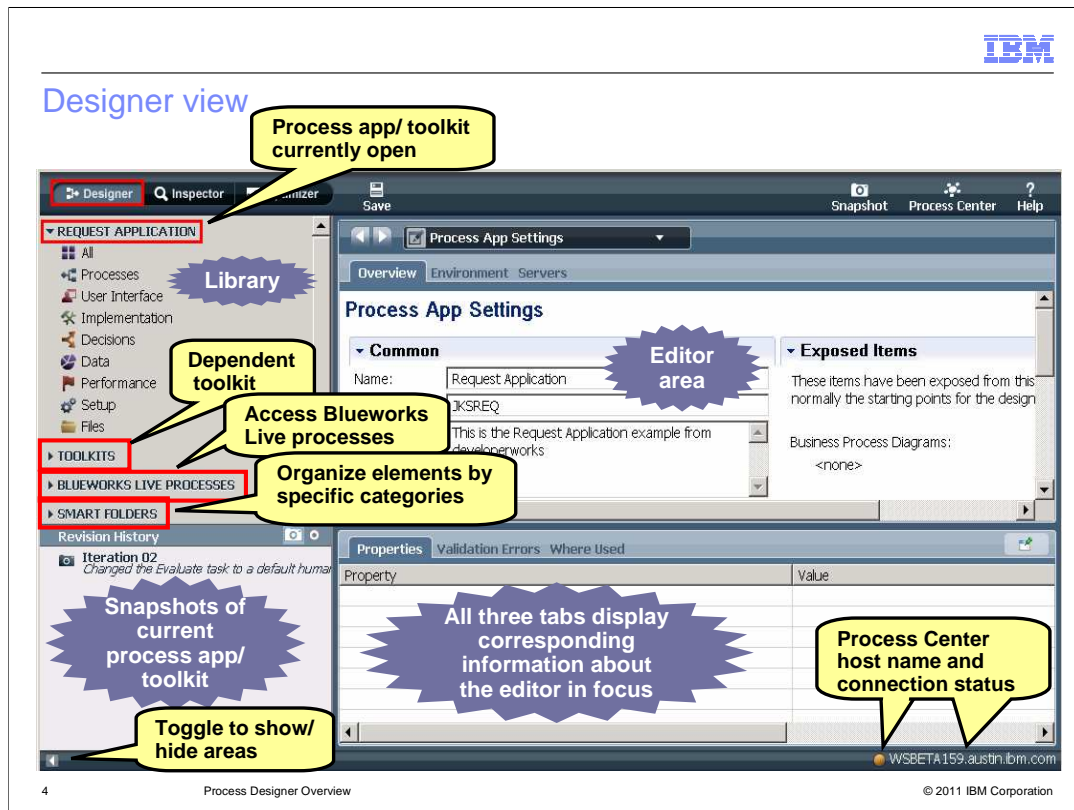
Process Designer at a high level

- Authoring tool to design and model business processes based on BPMN 2.0 specification
- Available in all product editions
- Installed as part of IBM Business Process Manager installation when using typical install method
- Can be downloaded from Process Center console and installed independently when IBM Business Process Manager is installed using the custom install method
- Always connected to Process Center
- Allows running of a process while in a development stage using the connected Process Center server
 - Referred to as 'Playback'
 - Explicit deployment not required

Process Designer allows you to iteratively design and model business processes based on BPMN 2.0 specification using a graphical editor. This authoring tool is available in all three product editions, Standard, Express and Advanced. The typical installation of the product installs Process Designer for you. If you do a custom installation of the product, you can download it from the Process Center console and install independently.

You must ensure that the Process Center is started before launching Process Designer. Process Designer always functions connected to a Process Center and thus every time you launch Process Designer, you are prompted to specify a user ID and password to connect to the Process Center. Process Designer always opens with the Process Center console view in focus.

Process Designer allows you to test processes while being developed using the Process Center server. You do not have to deploy the processes explicitly in order to test them. Testing during the development stage is referred to as playback in the product. The playback details are discussed later in this presentation.



The Designer view of Process Designer is where you create elements required for modeling processes, for example, business objects, services, etcetera and you model business processes using these elements. To go to the Designer view from the Process Center console, click the Designer icon at the top right corner. Alternatively, you can hover over a process application or a toolkit and click the “Open In Designer” option beside it. Process Designer retrieves items from the Process Center to display in the Designer view. The currently open version of a process app or toolkit is referred to as the tip.

The diagram on the slide shows the Designer view as a whole with its different functional areas.

The top left area is known as the Library. The process application or toolkit currently being worked on is displayed as a top level section in the Library. Categories of elements that can be contained in a process application or a toolkit are displayed under this section. There are three more top level sections in the Library. The TOOLKITS section shows all the toolkits that the currently open process application or toolkit depends upon. The dependency is on a particular snapshot version of a toolkit which is indicated by appending the snapshot name enclosed in parenthesis to the toolkit name.

The BLUEWORKS LIVE PROCESSES section displays subscriptions to Blueworks Live processes allowing you to open these processes directly from Process Designer.

The SMART FOLDERS section has four folders by default. Each of these folders displays elements based on some predefined criterion. You can add new folders and define any criterion by which you want to see elements in these folders.

The area below the Library is where you access the Revision History. It displays snapshots of the currently open process application or toolkit. You can select any snapshot to see its contents. The editor area displays the artifacts from the selected snapshot in a read-only mode.

The top right is the editor area. When you open any element from the Library, its editor is displayed in this area. Only one editor is in focus at a time although multiple editors can be open.

Below the editor area are three tabs. The Properties tab allows you to modify various properties of an element selected in a graphical editor. The Validation Errors tab displays errors on an element whose editor is currently in focus. If a graphical editor is in focus, the tab displays errors on the parent element and all of the child elements.

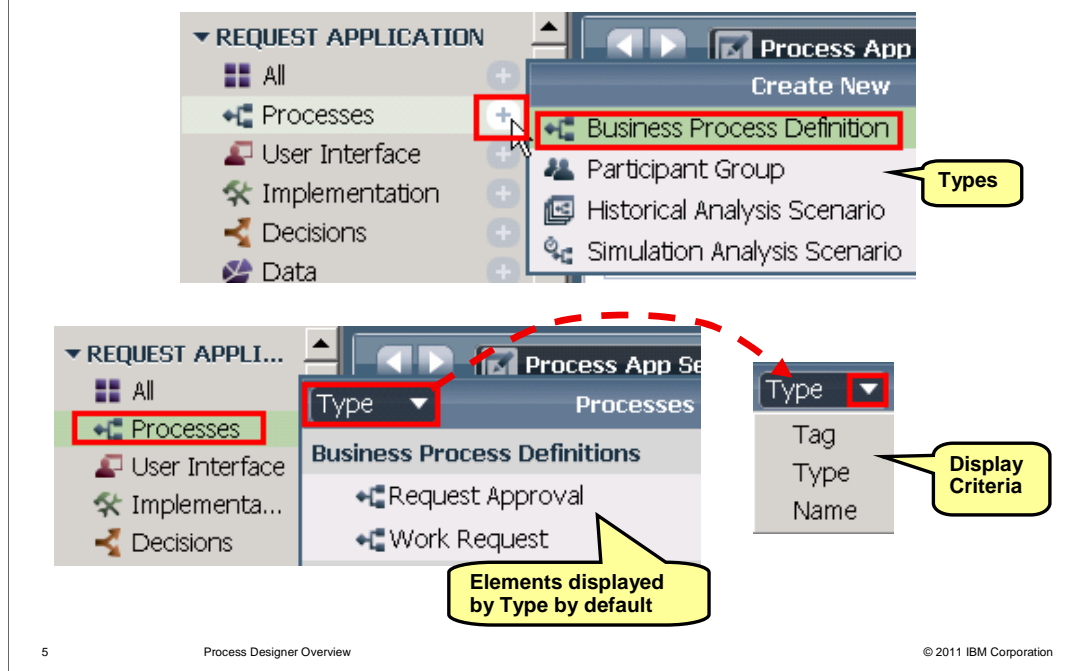
The “Where Used” tab displays all elements that currently reference the top level element whose editor is in focus. You can use this tab to understand the dependencies between various elements.

The left arrow at the bottom left corner is a toggle button. Click the left arrow to hide the Library area and the Revision history area giving more editing space. The left arrow then turns to a right arrow. Click the right arrow to show the Library area and the Revision history area.

The bottom right corner shows the host name of the machine with the Process Center which Process Designer is connected to. A color coded icon to the left of the host name indicates connection status to the Process Center with green being a good connection, yellow and orange being a slow connection and red being an indication that the server is possibly down.

User interactions with these areas to perform day-to-day tasks during modeling are described on subsequent slides.

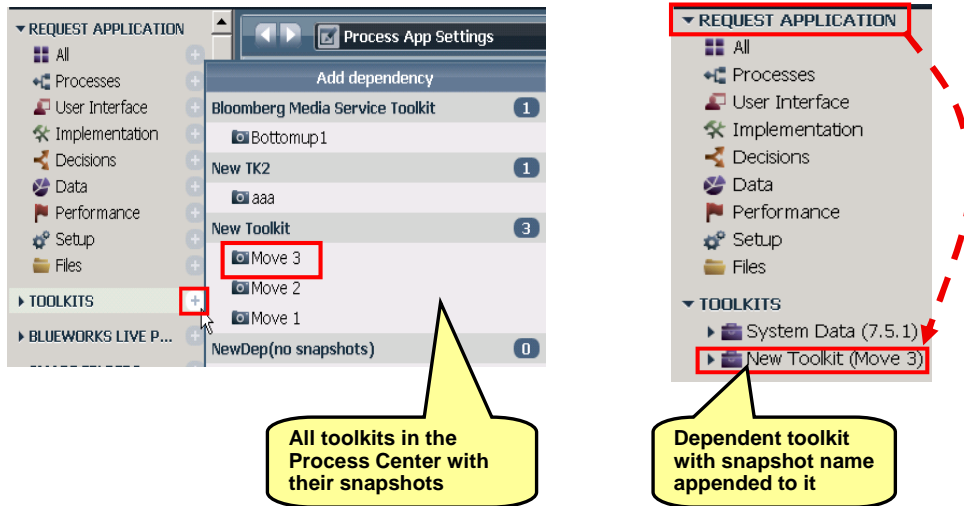
Designer view – Library



The top image shows element creation in the Library. To create an element of a particular category, hover over that category and click the “+” sign that is shown beside the category. This displays element types that reside in the category. Select the type to create an element of that type. An element creation wizard is launched based on the type selected. You can complete the element creation using the wizard.

To view existing elements in a particular category, click the category. All elements in that category are displayed based on Type, Tag or Name. Displaying by Type is the default as shown in the image at the bottom. If you want to display by Name, click the arrow beside Type and select Name in the drop down list. Elements are then displayed alphabetically based on their names. When you change the display criterion for one category, it applies to all categories. So, if you select any other category in the Library, all its elements are also displayed based on Name.

Designer view – Library adding snapshot dependency

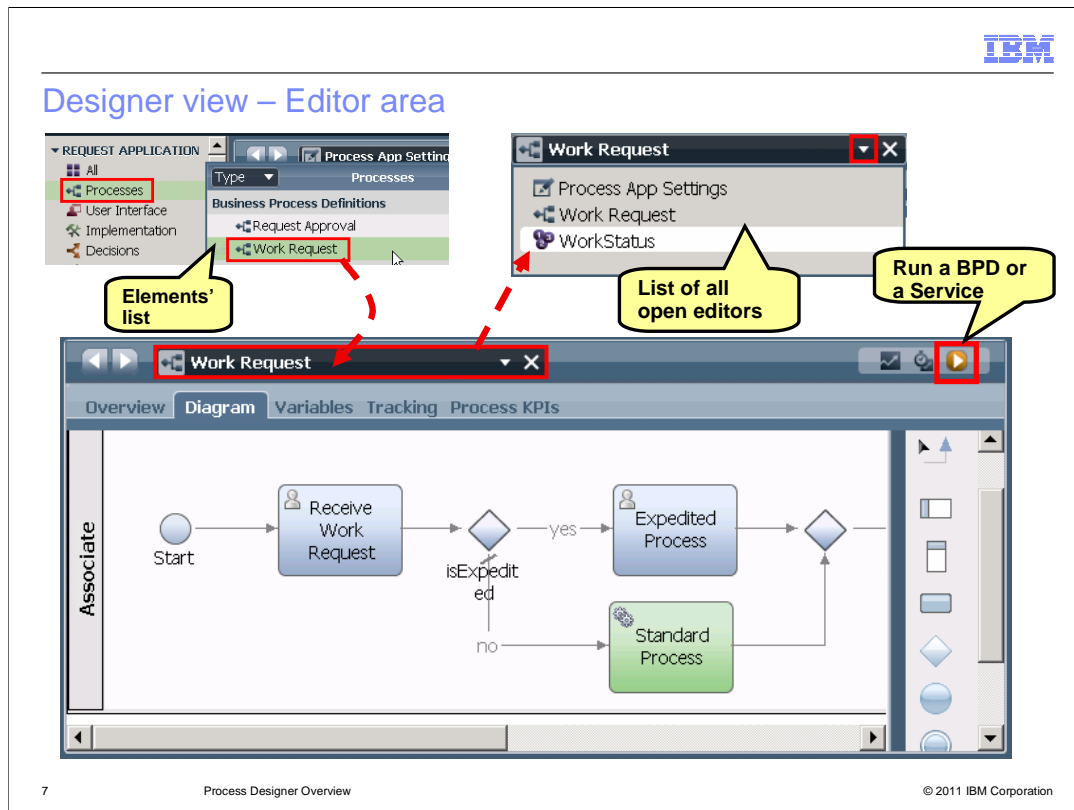


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Process Designer Overview

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A process application or a toolkit currently open can have dependencies on one or more other toolkits. A toolkit that you want to add a dependency on must have a snapshot as the dependency is on a snapshot and not on the tip. To start adding a dependency, hover over TOOLKITS and click the “+” sign beside it. A list of toolkits with all their snapshots displays where you can select any snapshot for dependency. This is demonstrated in the image at the left. Once the dependency is added, the toolkit is displayed in the Library as shown in the image at the right indicating that the currently open process application or a toolkit has a dependency on it. The snapshot name surrounded by parenthesis is appended to the toolkit name. Right-clicking the dependent toolkit gives you an option to remove the dependency or change the dependency to another snapshot version of the same toolkit. When a new snapshot is created for the dependent toolkit, a warning marker is shown beside the toolkit name in the Library to indicate that a new snapshot is available for this toolkit. You can click the warning marker or right-click the toolkit to see what options are available to deal with this change. You can either upgrade to the new snapshot version or ignore it. If you choose to ignore, the warning marker is removed.



When you create an element in the Library as discussed on the previous slide, the element editor opens up in the editor area. If you want to open an editor for an existing element, select a category in the Library and in the displayed elements' list double-click an element that you want to open. You can have multiple elements open in their respective editors, but, only one editor is in focus at any point in time. When you close the current editor, the editor that was open before the closed editor is brought to focus. You can navigate between different open editors using the drop down list in the toolbar as shown in the image at the top right.

When a BPD editor is in focus, you can test the process using the Run icon in the toolbar. Click the icon to start the process. You are prompted to switch to the Inspector view where you can step through the process. The Inspector view is discussed in detail later in the presentation. You can test a service in the same manner when the service editor is in focus.

The Process Application or Toolkit settings editor is opened when you open a Process Application or a Toolkit in the Designer from Process Center Console. This editor is always open, you cannot close it. If you want to only switch between the settings editor and the current editor, the quickest way is to use the left arrow beside the editor name area. Once in the settings editor, you can use the right arrow to switch back to the current editor.

Designer view – Editor area showing snapshot version

The screenshot shows the IBM Process Designer interface in read-only mode for a snapshot version. The top toolbar includes 'Designer', 'Inspector', and 'Optimizer' tabs. A status bar indicates 'Showing track as of Iteration 02'. The main editor area displays a process diagram with steps: Start, Receive Work Request, isExpedited (decision), Expedited Process, Standard Process, and Evaluate. A 'Revision History' panel on the left shows a list of snapshots, with 'Iteration 02' selected. Callout boxes highlight: 'All editors in a read-only mode', 'Toolbar status showing snapshot name', 'Run a BPD or a Service', and 'List of snapshots'.

When working on a process application or a toolkit, you can view the contents of an older snapshot version by selecting it in the Revision History area below the Library area. The toolbar shows an indication as to what snapshot version is being shown. The Library and the editor area display assets from the selected snapshot in a read only mode. When you hover over a category in the Library, the “+” sign does not show up thus disabling creation of any new elements. The tool allows you to run the snapshot version of a process or a service the same way as running the current version.

When viewing a snapshot, you can copy any asset, for example, a BPD to the current version. Select a category in the Library, right-click an asset and select “Copy to tip” option in the pop-up menu to initiate the copy operation. If the current version already has the asset by the same name, the next available sequential number is appended to the copied item’s name.

You can click the close icon on the toolbar indicator to return to the current version at any time.

Designer view – properties, validation errors and where used tabs

The screenshot displays the IBM Process Designer interface. At the top, the 'Properties' tab is active for a 'User Task' element, showing sections for 'General', 'Implementation', 'Task Header', and 'Priority Settings'. A callout bubble points to the 'Properties' tab with the text: 'Different properties for different element types'. Below this, the 'Work Request' editor is shown with the 'Variables' tab active, displaying a variable 'theWorkRequest' of type 'WorkRequest'. A callout bubble points to the variable type with the text: 'Error due to a missing Business Object'. The 'Validation Errors' tab is also visible, showing an error message: 'WorkRequest is unreachable: [classId:null]'. To the right, the 'Where Used' tab shows a tree structure with 'Request Approval' under 'Work Request', and a callout bubble points to it with the text: 'Element references'. At the bottom right, the 'Request Approval' editor is shown with a process flow diagram where 'Work Request' is used as a 'Linked Process'.

The Properties tab below the editor area allows you to update properties of elements in a graphical editor in focus including swimlanes and milestones in the case of a BPD editor. The Properties tab groups properties semantically in different options. These options are displayed on the left side of the properties tab. The options vary based on the type of an element selected in the diagram. To see all the properties of a particular option, click the option at the left. The area on the right refreshes to show properties belonging to this option. The image at the top is an example of properties of a user task.

The properties of the top level element, for example, a BPD, a Human Service cannot be changed in the Properties tab. Their editors have different tabs for different properties.

When the top level element whose editor is in focus has errors, the details of those errors are displayed in the Validation Errors tab. If a graphical editor is open, errors on all of the child elements are also displayed. The image at the bottom left shows a BPD called WorkRequest in focus. The BPD had a variable defined of type WorkRequest. However, the Business Object WorkRequest was deleted and as a result, the BPD now has a validation error. The Validation Errors tab shows this error. The Variables tab of the BPD editor also shows an error marker.

The Where Used tab uses a tree structure to show where the top level element in focus is being used, that is, what elements reference it. The image at the center right shows an example of the Where Used tab. When the BPD WorkRequest is in focus, the tab shows that it is being used in another BPD called Request Approval. You can double-click the Request Approval BPD in the tree structure to open its editor. The image at the bottom right shows the BPD Request Approval in focus. Note the Work Request BPD in the process flow as a Linked Process.

Inspector view

The screenshot shows the IBM Process Designer Inspector view. At the top, there is a toolbar with tabs for 'Designer', 'Inspector', and 'Optimizer'. A 'Drop down list of all versions' callout points to the 'All versions' dropdown menu. Below the toolbar is the 'Process Instances' section, which includes a search field and a 'Filter options' callout. A table lists process instances with columns for Instance Name, Snaps..., Process, Status, Due, Status, Owner, Subject, Priority, and Due. A 'Process instances' callout points to this table. Below the table is a 'Running process' diagram showing a flow from 'Receive Work Request' to a decision diamond 'isExpedited' to 'Expedited Process'. A 'Running process' callout points to this diagram. To the right of the diagram is a sidebar with 'Execution State', 'Breakpoints', and 'Variables' tabs. A 'Tasks in a Running process' callout points to the task list in the sidebar. A 'Variables in the current step' callout points to the 'Variables' tab. At the bottom left, there is a 'Standard' dropdown menu with an 'Options to change the display' callout. The bottom of the screenshot shows '10 Process Designer Overview' and '© 2011 IBM Corporation'.

The Inspector is a key component in Process Designer that drives the iterative process development capability. Using the Inspector, you can playback the business processes in real-time on a Process Center server, find issues, fix processes and re-run them. When you are satisfied with your processes, you can deploy them to a production environment.

The diagram shown here depicts the Inspector view with its different areas. The top left area displays all process instances from the tip and all the snapshot versions by default. You can select a specific version from the drop down list on the toolbar to do the testing. Two filter options are presented right above the process instances area to control what instances should be displayed. You can type part of the name in the Instance Name field to display only those instances that contain the typed string in their name. If you want to see all the instances with a particular status, say, Terminated, use the Status field and select Terminated from the drop down list. You can use the combination of both to further reduce the number of instances displayed. When you select an instance, it is highlighted and all other areas show details of this instance.

The bottom left area shows the BPD diagram for the selected instance. You can start running the process using the Run Process icon at the upper right corner of the diagram area. During the running of the process, to indicate where you are, the current task is highlighted and a red token is displayed above the task.

The current task is also displayed in the top right area. To run the current task, select the task and click the run icon in the toolbar above the tasks area. When the task runs successfully, the status changes to Closed. The next task is highlighted in the BPD diagram and the tasks area shows the new task.

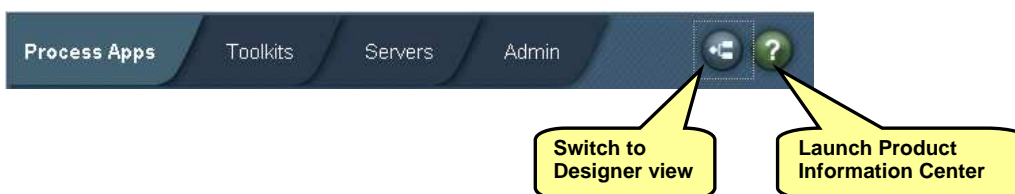
The Execution State tab just below the tasks area displays the current task in a tree structure. The token number is appended to the task name. The Variables tab at the bottom right shows the variables used by the current task. If you right-click the variable and select "Show In Execution Evaluator", the variable values are shown in a string format in the area below.

The toolbar above the tasks area has various icons that perform different actions on the selected process instances. Each of the icons has a detail hover help indicating the function it performs.

The image shows the default interface of the Inspector. You can use the drop down menu below the diagram area to change the display. The Standard option shows the defaults. You can choose the Simple option to hide the Execution State and Variables areas or choose the Edit and Debug option to show the Properties tab and the Validation Errors tab.

Common toolbar items

Process Center console in PD



Designer view in PD



Various toolbar icons are discussed on earlier slides in this presentation. This slide gives a consolidated view of all the common icons.

The Process Center console toolbar provides an icon to switch to the Designer view and to launch the product information center as shown in the top image.

The Designer view toolbar provides icons to switch to the Inspector view for process playback and to switch to the Optimizer view for simulation. The Save icon on the toolbar allows saving of all open editors irrespective of which editor is in focus. You can use the Snapshot icon to create a new snapshot version of the current state of the process application or the toolkit being edited. The new snapshot is shown in the Revision History area below the Library area. The Designer continues to show the Tip of the process application or the toolkit. The Process Center icon allows you to switch to the Process Center console. The Help icon launches the product information center.

The same common toolbar items are available in the Inspector view as the Designer view.

Summary

- Process Designer is the authoring tool to design, model and test business processes based on BPMN 2.0 specification
 - The Designer view allows creation of assets
 - The Inspector view allows you to test the business processes in real-time on Process Center server, find issues, fix processes and re-run them iteratively until your processes are production ready

In this session, you learned that Process Designer is the authoring tool that allows you to model and test business processes using different UI components. The Designer view allows you to create various assets. The Inspector view allows you to test business processes, find and fix issues, re-run the processes iteratively until you are satisfied with your processes and are ready to deploy them to production environment.



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