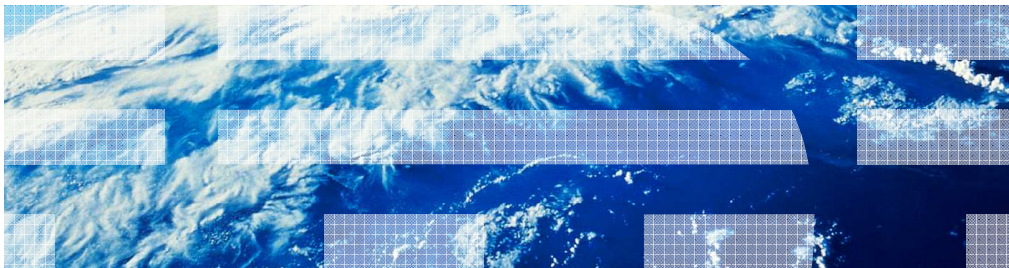


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# Business Process Management IBM Business Process Manager V7.5

## Federated task management for BPEL processes and human tasks



This presentation introduces the federated task management feature for BPEL processes and human tasks in the Business Space that is available in BPM version 7.5.

## Agenda

- BPEL process and human task management in WebSphere Process Server
- Federated task management in business space in BPM V7.5
- Business space configuration
- How-to example step by step

This presentation starts with a brief review on two human task types that can be created in the Integration Designer and the traditional approach to manage them in WebSphere Process Server releases before BPM version 7.5.

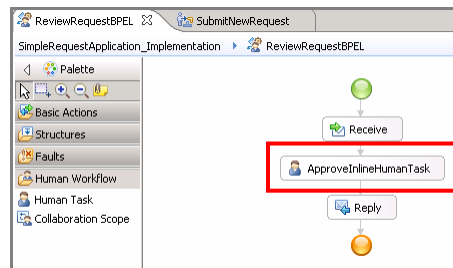
Then you are presented with the new federated task management feature available in Business Space for BPM version 7.5.

In the Business Space Configuration section, you learn how to choose the appropriate REST services based on your runtime environment.

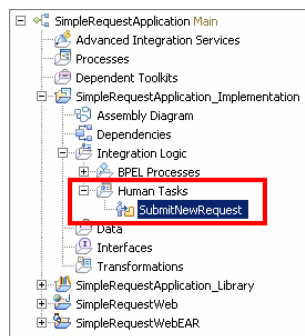
Finally you are guided through the how-to steps to enable the BPEL process and human task management feature, starting from authoring in Integration Designer and completing with the task management in Business Space.

## Human task types in IBM Integration Designer

- Inline human task in BPEL



- Stand-alone human task service



In the Integration Designer, you can implement a human task as part of the logic of a BPEL process, or independently of other processes. If the task is implemented within a BPEL process, it is called an inline task. Otherwise, it is referred to as a stand-alone task.

## Start BPEL process in BPC Explorer

- URL to launch Business Process Choreographer Explorer

`http://<host name>:<port>/bpc`

- Two ways to start a BPEL process

The Business Process Choreographer (BPC) Explorer is a web application that comes from the WebSphere Process Server heritage. It is used to initiate, run and manage SCA based BPEL processes that are created in the Integration Designer tool. To launch the BPC Explorer, type into a web browser the URL shown in the slide, substituting the correct host name and port. You are presented with a login page.

There are two ways to start a BPEL process. One is from the “Process Templates” section in BPC Explorer. Clicking either the “Currently Valid” or “All versions” link, you see a list of available BPEL processes. Then you can select the process you want to run, and click the “Start Instance” button.

Another approach is to use an invocation task from the “All Tasks” list in the “Task Instances” section. Once you complete the invocation task, it automatically triggers the related BPEL process.

## Work on human task in BPC Explorer

Business Process Choreographer Explorer

Welcome admin | Logout | Manage Views | Customize | Help | About

Views Reports My To-dos

Use this page to work on tasks that are assigned to you. ⓘ

Process Templates

Process Instances

Activity Instances

Task Templates

Task Instances

My To-dos 1

All Tasks

Work on Release Transfer Start Change Business C

Priority Task Name State Kind

5 ApproveInlineHumanTask Ready To-do Task

Items found: 1 Items selected: 1

Find the human task from "My To-dos" list and work on it

Task Message

Use this page to provide the information required to complete the task. ⓘ

Complete Save Release Cancel

Task Name ApproveInlineHumanTask

Task Input Message

Form View

req	requestId	1
	requester	Vivian
	status	new
	approvalNeeded	<input checked="" type="checkbox"/>

View Source

Task Output Message

Form View\*

req	requestId	1
	requester	Vivian
	status	approved
	approvalNeeded	<input type="checkbox"/> Add

Edit Source

- "Task Message" is a simple JSP page
  - Read-only task inputs
  - Editable outputs form
  - A set of operations

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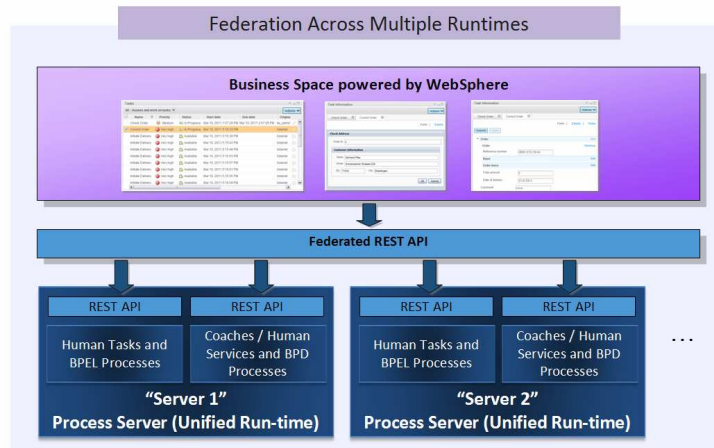
To get a list of the available human tasks that are assigned to you, go to the "Task Instances" section and check the "My To-dos" list. Select the task you'd like to claim and click the "Work on" button.

The "Task Message" page in BPC Explorer provides a simple, ready-to-use web user interface based on a set of default Java Server Pages.

On the page, you can review the task input information, fill in the output form, and perform one of the response operations to manage the human task.

## Federated task management in Business Space

- Work with both integration-centric and human-centric business processes and tasks that come from different systems



- For information on federation support with other IBM BPM products, see the [Federated task management overview](#) presentation

In BPM version 7.5, Business Space provides a single, federated user experience to interact with processes and tasks from multiple systems. Within one space, you can manage the BPEL processes and human tasks authored in the Integration Designer, together with the business process definitions, human services and coaches developed in the BPM Process Designer.

This presentation focuses on helping you enable the BPEL processes and human tasks in Business Space. For federation support with other BPM products, see the “Federated task management overview” presentation. The link is provided on the slide.

## Business space configuration

- Three types of REST service endpoint settings available in the administrative console

### REST service endpoint registration

Type	Service Endpoint Target
Process services	Node=aimcp026Node01,Server=server1,Name=Federated REST services
Task services	None
	Node=aimcp026Node01,Server=server1,Name=Business Process Choreographer REST services
	Node=aimcp026Node01,Server=server1,Name=Federated REST services
	Node=aimcp026Node01,Server=server1,Name=Business process definition engine REST services

- To manage BPEL processes and human tasks, you can choose BPC REST services or Federated REST services
- To change the REST service endpoint, see the [Federated task management overview](#) presentation

To enable Business Space Federation with BPEL processes and human tasks authored in the Integration Designer, there are two REST service settings you can choose based on your runtime environment. If your user groups only need to access the BPEL processes and human tasks modeled in the IBM Integration Designer, just choose the Business Process Choreographer REST services. If your user groups need to interact with the processes and tasks from the Process Designer and the Integration Designer, or across multiple systems, you should choose the Federated REST services.

A BPM profile is by default configured to use the Federated REST services.

Check the “REST service endpoint settings for BPM Federation” topic in the “Federated task management overview” presentation to find out the details on how to configure REST service endpoints using the administrative console.

## How-to step by step

- Create human tasks in the Integration Designer
- Define the human task user interface in the human task editor
- Publish the business application project
- Install the form web project using the administrative console
- Create a business space using a template
- Manage the human task in business space



To ensure that you can use business space to work with federated task management, certain requirements need to be met during the authoring and deployment phases. The following slides walk you through some necessary steps to enable this feature, specifically focusing on BPEL processes and human tasks. The steps are summarized here, followed by the detailed slides.

The first step is to create an invoking human task service and adding a human task to a BPEL process in the Integration Designer.

Then you generate a human task user interface using an HTML Dojo form, and publish the business process application.

Next you export and install the web project onto the process server using the administrative console.

A task management business space is then created using a provided template. The template makes it possible for you to create the space quicker and easier.

Finally, the steps for a simple process flow of the human task management in the business space is shown.



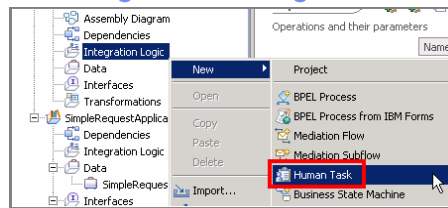
## Create stand-alone human task in Integration Designer

- Create stand-alone human task in Integration Logic category

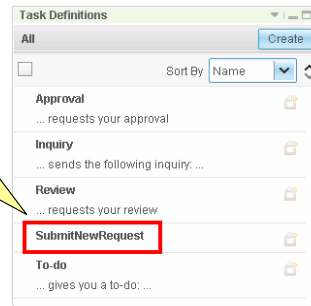
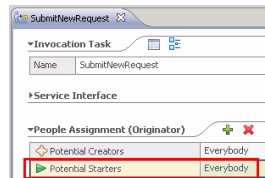
### – Task type Selection



Choose "Invocation task" type and it will be shown in "Task Definition" widget in the business space



### – Potential Starter



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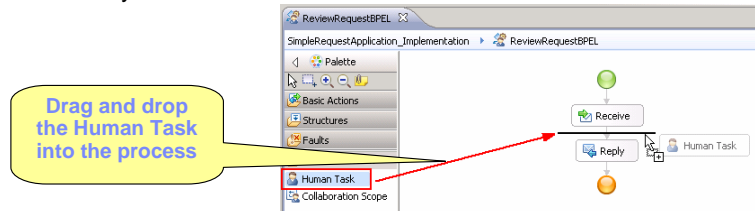
You need a stand-alone invocation task to start the BPEL process. To create a stand-alone human task in the Integration Designer, right click the Integration Logic category and choose "New" then "Human Task".

On the "New human task" dialog, choose the "Invocation task" as the task type so that the task will show up in the "Task Definitions" widget in the Business Space.

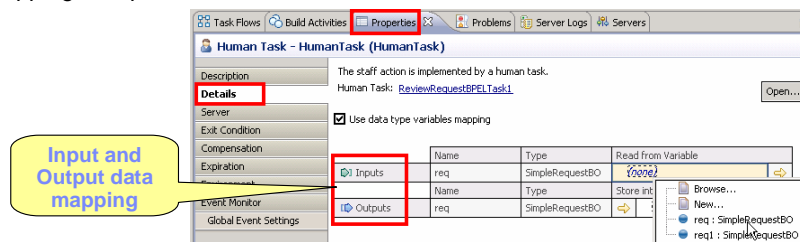
By default, the invocation task can be started by Everybody. You can assign it to the appropriate users or groups in the "Potential Starters" section in the human task editor.

## Create inline human task in BPEL editor

- Add human task activity



- Data mapping with process variables

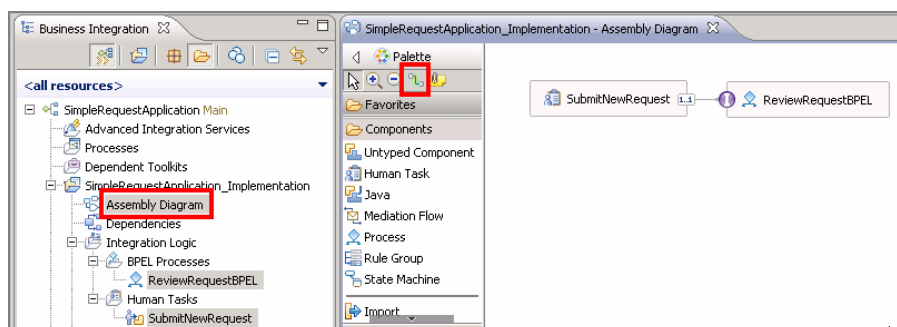


An inline human task is defined within an implementation of a BPEL process. To create an inline task, drag a human task activity from the palette and drop it on to the canvas in the BPEL process editor.

In the human task “Properties” tab “Details” section, you need to map the activity inputs and outputs with the BPEL process variables.

## Wire together in the Assembly Diagram

- Connect stand-alone human task service with the BPEL process in assembly diagram

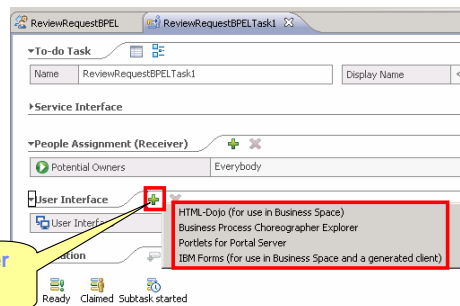


You now have both an invocation stand-alone human task service and a BPEL process. It's time to connect them using the assembly editor. From the navigation tree in the "Business Integration" view, drag the stand-alone human task and the BPEL process on to the assembly diagram. Using the wire tool on the palette, connect the human task WSDL interface with the BPEL interface. This configures the human task service to invoke the BPEL process.

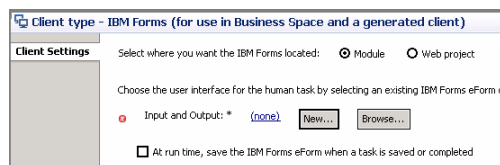
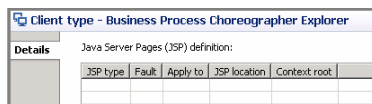
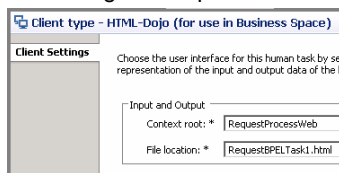
## Define user interface for the human tasks

- Define user interface in human task editor for both stand-alone task and inline task
  - 4 client types to choose

Create the user interface



### - Settings in Properties



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The user interface of a human task is the means by which a staff member interacts with a human task in the runtime environment. The human task editor in the Integration Designer can help you generate the human task client.

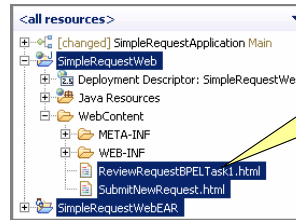
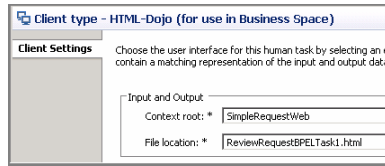
In the human task editor “User Interface” section, you can click the green plus sign to get a list of client types to choose. There are four supported client types: HTML-Dojo (for use in Business Space), Business Process Choreographer Explorer, Portlets for Portal Server, and IBM Forms (for use in Business Space and a generated client).

Different clients need different configurations and product support. For example: Portlets forms requires a portal server. IBM Forms need a IBM Form server configured. If you want to learn more about each client generation and settings, you can find corresponding details in the IBM Integration Designer Information Center.

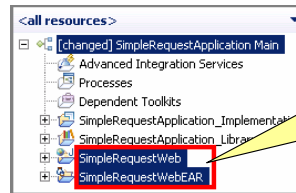
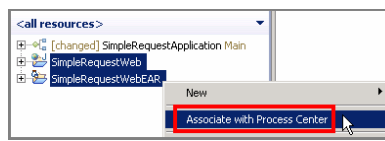
The HTML-Dojo (for use in Business Space) is used in this presentation.

## HTML Dojo web project generation and association

- Generate web project and its EAR project



- Associate web projects with Process Center



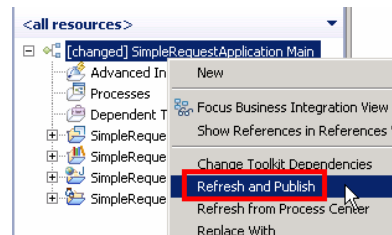
You can create one client for all the human tasks in a module, or create a separate client for each task. In this presentation, both stand-alone human task and inline human task use the HTML-Dojo form client and share one web project.

In the “Client Settings” section of the HTML-Dojo form, click the “New” button on the right side of the “Context root” field. You can select an existing web content folder or choose to create a new web project to store the new HTML file. Once done, a default HTML file with human task name is generated. If you choose to create a new web project in the previous step, a new web project and its web EAR project are also generated. You can also modify the HTML file to customize the user-interface.

The next step is to associate the web projects with the business application that is stored in the Process Center repository. Select both web project and web EAR project, right-click and choose the “Associate with Process Center” option from the menu. After the association is completed, you can see both web projects are part of the business application project in the hierarchical structure.

## Publish the business application

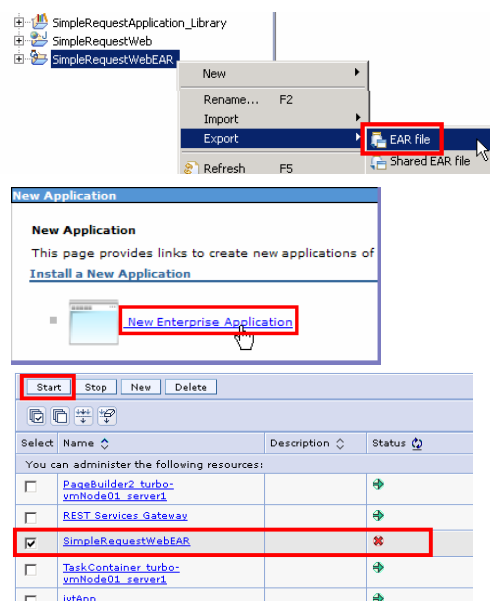
- Refresh and Publish



The business application is now ready to be deployed. Right click the project and select “Refresh and Publish” from the pop-up menu. The application is available on the process center server after a successful publish.

## Export and install web application

- Export web EAR project as EAR file to local directory
- Install on the server that has Business Space
  - Use the administrative console
  - Install new enterprise application
  - Pick up the exported .ear file
  - Finish installation
  - Save changes
- Start the web application



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To ensure that the generated form is available for the “Task Information” widget, you need to perform additional steps to deploy the form on the same server that the Business Space application is deployed.

First export the web EAR project as an EAR file to a local directory. Next login to the administrative console and from the navigation panel, expand “Applications” and click “New Application”. Choose “New Enterprise Application” from the application type list.

Browse to the exported ear file location and finish the installation. Once you see the successful installation message, click “Save” to save the changes to the master configuration.

You can find the newly installed application in the application list. If its status shows the “Stopped” icon, select the application and click the “Start” button on the top of the application list.

You now have the business application and web application ready on the Process Center server. Next you switch to the Business Space.

## Creating a task management business space

- Create task management space using templates

The image shows two screenshots from the IBM Business Space interface. On the left is the 'Create Space' dialog box. It has a 'Space name' field and a section 'Create a new space using a template'. Under this section, several templates are listed: 'Advanced Task and Process Management', 'Advanced Task and Process Management', 'Configure Work Baskets and Business Categories', 'Integrated Inbox', 'Interact with Processes and Tasks', 'Problem Determination', 'Service Administration', 'Solution Administration', and 'Work on Tasks Continuously'. A red dashed arrow points from the 'Interact with Processes and Tasks' template to the right-hand screenshot. The right-hand screenshot shows the 'Interacting with Processes and Tasks' template in a browser window. The window title is 'Interacting with Processes and Tasks'. It features a 'Task Definitions' pane on the left with a 'Create' button and a 'Tasks' table on the right. The table has columns for Name, Description, Due date, Priority, Status, and Start date. Below the table is a 'Task Information' section with a 'Form' and 'Details' tab. The 'Form' tab is active, showing a 'Request # 0' section with fields for 'Request Number', 'Request Description' (containing 'request0'), and 'Request Approval'.

- Task management related space templates described in the [Federated task management overview](#) presentation in the “Business space templates” topic

Once you log onto the Business Space, you need to ensure you have the task management related space available. The task management space templates help you set up a business space quickly with pre-configured task management widgets.

The “Advanced Task and Process Management”, the “Interact with Processes and Tasks”, and the “Work on Tasks Continuously” templates are delivered in version 7.5.

New in BPM version 7.5.1, the “Integrated Inbox” template adds more capability to federate with business processes from BPM and case instances from IBM Case Manager.

For the details of task management related space templates, see the “Business space templates” topic in the “Federated task management overview” presentation.

In this presentation, the “Interact with Processes and Tasks” template is used.



## BPEL process and human task management in Business Space

1. Starts invoke task

2. Submit invoke task to start BPEL process

3. Work on BPEL inline human task

4. Complete the inline human task

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Open the “Interacting with processes and tasks” space. You can find the invoking task in the “Task Definitions” widget. Click the Create icon to create an instance of this task.

The stand-alone human task form is shown in the “Task Information” widget. Fill in the initial data in the form and click the Submit button. It will immediately start the BPEL process instance.

Now check the “Tasks” widget and you can see the inline human task is available. Select the task and using the “Actions” drop down list you can perform various operations.

If you accept the task to work on, you can see the inline human task form inside the “Task Information” widget. The data passed from the previous task is presented in the form. After you update the form, click the Submit button to finish the inline human task. This task disappears from the Tasks widget since it’s completed.

## Summary



- BPEL process and task management using BPC Explorer
- Federated task management using Business Space
- Choose the right REST endpoint service and create a space using new task management templates
- Create, deploy, install, and run BPEL process and human tasks

During the session, you became familiar with the federated task management feature for BPEL processes and human tasks.

It started with a quick review of inline human tasks and stand-alone human tasks in the Integration Designer. You were then shown how to use the traditional BPC Explorer to manage BPEL processes and human tasks.

After the review, the new federated task management feature in version 7.5 Business Space was introduced.

You learned which REST endpoint service to choose for managing BPEL processes and human tasks.

The rest of this presentation walked you through the required steps for enabling the federated task management for BPEL processes and human tasks. The final step showed the different task management widgets in business space using a sample business process flow.

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