

Oracle® Fusion Middleware

User's Guide for Oracle Business Process Management

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Documentation for process participants, process owners, administrators, and supervisors using either Oracle Business Process Management Workspace or Oracle Business Process Management Process Spaces to act on tasks, activity guides, and process instances.

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Preface

Oracle Fusion Middleware User's Guide for Oracle Business Process Management describes how to interact with tasks and business processes in both Oracle Business Process Management Workspace and Oracle Business Process Management Process Spaces.

Audience

This document is intended for all users of both Oracle Business Process Management Workspace and Oracle Business Process Management Process Spaces.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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Related Documents

For more information, see the following Oracle resources:

- *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*
- *Oracle Fusion Middleware Business Process Composer User's Guide for Oracle Business Process Management*
- *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

What's New in This Guide for Release 11.1.1.6.x

For Release 11.1.1.6.x, this guide has been updated in several ways. The following table lists the sections that have been added or changed. If a feature was not available in the first release of 11.1.1.6.x, the last columns denote which documentation release contains the update.

For a list of known issues (release notes), see the "Known Issues for Oracle SOA Products and Oracle AIA Foundation Pack" at <http://www.oracle.com/technetwork/middleware/docs/soa-aiafp-knownissuesindex-364630.html>.

Sections	Changes Made	11.1.1.6.0	11.1.1.6.1
Chapter 2 Getting Started with Process Workspace			
Section 2.3.3, "About the Process Workspace Process Tracking Page"	This section is updated to reflect new sorting and filtering enhancements.	X	
Chapter 3 Working on Tasks in Process Workspace			
Section 3.7, "Adding Comments and Attachments to Tasks in Process Workspace"	This section is updated to reflect that, if you are the initiator of the task, then your comment is shared with all process participants and not only with task assignees. The option to share with only task participants is not available to you.	X	
Chapter 4 Working on Process Instances in Process Workspace			
Section 4.3.1, "Viewing the Audit Trail in Process Workspace"	This section is updated to describe how to select the display of audit records, including the new tree view. This section also now describes how to select the type of activity, sub-process, gateway, or event you want to audit, and to display input and output messages for an activity.	X	
Section 4.1, "Initiating Process Instances in Process Workspace"	This section updated to indicate that, when a process instance is initiated, it is assigned to the initiator	X	
Chapter 5, "Working with Activity Guides in Process Workspace"	This new chapter is added to describe newly supported activity guides.	X	
Chapter 6 Creating and Editing Custom Pages in Process Workspace			

Sections	Changes Made	11.1.1.6.0	11.1.1.6.1
Section 6.1.6, "How to Grant and Manage Access to Customized Pages in Process Workspace"	This section updated to reflect enhancements to synchronizing roles between customized pages and widgets.	X	
Chapter 9 Managing Process Workspace (for Administrators)			
Section 9.1, "Setting the Display of the Work Items Panel in Process Workspace"	This section is updated to reflect enhancements to display setting, including specifying the branding logo, skins, and branding title.	X	
Chapter 10, "Managing Your Organization in Process Workspace (for Administrators)"			
Section 10.5.2, "How to Specify the Escalation Path for a Role"	This section is updated to reflect enhancements to role escalations.	X	
Chapter 15, "Creating Custom Dashboards in Process Spaces"			
	This chapter is updated to explain enhancements to creating dashboards in Oracle Business Process Management Process Spaces	X	

Oracle Business Process Management Suite (Oracle BPM Suite) Overview

This chapter provides a general overview of the Oracle BPM Suite, explains Oracle BPM user personas, Oracle BPM components, integration with Oracle Business Process Analysis (BPA) Suite, and the development lifecycle of a process. Finally, it describes typical uses cases of the Oracle BPM Suite from process modeling to run time.

This chapter includes these topics:

- [Section 1.1, "Introduction to the Oracle BPM Suite"](#)
- [Section 1.2, "Oracle BPM User Personas"](#)
- [Section 1.3, "Oracle BPM Suite Components"](#)
- [Section 1.4, "Oracle Business Process Analysis \(BPA\) Suite"](#)
- [Section 1.5, "Introduction to the Application Development Life Cycle"](#)
- [Section 1.6, "Oracle BPM Use Cases"](#)

1.1 Introduction to the Oracle BPM Suite

The Oracle BPM Suite provides an integrated environment for developing, administering, and using business applications centered around business processes.

The Oracle BPM Suite provides the following:

- Enables you to create process models based on standards with user friendly applications. It enables collaboration among process developers and process analysts. Oracle BPM supports BPMN 2.0 and Business Process Execution Language (BPEL) from modeling and implementation to run time and monitoring.
- Enables process analysts and process owners to customize business processes and Oracle Business Rules.
- Provides a web-based application for creating business processes, editing Oracle Business Rules, and task customization using predefined components.
- Expands business process management to include flexible, unstructured processes. It adds dynamic tasks and supports approval routing using declarative patterns and rules-driven flow determination.
- Enables collaboration provided by Oracle Business Process Management Process Spaces, which drives productivity and innovation.
- Unifies different stages of the application development life cycle by addressing end-to-end requirements for developing process-based applications. Oracle BPM

unifies the design, implementation, run time, and monitoring stages based on an Service Component Architecture (SCA) infrastructure. This allows different personas to participate through all stages of the application life-cycle.

See [Section 1.2, "Oracle BPM User Personas"](#) for more information about the user personas defined for the Oracle BPM Suite.

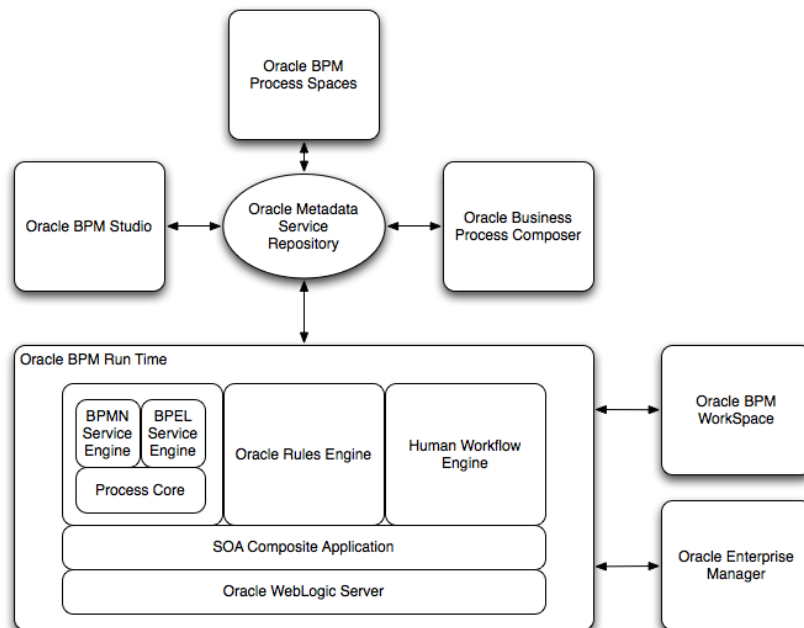
The Oracle BPM Suite provides a seamless integration of all stages of the application development life cycle from design time and implementation to run time and application management.

The Oracle BPM Suite is layered on the Oracle SOA Suite and shares many of the same product components, including:

- Business Rules
- Human Workflow
- Oracle Adapter Framework for Integration

[Figure 1–1](#) shows a high-level architectural view of the Oracle BPM Suite.

Figure 1–1 The Oracle BPM Suite



[Section 1.3, "Oracle BPM Suite Components"](#) provides more information on each of these components shown in [Figure 1–1](#).

1.2 Oracle BPM User Personas

Different stages of application development life cycle require interaction from different types of users. [Table 1–1](#) outlines typical users of Oracle BPM Suite and their responsibilities. It also lists the components of the Oracle BPM they would use to perform their work.

These user personas are used within the examples in this guide.

Table 1–1 Oracle BPM User Persona

User Persona	Description
Process analyst	<p>Process analysts are responsible for creating the initial flow of a business process and documenting its steps. This also includes identifying and defining the Key Performance Indicators (KPIs) and high-level rules that define the routing artifacts of the business process. This persona can also perform simulations to calculate and estimate the return on investment.</p> <p>Process analysts typically use the Oracle Business Process Analysis Suite or Business Process Composer to create process models. They can also use process analyst role within Oracle BPM Studio.</p>
Process developer	<p>Process developers are responsible for implementing the process models created by process analysts. Each step in the process requires an implementation. The process developer is responsible for integrating the business process with back-end applications such as databases.</p> <p>Process developers typically use Oracle BPM Studio to model and implement the components of a business application. They may occasionally use Oracle Business Process Composer (Business Process Composer) for modeling basic processes.</p>
Business administrator	<p>Business administrators are responsible for administering the BPM infrastructure. Typical activities include the installation and setup of BPM environments and the overall management of the Oracle BPMN Service Engines that are hosting the business processes.</p> <p>This persona can be delegated the responsibilities for administering the organizational assets such as users, groups, organization units, calendars and holidays.</p> <p>The main tool used by business administrators is the Oracle Enterprise Manager and automated tools such as Ant. Business administrators also use Oracle Business Process Management Workspace (Process Workspace) to manage organization units, role assignments and perform other activities like creating workflow advanced routing declarations</p>
Process owner	<p>Process owners are responsible for controlling and managing deployed business processes. They are responsible for the overall supervision of the running business process. They often use metric analysis tools such as dashboards to understand the current state of the managed business processes.</p> <p>Process owners typically use Process Workspace. They also use Business Process Composer to change the behavior of a process by editing Oracle Business Rules. They may also use the Oracle BAM console to view metrics dashboards.</p>
Process participant	<p>Process participants are the people who use the business applications created with the Oracle BPM Suite.</p> <p>Process participants typically use Process Workspace or Process Spaces.</p>

1.3 Oracle BPM Suite Components

This section provides a general description of the major components of the Oracle BPM Suite. See [Section 1.5, "Introduction to the Application Development Life Cycle"](#) for information about how these components interact within the application development process.

1.3.1 Process Modeling and Implementation

This section describes the applications and components used to model and implement business processes and process-based business applications.

The Oracle BPM Suite provides two primary applications for modeling and implementing business processes: Oracle BPM Studio and Oracle Business Process Composer.

Note: Oracle BPM can also integrate business processes created using the Oracle Business Process Analysis Suite. See [Section 1.4, "Oracle Business Process Analysis \(BPA\) Suite"](#) for more information.

1.3.1.1 Oracle BPM Studio

Oracle BPM Studio is a component of the Oracle BPM Suite that provides a user friendly environment where process analysts can design business process models and run process simulations. Oracle BPM Studio supports Business Process Management Notation (BPMN) 2.0.

Oracle BPM Studio also enables process developers to create working process-based applications. These applications are Oracle BPM projects that are integrated as Service Integration composite applications.

You can use Oracle BPM Studio to implement business processes with other Oracle components such as adapters, human workflow and business rules. You can then deploy these processes to Oracle BPM run time.

Oracle BPM Studio is a part of the Oracle JDeveloper IDE. Oracle BPM Studio enables IT users to use a single integrated tool to model and edit business processes, implement the required IT elements, and deploy applications to the run-time environment.

Oracle BPM Studio also provides a BPM role that enables business users to use a simplified version of Oracle JDeveloper that displays only functionality relevant to process design.

See the *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management* for more information.

1.3.1.2 Oracle Business Process Composer (Business Process Composer)

Business Process Composer is a Web-based application that enables business users to collaborate with process developers and designers. It provides a user friendly environment for editing processes and process templates created in Oracle BPM Studio.

Process developers can create a catalog of preconfigured components such as services, tasks, and rules in Oracle BPM Studio. This catalog can be included in project templates that process analysts can use to create new projects using Business Process Composer.

After creating a project based on a project template, process analysts can incorporate business catalog elements and perform other required edits defined by the project template. Process analysts can then deploy these project to the Oracle BPM run time.

Business Process Composer also enables process analysts to create process blueprints. These are initial drafts of a process that can be used by process developers who use Oracle BPM Studio to add further implementation details and refinement to the project.

Business Process Composer also enables you to edit Oracle Business Rules at run time. This is important because policies tend to evolve faster than business processes.

See the *Oracle Fusion Middleware Business Process Composer User's Guide for Oracle Business Process Management* and *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management* for more information.

1.3.1.3 Oracle Metadata Service (MDS) Repository

MDS provides a repository that is used to store data about applications deployed within an Oracle Fusion Middleware environment. Oracle BPM uses this repository, called Oracle Business Process Management Metadata Store, to store information about deployed applications.

Oracle BPM also uses a separate MDS partition to share projects and project templates between process analysts and process developers. [Figure 1–1, "The Oracle BPM Suite"](#) shows how the MDS repository fits within the overall Oracle BPM architecture.

1.3.1.4 Oracle BPM Projects

Oracle BPM projects are containers for the business processes and related resources used to create a process-based business application. An Oracle BPM project can contain the following:

- Organizational data
- Activity guides
- BPMN process models
- Business catalog
- Simulation models
- Other resources

Oracle BPM projects are deployed at run time as Service Integration composite applications. For more information on working with projects and Service Integration composite applications see the following documentation:

- "Working with Projects and Project Templates" in *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*
- "Working with Projects and Project Templates" in *Oracle Fusion Middleware Business Process Composer User's Guide for Oracle Business Process Management*
- *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*

1.3.2 Oracle BPM Run Time Components

Oracle BPM Run Time is responsible for controlling deployed applications. Oracle BPM run time includes the following components:

1.3.2.1 Oracle BPM Engine

The Oracle BPM Engine provides a run-time environment for running business processes. It provides native support for both BPMN and BPEL processes.

The BPM engine is composed of three separate components:

- BPMN Engine
 - The BPMN engine provides an environment for running BPMN processes.
- BPEL Engine

The BPEL engine provides an environment for running BPEL processes.

- **Process Core**

The Process Core provides engine functionality that is shared by the BPMN and BPEL engines. Some of the key functionality performed by the process core includes:

- Manage security
- Generate audit trails
- Invoke services
- Manage persistence

1.3.2.2 Oracle Human Workflow

Many end-to-end business processes require human interactions with the process. For example, humans may be needed for approvals, exception management, or performing activities required to advance the business process. The human workflow service provides features such as:

- Task routing to users, groups or application roles.
- Deadlines, escalations, notifications, and other features required for ensuring the timely performance of a task.
- Task forms for presentation of tasks to end users through a variety of mechanisms, including a workspace and portals.
- Organization, filtering, prioritization, dispatching rules and other features required for end users to productively perform their tasks.

1.3.2.3 Oracle Business Rules

Oracle Business Rules are a component of the Oracle SOA Suite that enable dynamic decisions at run time allowing, among other features, applications to rapidly adapt to regulatory and competitive pressures. This increased agility is possible because process analysts using Oracle Business Rules can create and change business rules that are separated from the application code. By using Oracle Business Rules, process analysts can change business rules without stopping business processes. Also, externalizing business rules enables process analysts to manage business rules directly, without involving process developers.

1.3.2.4 Oracle WebLogic Server

Oracle WebLogic Server is an application server that provides a platform for creating and running J2EE-compliant applications.

1.3.2.5 Oracle Enterprise Manager

The Oracle Enterprise Manager is a Web-based application that enables system administrators to control and manage applications running on the Oracle SOA Suite. Enterprise Manager enables business administrators to configure and manage business applications and process instances.

1.3.3 Oracle BPM Suite Process Participant Applications

The following sections describe the components of the Oracle BPM Suite that are used by process participants to perform their day-to-day work. These applications enable

process participants to interact with running business applications managed by Oracle BPM run time.

1.3.3.1 Oracle Business Process Management Workspace (Process Workspace)

Process Workspace enable process participants to interact with the applications you create using Oracle BPM. The Process Workspace user interface provides tabs for each of the following:

- **Tasks:** This page enables process participants to view and work with their assigned tasks.
- **Process Tracking:** This page enables process participants to view running process instances.
- **Standard Dashboards:** This page provides out-of-the-box dashboards for monitoring process performance, task performance, and workload.
- **Custom Dashboards:** This page enables process participants to define and use custom dashboards based on the measurement data generated by process instances.

Process Workspace also enables business administrators to configure and maintain organizations and roles. See the *Oracle Fusion Middleware User's Guide for Oracle Business Process Management* for more information.

1.3.3.2 Oracle Business Process Management Process Spaces (Process Spaces)

Process Spaces is a collaborative workspace built on top of Oracle WebCenter PortalSpaces and enables more productive BPM by increasing collaboration.

See the *Oracle Fusion Middleware User's Guide for Oracle Business Process Management* for more information.

1.3.4 Other Oracle BPM Suite Components

The following sections describe other components of the Oracle BPM Suite.

1.3.4.1 Process Analytics

Business Process Analytics enables process participants to monitor the performance of running process-based applications. It measures the key performance indicators defined in a BPM project and stores them in a database. Process participants and analysts can view the metrics stored in the process analytics databases using Process Workspace dashboards or Oracle BAM.

1.3.4.2 Guided Business Processes

Guided Business Processes enable process analysts and developers to group the interactive activities in your BPM process into a set of milestones that are meaningful to the process participants. They outline the steps the process participants must complete, hiding the complexity of the business process.

See "Introduction to Guided Business Processes" in *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*

1.4 Oracle Business Process Analysis (BPA) Suite

The Oracle Business Process Analysis Suite is a separate Oracle product suite based on the Aris platform from IDS Scheer. It provides comprehensive modeling, analysis, and

simulation capabilities for enterprise wide business processes. It also supports capturing business architecture artifacts such as strategic objectives, goals, higher level KPIs, risks and controls, and conceptual models such as value chain diagrams.

Additionally, the Oracle Business Process Analysis Suite supports the following:

- Alignment of business processes with a business strategy.
- Service discovery and linking to business processes. Drives service requirements for the Oracle SOA Suite.
- Loading and creating simulation scenarios which enable you to determine optimal resource allocation. Simulation enables you to perform throughput analysis, activity based costing, and resource utilization. Additionally, you can create simulation analysis reports for easy analysis of simulation results.
- Comprehensive version management including check-in, check-out, and change management capabilities.

The business architecture defined by the Oracle Business Process Analysis Suite is the formal link between strategic objectives and the actual business applications created using Oracle BPM. The Oracle Business Process Analysis Suite supports modeling of business architecture artifacts such as strategy maps, goals, objectives, risk and controls and linking them to business processes.

This provides the ability to prioritize efforts, justify decisions, and trace activities of the business process improvement initiatives to strategic goals of the business, hence improving business and IT alignment. It provides tremendous value because it offers a clear understanding of which BPM projects to undertake, which processes are currently most strategic to the company, and which services are most aligned with the business strategy.

The Oracle Business Process Analysis Suite complements the functionality of the Oracle BPM Suite by adding orthogonal dimensions to the modeling phases including organization goals. See the *Oracle BPA Quick Start Guide* for more information.

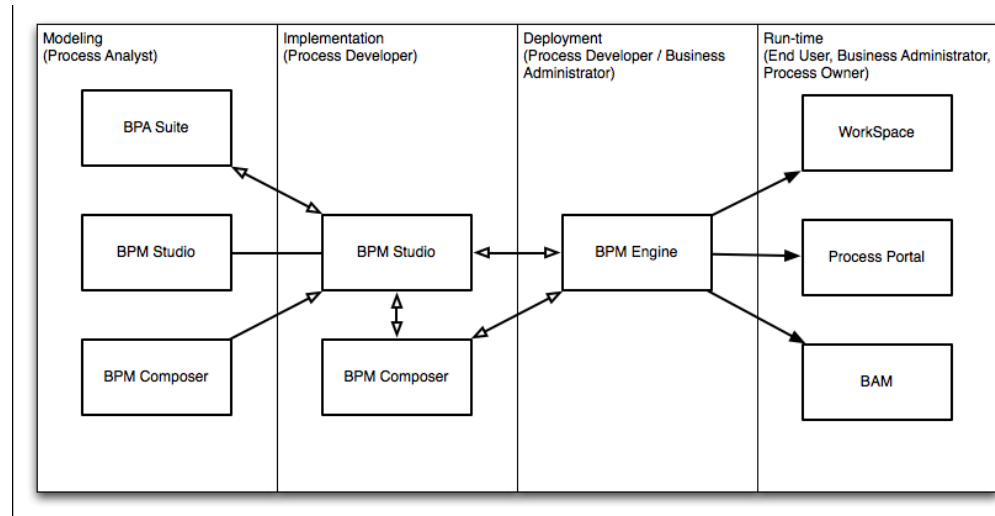
Processes created in the Oracle Business Process Analysis Suite can be imported into the Oracle BPM Suite. Using Oracle BPM Studio, you can integrate your business process with other Oracle technologies including adapters, business rules, and human tasks.

See the *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management* for more information on using business processes created in Oracle Business Process Analysis within Oracle BPM Studio.

1.5 Introduction to the Application Development Life Cycle

This section outlines the stages of the development life cycle of an Oracle BPM application. It describes how different components of Oracle BPM are used within each stage.

[Figure 1–2](#) lists the four stages of the application development life cycle, the user personas applicable to each stage, and the Oracle BPM tools and applications that are used.

Figure 1–2 Stages of the Oracle BPM Application Development Life Cycle

1.5.1 Process Modeling

The first stage of the application development life cycle is process modeling. During this stage a process analyst creates process models based on real-world business processes and problems.

Oracle BPM provides three distinct tools for modeling business processes. Each tool has a different role within the Oracle BPM Suite. The tool you use depends on your business requirements, the stage of the application development cycle, and your user persona.

- Oracle BPM Studio

Oracle BPM Studio runs on the Oracle JDeveloper IDE platform. Oracle BPM Studio provides a process analyst role that displays a simplified set of JDeveloper functionality that focuses on designing process models.

Oracle BPM Studio enables process analysts and process developers to design and implement detailed process flows that are deployed to Oracle BPM run time and run as working applications. Additionally, detailed process flows from Oracle Business Process Analysis Suite or Business Process Composer can be brought inside Oracle BPM Studio for further implementation, then deployed to the Oracle BPM run time.

- Oracle Business Process Composer

Business Process Composer is a collaboration tool that enables process analysts to collaborate with process developers.

- Oracle Business Process Analysis Suite (BPA)

The Oracle Business Process Analysis Suite enables you to create robust models of your business processes from high-level models of your entire organization down to lower level business processes that you can implement as running processes.

See [Section 1.6, "Oracle BPM Use Cases"](#) for more information about how each of these tools fit within the typical Oracle BPM uses cases. See *Oracle Fusion Middleware Business Process Composer User's Guide for Oracle Business Process Management* and *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management* for more information about how Business Process Composer and Oracle BPM Studio interact within the application development life cycle.

1.5.2 Implementation

After process analysts model business processes, process developers are responsible for creating business applications based on these models. Using Oracle BPM Studio, process developers implement reusable services and integrate other business systems.

Implementation may include the following types of tasks generally performed by process developers:

- Data mapping and transformation
- System fault handling
- Designing and implementing user interfaces using Oracle Human Workflow
- Designing Oracle Business Rules
- Creating dashboards

After a process developer finishes the implementation, the application is compiled and deployed like other Service Integration composite applications. It can be compiled and deployed using Oracle BPM Studio.

1.5.3 Deployment

Deployment is the process of transferring an Oracle BPM project from the development environment to the run-time environment. This can be either a testing or production run-time environment.

After finishing the integration of business processes with back-end systems and reusable services, process developers create and compile a working process-based application. This application is then deployed to Oracle BPM Run Time.

Oracle BPM Suite contains the following typical scenarios for deploying to Oracle BPM Run Time:

- Deployment directly from Oracle BPM Studio

Applications created with Oracle BPM can be deployed directly to the run-time environment like any other Service Integration composite application. This is typically performed by a process developer using Oracle BPM Studio within a test or development environment.

See the *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite* for more information about deploying Service Integration composite applications.
- Deployment directly from Business Process Composer

Oracle BPM enables you to deploy projects created from project templates directly to the same run time environment where Business Process Composer is installed. When creating a project, you can specify an approval workflow that must be completed before the project is deployed.

You can deploy from Business Process Composer when it is installed in the same server infrastructure as Oracle BPM Run Time. This enables process analysts to deploy and test process-based business applications. This is generally done in a testing environment.
- Deployment using an exported SAR file

Oracle BPM Studio and Business Process Composer enable you to export applications using a SAR file. The SAR file can be deployed to a run time environment by business administrators using Oracle Enterprise Manager.

In a production environment, this is generally how applications are deployed.

- Deployment Using the WebLogic Scripting Tool (WLST)
Oracle BPM provides customized WLST commands for managing and deploying Oracle BPM projects.

1.5.4 Oracle BPM Run Time

After an application is deployed, the run-time environment makes the Oracle BPM application available to process participants based on the roles assigned in the organization where the business processes were deployed. This stage is divided into these distinct functions:

- User interaction
Process participants and process owners are responsible for interacting with the running application using Process Workspace.
Process analysts and owners can also monitor the process and revise Oracle Business Rules at run time using Business Process Composer.
- Process management and monitoring
Process owners are responsible for monitoring and maintaining running processes using Process Workspace. Process analysts and owners use Oracle Business Process Analysis to monitor the real-time performance of business processes.
- Process creation
Process participants who have the necessary permissions can create new processes using Oracle BPM Workspace or Oracle Process Spaces
- System administration
Business administrators are responsible for maintaining running business applications and the overall run-time infrastructure using Oracle Enterprise Manager and the Oracle WebLogic Server administration console.

1.6 Oracle BPM Use Cases

This section describes typical use cases of the Oracle BPM Suite from process modeling to run time.

1.6.1 Use Case: Using Oracle BPM Studio to Create Project Templates

This use case involves using Oracle BPM Studio to create project templates. These templates are used by process analysts to create new projects using Business Process Composer.

Typical Workflow for Using Oracle BPM Studio to Create Project Templates

1. Determine the business requirements (process analyst).
2. Model the required business processes using Oracle BPM Studio (process analyst or process developer)
A process analyst can use the Process Analyst role in Oracle JDeveloper.
3. Implement the processes by integrating each element of the process with back-end systems and reusable services (process developer).
4. Create a project template using Oracle BPM Studio (process developer)

5. Publish the project template to the Oracle BPM MDS repository (process developer).
6. Create a new Oracle BPM project based on a project template (process analyst).
7. Implement the required reusable services defined by the project template (process analyst).
8. Deploy the project to Oracle BPM run time (process analyst).

1.6.2 Use Case: Using Oracle BPM Studio to Model Processes and Deploy an Application

This use case involves using Oracle BPM Studio to create process models. These models are used to create working business applications that are deployed to the Oracle BPM Run Time.

Typical Workflow for Using Oracle BPM Studio to Model Processes

1. Determine the business requirements (process analyst).
2. Model the required business processes using Oracle BPM Studio (process analyst or process developer)
A process analyst can use the Process Analyst role in Oracle JDeveloper.
3. Run a simulation to test and improve process performance. (process analyst / process developer).
4. Implement the processes by integrating each element of the process with back-end systems and reusable services (process developer).
5. Compile the Oracle BPM project as a composite application (process developer).
6. Deploy the application to the run-time environment (process developer, business administrator).
7. Interact with the deployed processes as part of a running business application (process participants, process owner).
8. Maintain and monitor the running process-based applications (business administrator, process owner).

1.6.3 Use Case: Using Business Process Composer to Create Process Blueprints

This use case involves creating process blueprints using Business Process Composer. These blueprints are then shared with process developers who import them into Oracle BPM Studio, where they perform further refinement and implementation.

Typical Workflow for Using Business Process Composer to Create Process Blueprints

1. Create process blueprints using Business Process Composer (process analyst).
2. Provide implementation details for the business process and prepare the process-based business application for deployment (process developer).
3. Create project templates and publish them to the Oracle BPM Metadata Store repository using Oracle Business Process Management Studio (process developer).
4. Create a project based on a the project template (process analyst).
5. Edit the project as defined by the edit policies of the project template (process analyst).

6. Deploy the project to Oracle BPM Run Time (process analyst, process administrator).

1.6.4 Use Case: Using Business Process Composer to Revise Oracle Business Rules

This use case involves using Business Process Composer to edit Oracle Business Rules at run time. After an application is deployed, process analysts and owners can open the deployed project and edit Oracle Business Rules.

Typical Workflow for Using Process Composer to Revise Oracle Business Rules

1. Model a set of business processes (process analyst).
2. Implement and deploy an application (process developer).
3. Edit the Oracle Business Rules at run time using Business Process Composer. (process owner).

1.6.5 Use Case: Using the Oracle Business Process Analysis Suite to Model Your Business Processes

This use case involves using the Oracle Business Process Analysis Suite to model your business processes. These processes can be imported into Oracle BPM Studio.

Typical Workflow for Using the Oracle Business Process Analysis Suite and Oracle BPM Suite to Model Processes

1. Determine the business requirements (process analyst).
2. Design your business architecture by capturing strategic objectives, process maps, value chain diagrams using Oracle Business Process Analysis (process analyst).
3. Perform strategic analysis to determine potential process candidates for Oracle BPM projects. (process analysts)
4. Design detailed process flows for the process candidates identified previously (process analyst)
5. Import your process models into Oracle BPM Studio (process analyst, process developer).
6. Implement the processes by integrating each process component with back-end systems and reusable services (process developer).
7. Deploy the business processes, as a BPM project, to the run time environment (process developer, business administrator).
8. Interact with the deployed processes as part of a business application (process participant, process owner)
9. Maintain the processes (business administrator, process owner)

Part I

Using Oracle Business Process Management Workspace (Process Workspace)

This part contains the following chapters:

- [Chapter 2, "Getting Started with Process Workspace"](#)
- [Chapter 3, "Working on Tasks in Process Workspace"](#)
- [Chapter 4, "Working on Process Instances in Process Workspace"](#)
- [Chapter 5, "Working with Activity Guides in Process Workspace"](#)
- [Chapter 6, "Creating and Editing Custom Pages in Process Workspace"](#)
- [Chapter 7, "Using Dashboards in Process Workspace"](#)
- [Chapter 8, "Managing Workloads Among Users in Process Workspace"](#)
- [Chapter 9, "Managing Process Workspace \(for Administrators\)"](#)
- [Chapter 10, "Managing Your Organization in Process Workspace \(for Administrators\)"](#)

Getting Started with Process Workspace

This chapter tells you how to start and log in to Process Workspace, navigate its interface, and configure your preferences.

Process Workspace is a customizable web-based interface enabling users to access and manage tasks and process instances according to their roles and responsibilities.

To help you get started with Process Workspace, this chapter contains these topics:

- [Section 2.1, "Understanding Process Workspace"](#)
- [Section 2.2, "Starting and Logging In to Process Workspace"](#)
- [Section 2.3, "Navigating Process Workspace"](#)
- [Section 2.4, "Accessing Administration Capabilities"](#)
- [Section 2.5, "Setting Your Preferences in Process Workspace"](#)

For information about troubleshooting human workflow issues, see section "Human Workflow Troubleshooting" of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

2.1 Understanding Process Workspace

[Table 2–1](#) lists and describes the users for whom Process Workspace is designed.

Table 2–1 Users of Oracle Business Process Management Workspace

User Profile	Description
Process Participants	<p>This is the most basic profile, common to all users. It enables you to:</p> <ul style="list-style-type: none"> ■ Organize, find, claim, and perform work assigned or delegated either to you or to your group ■ Delegate work to another user ■ Create and manage personal rules—for example, whom to send tasks to when you are on vacation ■ Define and share views ■ Manage personal preferences ■ View reports and dashboards <p>These users may be spread throughout the organization or work outside the company.</p> <p>A process participant may be one who not only initiates the process, but can also track its progress and, if appropriate, withdraw it.</p>

Table 2–1 (Cont.) Users of Oracle Business Process Management Workspace

User Profile	Description
Process Owners	<p>Users who manage one or more business process. They act on tasks belonging to the process but assigned to other users, in addition to their own end-user access. They want to know how process instances are moving in those processes. To get this perspective, they typically use dashboards.</p> <p>These users usually reside on the business side of the house as part of the operations organization. They may also be supervisors.</p>
Administrators	<p>Includes two types of administrative users:</p> <ul style="list-style-type: none"> ■ Business administrators: Users responsible for administering Process Workspace—for example, adding mapped attributes, changing the look and feel, or ensuring that the web application is both running and accessible. Administers tasks that are in an errored state, for example, tasks that must be reassigned or suspended. They can also change application preferences and map attributes, and manage rules for any user or group, in addition to their own end-user access. They typically need access to Fusion Middleware Control Console as well as to the computers where Process Workspace resides. ■ Process administrators: Users responsible for administering processes—for example, creating shared views; assigning or removing roles, permissions, and groups; and mapping roles.
Supervisors	<p>Users with other process participants reporting to them. To ensure that process instances execute as expected, supervisors can:</p> <ul style="list-style-type: none"> ■ Access staff work ■ Reassign and delegate work as needed ■ Handle escalations from individuals reporting to them ■ Generate reports regarding work distribution and productivity ■ Specify extended user properties

Process analysts typically use the Oracle Business Process Analysis Suite or Business Process Composer to create process models. They can also use process analyst role within Oracle BPM Studio.

Process developers typically use Oracle BPM Studio to model and implement the components of a business application. They may occasionally use Oracle Business Process Composer (Business Process Composer) for modeling basic processes.

2.2 Starting and Logging In to Process Workspace

To start Process Workspace, you must have installed Oracle SOA Suite, and the Service Integration server must be running. See your installation documentation for more information.

To start and log into Process Workspace:

1. Go to

`http://host_name:port_number/bpm/workspace/`

The `host_name` is the name of the host computer on which Oracle SOA Suite is installed.

The `port_number` is the one used at installation.

2. Enter the user name and password.

You can use the preseeded user name to log in as an administrator. If you have loaded the demo user community in the identity store, then you can use other users such as `jstein` or `jcooper`.

The user name and password must exist in the user community provided to JAZN.

3. Click **Login**.

Notes:

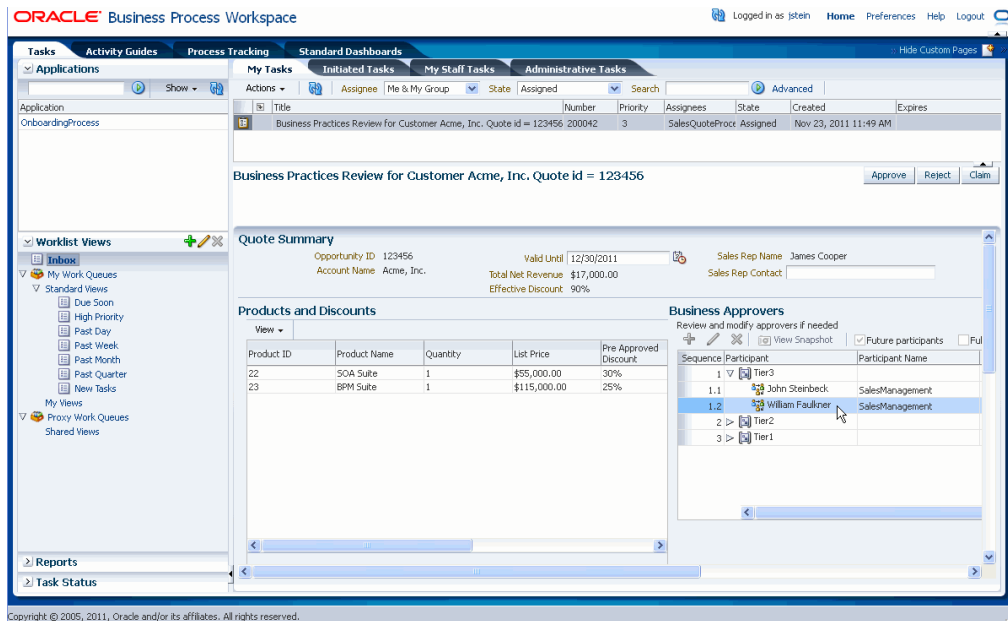
- If you expect to have a large number of users using Process Workspace simultaneously, then set the session time-out value to no more than 5 minutes. To do this, expand the Process Workspace `.ear` file, open the `web.xml` file, and update the time-out parameter.
- If user identities are stored in Microsoft Active Directory, then at times authentication can fail due to the inability of Oracle WebLogic Server, where Process Workspace is running, to communicate with the Active Directory installation. This can occur when Oracle WebLogic Server and Active Directory are in separate domains.

To resolve this issue, add the entry for the Active Directory host's address to the `/etc/hosts` file on machine where Process Workspace is running.

2.3 Navigating Process Workspace

Figure 2–1 shows Process Workspace as it first appears by default when you log in.

Figure 2–1 Process Workspace Home



At the highest level, Process Workspace provides four default tabs:

- Tasks
- Activity Guides
- Process Tracking
- Standard Dashboards

It also provides a link in the top right toolbar for performing administration.

In addition to the default tabs, you can create your own custom tabs, with each one appearing as a separate page in Process Workspace. For more information about creating custom tabs, see [Chapter 6, "Creating and Editing Custom Pages in Process Workspace"](#).

An administrator can choose whether to show or hide the default tabs. The administrator can also specify which tab page is displayed when the user logs in. For information on hiding and showing default tabs, see [Section 9.1.8, "How to Show or Hide the Default Tab Pages in Process Workspace"](#)

This section contains these topics:

- [Section 2.3.1, "About the Process Workspace Tasks Page"](#)
- [Section 2.3.3, "About the Process Workspace Process Tracking Page"](#)
- [Section 2.3.4, "About the Process Workspace Standard Dashboards Page"](#)

2.3.1 About the Process Workspace Tasks Page

After a user logs in, the Home page displays the **Tasks** page by default. The **Tasks** page displays tasks for the user based on the user’s permissions and assigned groups and roles.

Within the **Tasks** page, the **My Tasks** page and the **Inbox** are displayed by default. The actions allowed from the **Actions** list depend on the logged-in user’s privileges.

The **Tasks** page enables you to do the following:

- Perform authorized actions on tasks in the worklist, acquire and check out shared tasks, define personal to-do tasks, and define subtasks.
- Filter tasks in a worklist view based on various criteria.
- Work with standard work queues, such as high priority tasks, tasks that are due soon, and so on. Work queues enable users to create a custom view to group a subset of tasks in the worklist—for example, high priority tasks, tasks due in 24 hours, expense approval tasks, and more.
- Define custom work queues.
- Gain proxy access to part of another user's worklist.
- Define custom vacation rules and delegation rules.
- Enable group owners to define task dispatching rules for shared tasks.
- Collect a complete workflow history and audit trail.
- Use digital signatures for tasks.

Note: If you change a user's privileges in Oracle Enterprise Manager Fusion Middleware Control Console while the user is logged in to Process Workspace, the changes take effect only after a subsequent login by the user. This is true for situations in which there are two active worklist sessions: one in which the user is logged in before the privileges are changed, and one in which the same user logs in after the privileges are changed. In the first case, the changes to the user's privileges do not take effect while the user is logged in. In the second case, when the user logs in to the second instance of Process Workspace, the changes to the user's privileges do take effect.

2.3.1.1 Navigating the Process Workspace Tasks Page

This page lists all the tasks and work items assigned to you, depending on your role. For example, all users will see the My Tasks, Initiated Tasks and Administrative Tasks pages. Only supervisors will see the My Staff page. The Tasks page has these sections, as shown in [Figure 2-2](#):

- Task navigator on the left
- Task list on the upper half of the right side
- Task details on the lower half of the right side

Figure 2–2 Process Workspace Tasks Page

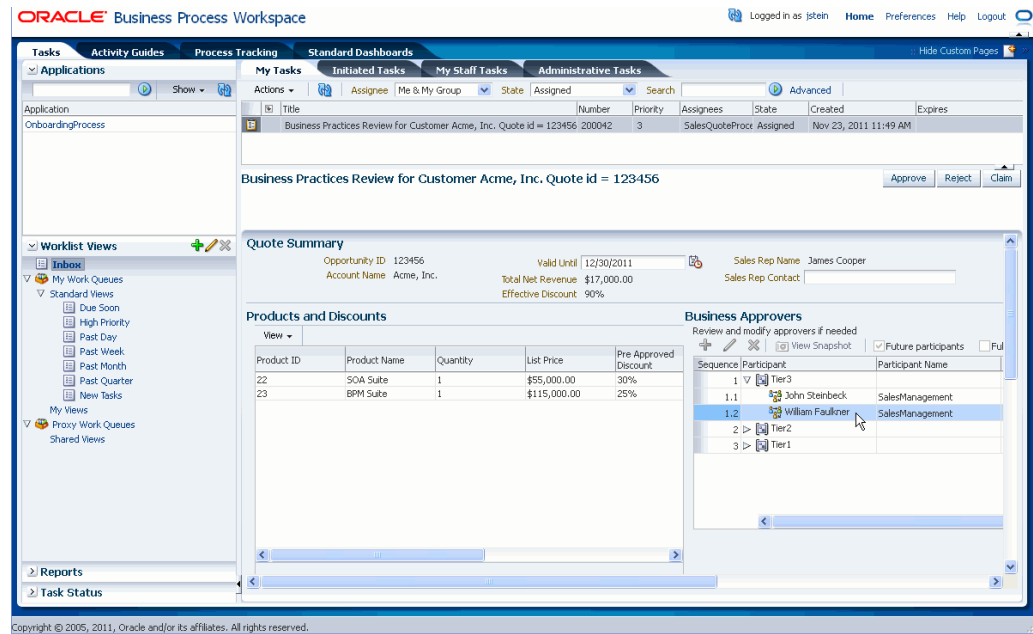


Table 2–2 Components of the Tasks Page

Component	Description
Tabs	<p>The tabs displayed depend on the role granted to the logged-in user.</p> <ul style="list-style-type: none"> Everyone (the user role) sees My Tasks, Initiated Tasks and Administrative Tasks. Users who are also supervisors see the My Tasks, Initiated Tasks, My Staff Tasks and Administrative Tasks tabs. Users who are also administrators (the BPMProcessAdmin), but not supervisors, see the My Tasks, Initiated Tasks, and Administrative Tasks. Users who are supervisors and administrators see all the tabs— My Tasks, Initiated Tasks, My Staff Tasks, and Administrative Tasks.
Applications	The processes the user is authorized to initiate.
Worklist Views	<ul style="list-style-type: none"> Inbox—Shows all tasks that result from any filters you used. The default shows all tasks. My Work Queues—Shows standard views and views that you defined. The Standard Views are Due Soon, High Priority, Past Day, Past Week, Past Month, Past Quarter, and New Tasks. Proxy Work Queues—Shows shared views.
Task Status	A bar chart shows the status of tasks in the current view.
Display Filters	<p>Specify search criteria from the Assignee, Status, or Search fields. The category filters that are available depend on which tab is selected.</p> <ul style="list-style-type: none"> From the My Tasks page, the Assignee filters are My, Group, My & Group, Previous (tasks worked on in the past), and Reviewer. From the Initiated Tasks page, the only assignee filter is Creator. From the My Staff Tasks page, the only assignee filter is Reportees. From the Administrative Tasks page, the only assignee filter is Admin. The Status filters include Any, Assigned, Completed, Suspended, Withdrawn, Expired, Errored, Alerted, Information Requested. <p>Use Search to enter a keyword or use Advanced Search.</p>

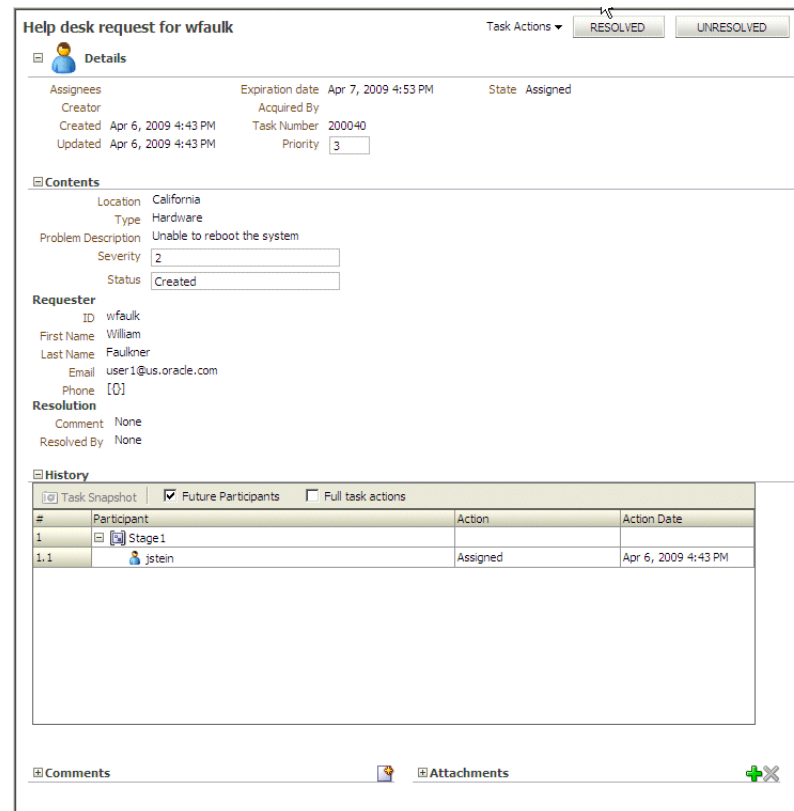
Table 2–2 (Cont.) Components of the Tasks Page

Component	Description
Actions List	Select a group action (Claim) or a custom action (for example, Approve or Reject) that was defined for the human task. Claim appears for tasks assigned to a group or multiple users; one user must claim the task before it can be worked. Other possible actions for a task, such as system actions, are displayed on the Task Details page for a specific task. You can also create ToDo tasks and subtasks here.
Default Columns	<p>Title—The title specified when the human task was created. Tasks associated with a purged or archived process instance do not appear.</p> <p>Number—The task number generated when the BPEL process was created.</p> <p>Priority—The priority specified when the human task was created. The highest priority is 1; the lowest is 5.</p> <p>Assignees—The user or group or application roles.</p> <p>State—Select from Assigned, Completed, Errored, Expired, Information Requested, Stale, Suspended, or Withdrawn.</p> <p>Created—Date and time the human task was created.</p> <p>Expires—Date and time the tasks expires, specified when the human task was created.</p>
Task Details	The lower section of the worklist displays the inline view of the Task Details page. Buttons indicate available actions.

2.3.1.2 The Process Workspace Task Details Page

Figure 2–3 shows an example of a Task Details page. This page is invoked by selecting a task from the inbox on the Process Workspace Tasks page.

Figure 2–3 Example of a Task Details Page



The task details page has the following components:

- Basic information including the title of the task—for example, Help Desk Request for wfaulk—task number, creator, assignees, state, created date, the person who acquired the task, priority, expiration date, and other flex fields.
- Action buttons—For custom actions defined in the human task—for example, **Resolved** and **Unresolved** for a help desk request or **Approve** and **Reject** for a loan request. For the administrator, task initiator, or manager, **Withdraw** may also appear.
- Other Actions—System task actions, beyond the custom actions defined for the task—as described in [Table 2–3](#).

Table 2–3 System Task Actions

Action	Description
Claim	If a task is assigned to a group or multiple users, then the task must be claimed first. Claim is the only action available in the Action list for group or multiuser assignments. After a task is claimed, all applicable actions are listed.
Escalate	If you are not able to complete a task, you can escalate it and add an optional comment in the Comments area. The task is reassigned to whomever is specified by the administrator. If no escalation path is specified, then the task is escalated to your supervisor (up one level in a hierarchy).
Pushback	Use this action to send a task down one level in the workflow to the previous assignee.
Reassign	If you are a manager, you can delegate a task to reportees. A user with BPMWorkflowReassign privileges can delegate a task to anyone.
Release	If a task is assigned to a group or multiple users, it can be released if the user who claimed the task cannot complete the task. Any of the other assignees can claim and complete the task.
Renew	If a task is about to expire, you can renew it and add an optional comment in the Comments area. The task expiration date is extended one week. A renewal appears in the task history. The renewal duration for a task can be controlled by an optional parameter. The default value is P7D (7 days).
Submit Information and Request Information	Use these actions if another user requests that you supply more information or to request more information from the task creator or any of the previous assignees. If reapproval is not required, then the task is assigned to the next approver or the next step in the business process.
Suspend and Resume	If a task is not relevant, you can suspend it. These options are available only to users who have been granted the BPMWorkflowSuspend role. Other users can access the task by selecting Previous in the task filter or by looking up tasks in the Suspended status. A suspension is indefinite. It does not expire until Resume is used to resume working on the task.
Withdraw	If you are the creator of a task and do not want to continue with it, for example, you want to cancel a vacation request, you can withdraw it and add an optional comment in the Comments area. The business process determines what happens next. You can use the Withdraw action on the home page by using the Creator task filter.

- Content—The payload. The fields displayed are specific to how the human task was created.
- Short History—Provides a graphical view of a task flow and lists all versions created by the following tasks:
 - Initiate task
 - Reinitiate task

- Update outcome of task
- Completion of task
- Erroring of task
- Expiration of task
- Withdrawal of task
- Alerting of task to the error assignee

You can include the following actions in the short history list by modifying the `shortHistoryActions` element.

- Acquire
 - Ad hoc route
 - Auto release of task
 - Delegate
 - Escalate
 - Information request on task
 - Information submit for task
 - Override routing slip
 - Update outcome and route
 - Push back
 - Reassign
 - Release
 - Renew
 - Resume
 - Skip current assignment
 - Suspend
 - Update
- History Details—The approval sequence and the update history for the task.
To see all actions performed, including those that do not change the task, such as adding comments, check **Full History**.
 - Comments and Attachments:
 - Comments entered by various users who have participated in the workflow. A newly added comment and the commenter's user name are appended to the existing comments. A trail of comments is maintained throughout the life cycle of the task. To add a comment, you must have permission to update the task.

For information about how to add a comment, see [Section 3.7, "Adding Comments and Attachments to Tasks in Process Workspace"](#)
 - Attachments are documents or reference URLs associated with a task. These are typically associated with the workflow as defined in the human task or attached and modified by any of the participants using the task list. To add or delete an attachment, you must have permission to update the task. When

adding file attachments, you can use an absolute path name or browse for a file.

2.3.1.2.1 Task History The task history maintains an audit trail of the actions performed by the participants in the workflow and a snapshot of the task payload and attachments at various points in the workflow. The short history for a task lists all versions created by the following tasks:

- Initiate task
- Reinitiate task
- Update outcome of task
- Completion of task
- Erroring of task
- Expiration of task
- Withdrawal of task
- Alerting of task to the error assignee

You can include the following actions in the short history list by modifying the `shortHistoryActions` element.

- Acquire
- Ad hoc route
- Auto release of task
- Delegate
- Escalate
- Information request on task
- Information submit for task
- Override routing slip
- Update outcome and route
- Push back
- Reassign
- Release
- Renew
- Resume
- Skip current assignment
- Suspend
- Update

The history provides a graphical view of a task flow, as shown in [Figure 2–4](#).

Figure 2-4 History: Graphical View

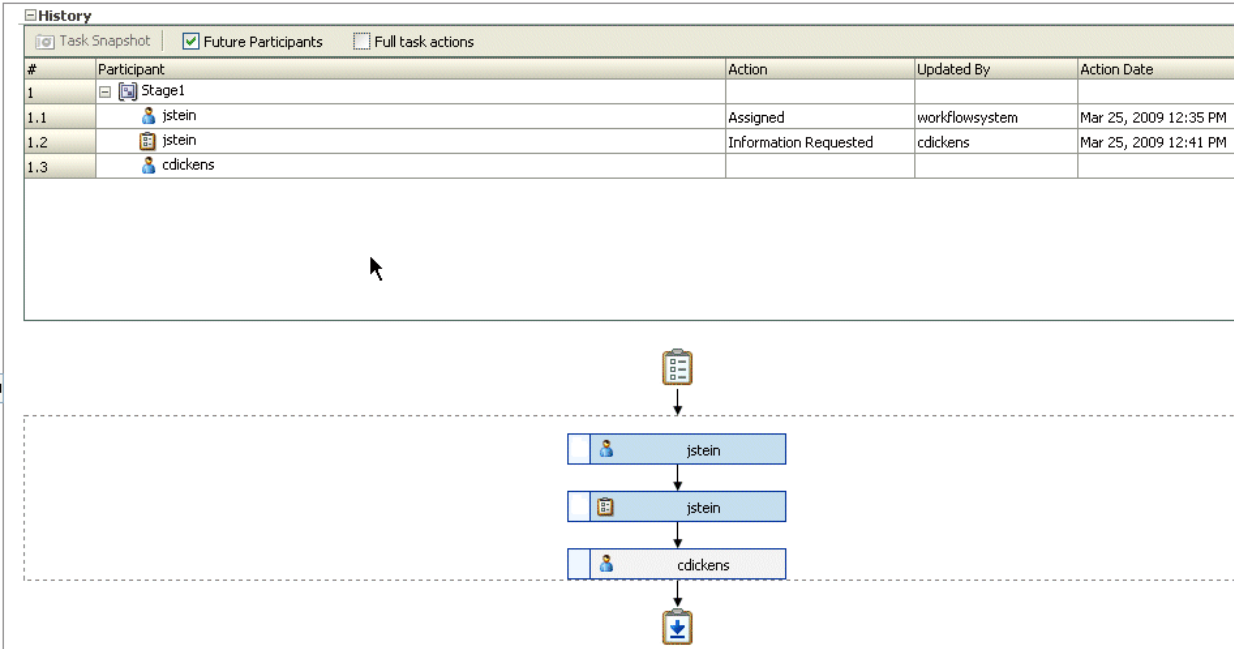


Table 2-4 describes the icons used in the Task History section.

Table 2-4 Icons for Task History

Icon	Description
	Indicates an approver in an ad hoc routing scenario.
	Indicates that the task has been approved
	Indicates that the participant just receives a notification task and the business process does not wait for the participant's response. Participant cannot directly impact the outcome of a task, but in some cases can provide comments or add attachments.
	Indicates that a set of people must work in parallel. This pattern is commonly used for voting.
	Indicates that the participant belongs to a management chain.
	Indicates the simple case in which a participant maps to a user, group, or role.
	Indicates that the task is untouched

Select **Full task actions** to see all actions performed, including those that do not make changes to the task, such as adding comments, as shown in Figure 2-5.

Figure 2–5 History: Full Task Actions

The screenshot shows a 'History' window with a table of task actions and a flow diagram below it.

#	Participant	Action	Updated By	Action Date
1	Stage1			
1.1	jstein	Assigned	workflowsystem	Mar 25, 2009 12:35 PM
1.2	cdickens	Reassigned	jstein	Mar 25, 2009 12:40 PM
1.3	cdickens	Comment Added	cdickens	Mar 25, 2009 12:41 PM
1.4	jstein	Information Requested	cdickens	Mar 25, 2009 12:41 PM
1.5	cdickens			

Below the table is a flow diagram showing a sequence of participants: jstein, cdickens, cdickens, jstein, and cdickens, connected by downward arrows.

Available ways to view the task history include:

- Take a task snapshot
- See future approvers
- See complete task actions

2.3.2 About the Process Workspace Activity Guides Page

Activity guides organize your tasks into milestones. Each milestone is a specific set of tasks for you to complete, either on your own or in collaboration with others. For each milestone, the activity guide tells you which tasks to complete and in which order. You complete a milestone by completing all the tasks it contains for you. Depending on the nature of the task, you can save an unfinished task and resume it later.

Figure 2–6 shows an example of an activity guide.

Figure 2–6 Sample Activity Guide

The screenshot displays the Oracle Business Process Workspace interface. At the top, it shows the user is logged in as 'jcooper'. The main navigation tabs include 'Tasks', 'Activity Guides', 'Process Tracking', and 'Standard Dashboards'. The 'Activity Guides' tab is active, showing a table of activity guides with columns for Title, Status, Initiated, Instance #, Process Name, and Composite Name. Below the table, there is a section for 'Activity Guide Completion' showing a progress bar at 0% and 'Completed Tasks (0/1)'. A tree view on the left shows the 'OnBoarding guided process' expanded to show 'Personal Info' and 'Validate personal info'. The 'Validate personal info' task is selected, showing details for 'Employee Id', 'First Name', 'Last Name', 'User Info - Address', 'Comments', and 'Attachments'. Red annotations highlight key features: 'View the status and percent completion of the overall business process in which you participate.' points to the table and progress bar; 'Expand a milestone to see and act on the tasks it includes.' points to the 'Validate personal info' task in the tree view.

Using an activity guide, you can:

- Expand a milestone to see and act on the tasks it includes.
- View the status and percent completion of the overall business process in which you participate.

For more information about navigating the Activity Guides page, see [Section 5.2, "Navigating Activity Guides"](#).

2.3.3 About the Process Workspace Process Tracking Page

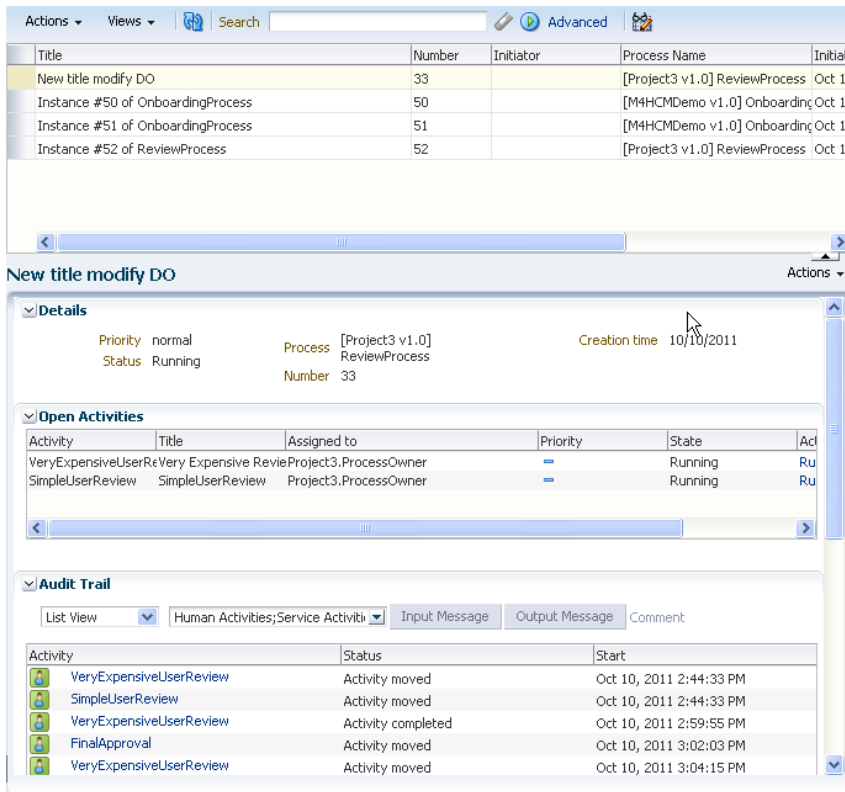
Use the Process Tracking page to interact with business processes based on the roles assigned to you.

Using the Process Tracking tab, you can do the following:

- View the list of process instances pending in your inbox.
- Execute tasks. That is, carry out a human task on a particular instance.
- Search for instances by different criteria.
- Save the searches as a view.
- View the details of an instance, including the audit trail.
- Create a new instance, if you have permission to do so.
- Attach a file to an instance.
- Add notes to an instance.

2.3.3.1 Navigating the Process Workspace Process Tracking Page

Figure 2-7 Process Workspace Process Tracking Page



The Process Tracking page has these sections:

- The Applications panel, which shows the list of applications available to you. Here you can perform basic Process Workspace actions, such as creating a new instance performing a given activity, or sorting applications.

Hovering over the name of an application in the Applications panel displays a tooltip with the application's full name and revision number.

The applications available in Process Workspace depend on the process design and the roles assigned to the user currently logged in. The list of available applications also depends on the BPM processes that are deployed and running. If no processes are running, or if you are not a participant able to execute an application in any of the processes currently running, then the applications panel is empty.

In the applications panel, you can sort either of the following:

- Only the default versions of applications
- All active versions of applications

You can sort either by name or by process version. You can filter the same applications by entering in the **Search** field either full or partial names or full or partial versions.

- The Views panel, on the lower left half, displays the views available to you in an expandable tree
- The Pending Components panel shows all suspended processes. If a new version of a process is deployed, and the previously deployed process has instances not yet migrated to the new version, then the previously deployed process is suspended. To resume it, either migrate or suspend any non-migrated instances. For information about resuming suspended processes, see "Resuming a Suspended Process" in *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.
- The Work Items panel, on the upper right half, shows the task items corresponding to the view you have selected in the Views panel. In this panel, you can choose the columns that are presented in a given view. A particular column arrangement is known as a presentation. Clicking **Add/Remove columns** displays the Presentation dialog box in which you can define columns.

The following columns are available:

- Actions
 - Activity
 - Activity Due Date
 - Copy
 - Creation Time
 - Deadline
 - Description
 - Has Attachments
 - Has Notes
 - Initiated
 - Initiator
 - Initiator Name
 - Instance #
 - Parent Copy
 - Participant
 - poID
 - Priority
 - Process Name
 - Process Due Date
 - Received
 - Status
 - Task Participant (that is, the participant that is currently executing an instance.)
 - Title
- The Work Item Detail panel, on the lower right half, shows detailed information about a work item that you have selected in the Work Items panel. It has these sections:

- Details: Shows the priority, process name, when the instance is due to complete, status, creation time, and the assignee if any.
- Open Activities: Shows the status of any gateways with threads that are still running.
- Audit Trail: Shows audit details in either a list view, a tree view, or graphical view. You can select the type of activity or sub-process you want to audit: human activities, service activities business rule activities, subprocesses, events, gateways, script activities, other activities, or all of the above.

If the process includes an input or output payload, then you can display the audit details for that message in a pop-up. Clicking on a particular activity displays the task history.

For more information about viewing audit details, see [Section 4.3.1, "Viewing the Audit Trail in Process Workspace."](#)

- Comments: Enables you to add comments to the process instance.
- Attachments: Enables you to add attachments to the process instance.

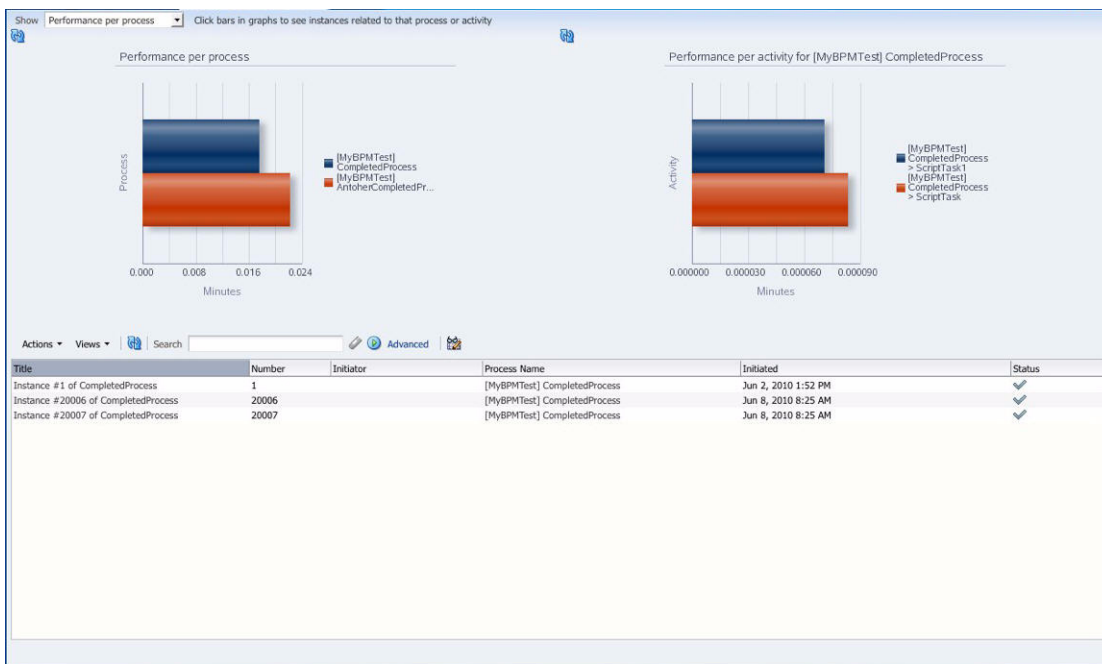
For more information about adding comments and attachments to a process instance, see [Section 4.3.2, "Associating Comments and Attachments with a Process Instance in Process Workspace."](#)

2.3.4 About the Process Workspace Standard Dashboards Page

Dashboards provide analytical information to monitor process execution as well as user workloads. They provide summary information and enable you to drill down to instance-specific information.

Figure 2–8 shows the Standard Dashboards page.

Figure 2–8 Process Workspace Standard Dashboards Page

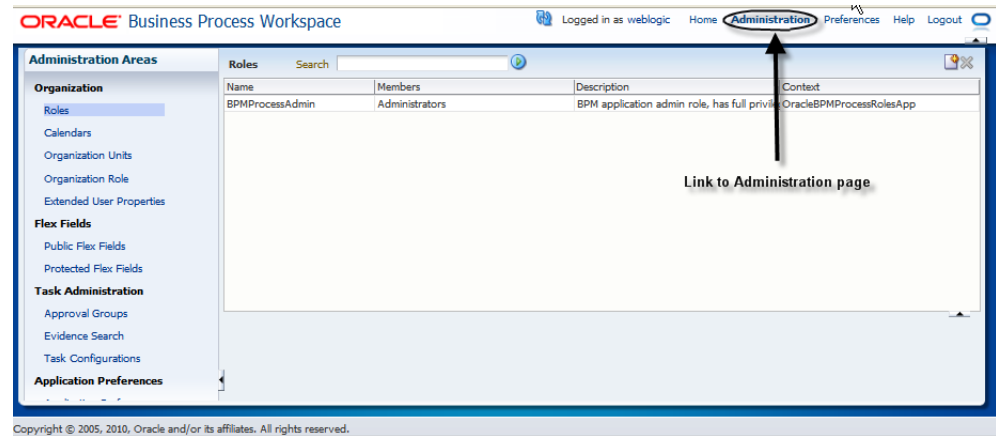


For additional information about dashboards, see [Chapter 7, "Using Dashboards in Process Workspace"](#).

2.4 Accessing Administration Capabilities

The upper right toolbar contains an **Administration** link as shown in [Figure 2–9](#).

Figure 2–9 Administration Link



[Table 2–5](#) lists and describes the categories in the Administration Areas and tells where to find more information about each one.

Table 2–5 Categories in the Administration Areas

Category	Description	Information
Organization	Model an organization by defining organization units, business calendars, business holidays, roles, and other user properties. Note: If you are logged into Process Workspace, and changes are made to your organizational membership, you will not see these changes reflected in the interface until you log out and log back in again. This is because, for better performance, the organization unit information is cached when you log into Process Workspace.	Section 10, "Managing Your Organization in Process Workspace (for Administrators)"
Flex Fields (Mapped Attributes)	Create mappings needed for populating mapped attributes.	Section 9.2.1, "Managing Mapped Attributes (Flex Fields) in Process Workspace"
Task Administration	Administer approval groups, task configuration, evidence search, and exceptions	Section 9.2, "Administering and Configuring Task-Related Information in Process Workspace"
Application Preferences	Customize the appearance of the worklist.	Section 9.1, "Setting the Display of the Work Items Panel in Process Workspace"

2.5 Setting Your Preferences in Process Workspace

[Table 2–6](#) lists and describes the preferences you can set and tells you where to find information for setting each preference.

Table 2–6 Preferences

Preference	Description	Information
Accessing Process Workspace in local languages	Specify your preferred language and time zone.	Section 9.1.3, "How to Specify the Language Locale Information in Process Workspace"
Providing a digital certificate	Provide a digital certificate from a certification authority to verify your credentials.	Section 3.5, "Providing a Digital Certificate in Process Workspace" .
Setting rules	Set rules for tasks assigned to a user or group.	Section 3.9.1, "How to Create User Rules in Process Workspace" Section 3.9.2, "How to Create Group Rules in Process Workspace"
Setting notification preferences	Configure the notification settings to control how, when, and where you receive messages in cases when you have access to multiple communication channels (delivery types).	Section 3.9.4, "Specifying Notification Settings" .
Setting accessibility preferences	Select accessibility preferences such as using a screen reader, using high contrast colors, and large fonts.	Section 3.4, "Setting Accessibility Preferences in Process Workspace"

In addition to the preferences mentioned in this section, administrators can also set various preferences for how the Work Items panel is displayed in Process Workspace. For information about setting these application preferences, see [Section 9.1, "Setting the Display of the Work Items Panel in Process Workspace"](#).

Working on Tasks in Process Workspace

This chapter describes how to set user preferences and act on tasks with Oracle Business Process Management Workspace, including claiming and releasing tasks; reassigning, delegating, and routing tasks; associating comments and attachments to tasks; and setting rules and vacation periods

This chapter contains these topics:

- [Section 3.1, "What You Need to Know When Acting on Tasks in Process Workspace"](#)
- [Section 3.2, "Working with the Process Workspace Tasks Page"](#)
- [Section 3.3, "Claiming and Releasing Tasks in Process Workspace"](#)
- [Section 3.4, "Setting Accessibility Preferences in Process Workspace"](#)
- [Section 3.5, "Providing a Digital Certificate in Process Workspace"](#)
- [Section 3.6, "Reassigning and Delegating Tasks in Process Workspace"](#)
- [Section 3.7, "Adding Comments and Attachments to Tasks in Process Workspace"](#)
- [Section 3.8, "Requesting Information in Process Workspace"](#)
- [Section 3.9, "Setting Rules, Vacation Periods, and Notification Preferences in Process Workspace"](#)
- [Section 3.10, "Creating ToDo Tasks and Subtasks in Process Workspace"](#)
- [Section 3.11, "Acting on Tasks that Require Passwords in Process Workspace"](#)
- [Section 3.12, "Acting on a Task that Requires a Digital Signature in Process Workspace"](#)
- [Section 3.13, "Routing Tasks in Process Workspace"](#)
- [Section 3.14, "Evidence Store Service and Digital Signatures"](#)

For information about troubleshooting human workflow issues, see section "Human Workflow Troubleshooting" of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

3.1 What You Need to Know When Acting on Tasks in Process Workspace

Here are a few things to keep in mind when acting on tasks:

- If the human task was designed to permit ad hoc routing, or if no predetermined sequence of approvers was defined, then the task can be routed in an ad hoc

fashion in the worklist. For such tasks, a **Route** button appears on the task details page. From the Route page, you can look up one or more users for routing. When you specify multiple assignees, you can select whether the list of assignees is for simple (group assignment to all users), sequential, or parallel assignment.

If you are a developer and want more information about designing tasks to permit ad hoc routing, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

- Parallel tasks are created when a parallel flow pattern is specified for scenarios such as voting. In this pattern, the parallel tasks have a common parent. The parent task is visible to a user only if the user is an assignee or either an owner or a creator of the task.

The parallel tasks themselves (referred to as subtasks) are visible to whomever the task is assigned, just like any other task.

You can view the subtasks from a parent task. In such a scenario, the task details page of the parent task contains a **View SubTasks** button. The SubTasks page lists the corresponding parallel tasks.

In a voting scenario, if any of the assignees updates the payload, the comments, or the attachments, then the changes are visible only to the assignee of that task. A user who can view the parent task (such as the final reviewer of a parallel flow pattern), can drill down to the subtasks and view the updates to the subtasks made by the participants in the parallel flow.

In the worklist, you provide the percentage of votes required for approval.

- If a human task was set up to require a password, then when you act on it, you must provide the password.

Note: Any kind of change to the task details page, such as changing a priority or adding either a comment or an attachment, requires you to save the change.

3.2 Working with the Process Workspace Tasks Page

This section contains these topics:

- [Section 3.2.1, "Viewing Task Details in Process Workspace"](#)
- [Section 3.2.2, "Customizing the Task List in Process Workspace"](#)
- [Section 3.2.3, "Searching for Tasks in Process Workspace"](#)

3.2.1 Viewing Task Details in Process Workspace

You perform most tasks in Process Workspace by using the Task Details page.

To display the Task Details page:

1. In the Home page, select the Tasks page, expand the Worklist Views section, and select Inbox. The right pane displays the My Tasks page as shown in the example in [Figure 3-1](#). This page lists all the tasks and work items assigned to you, depending on your role. For example, all users can see the My Tasks, Initiated Tasks and Administrative Tasks pages. Only supervisors can see the My Staff page and only process owners can see the Owner Tasks page.

Figure 3–1 Tasks Page

The screenshot shows the Oracle Business Process Workspace interface. The top navigation bar includes 'Tasks', 'Activity Guides', 'Process Tracking', and 'Standard Dashboards'. The main content area is titled 'My Tasks' and shows a task list with columns for Title, Number, Priority, Assignees, State, Created, and Expires. The selected task is 'Business Practices Review for Customer Acme, Inc. Quote id = 123456'. Below this, the 'Quote Summary' section displays key information: Opportunity ID 123456, Account Name Acme, Inc., Valid Until 12/30/2011, Total Net Revenue \$17,000.00, Effective Discount 90%, Sales Rep Name James Cooper, and Sales Rep Contact. The 'Products and Discounts' table lists two products: SOA Suite (Quantity 1, List Price \$55,000.00, Pre Approved Discount 30%) and BPM Suite (Quantity 1, List Price \$115,000.00, Pre Approved Discount 25%). The 'Business Approvers' section shows a sequence of approvers: Tier 3 (John Steinbeck), Tier 2 (William Faulkner), and Tier 1.

- To display the details of a task inline, select the task in the right pane. The details are displayed in the lower right pane. To display the task details in a pop-up window, double-click the task. Figure 3–2 shows an example of a Task Details page.

Figure 3–2 Example of a Task Details Page

The screenshot shows the 'Task Details' page for a help desk request. The task title is 'Help desk request for wfaulk'. The task is in the 'RESOLVED' state. The details section includes the following information:

- Assignees:** wfaulk
- Creator:** William Faulkner
- Expiration date:** Apr 7, 2009 4:53 PM
- Acquired By:** William Faulkner
- State:** Assigned
- Created:** Apr 6, 2009 4:43 PM
- Task Number:** 200040
- Updated:** Apr 6, 2009 4:43 PM
- Priority:** 3
- Location:** California
- Type:** Hardware
- Problem Description:** Unable to reboot the system
- Severity:** 2
- Status:** Created
- Requester:** wfaulk (William Faulkner, user1@us.oracle.com)
- Resolution:** Comment: None, Resolved By: None

The History section shows a table of task actions:

#	Participant	Action	Action Date
1	Stage1		
1.1	jstein	Assigned	Apr 6, 2009 4:43 PM

For more information about the Task Details page, see [Section 2.3.1.2, "The Process Workspace Task Details Page"](#)

3.2.1.1 Performing System Actions in Process Workspace

The action bar of the Task Details page displays system actions, which are available on all tasks based on the user's privileges. [Table 3–1](#) lists system actions.

Table 3–1 System Task Actions

Action	Description
Claim	Use this action to claim a task that is assigned to a group or multiple users. Claim is the only action available in the Task Action list for group or multiuser assignments. After a task is claimed, all applicable actions are listed.
Escalate	Use this action to escalate a task that is assigned to a group or multiple users. You can add an optional comment in the Comments area. The task is reassigned to whomever is specified by the administrator. If no escalation path is specified, then the task is escalated to your manager (up one level in a hierarchy).
Pushback	Use this action to send a task down one level in the workflow to the previous assignee.
Reassign	Use this action to assign a task to someone else. If you are a manager, you can delegate a task to reportees. A user with BPMWorkflowReassign privileges can delegate a task to anyone.
Release	Use this action to release a claimed task. If a task is assigned to a group or multiple users, it can be released if the user who claimed the task cannot complete the task. Any of the other assignees can claim and complete the task.
Renew	Use this task to extend a task's expiration date. You can add an optional comment in the Comments area. The task expiration date is extended 1 week. A renewal appears in the task history. The renewal duration for a task can be controlled by an optional parameter. The default value is P7D (7 days).
Submit Information and Request Information	Use these actions if another user requests that you supply more information or to request more information from the task creator or any of the previous assignees. If reapproval is not required, then the task is assigned to the next approver or the next step in the business process.
Suspend and Resume	Use these actions to suspend or restart a task. These options are available only to users who have been granted the BPMWorkflowSuspend role. Other users can access the task by selecting Previous in the task filter or by looking up tasks in the Suspended status. A suspension is indefinite. It does not expire until Resume is used to resume working on the task.
Withdraw	Use this action to cancel a task. If you are the creator of a task and do not want to continue with it, for example, you want to cancel a vacation request, you can withdraw it and add an optional comment in the Comments area. The business process determines what happens next. You can use the Withdraw action on the home page by using the Creator task filter.

For more information about the Task Details page, see [Section 2.3.1.2, "The Process Workspace Task Details Page"](#)

3.2.2 Customizing the Task List in Process Workspace

You can customize your task list in several ways, including adding worklist views, selecting which columns to display, and displaying a subset of the tasks based on filter criteria.

To increase the number of tasks retrieved, resize the task list display area.



This section contain these topics:

- [Section 3.2.2.1, "How to Filter Tasks"](#)
- [Section 3.2.2.2, "How to Create and Customize Worklist Views"](#)

3.2.2.1 How to Filter Tasks

Figure 3–3 shows the filter fields.

Figure 3–3 Filters: Assignee, Status, Search, and Advanced Search

Actions ▾  Assignee My & Group ▾ Status Assigned ▾ Search <input type="text"/> Advanced						
Title	Number	Priority	Assignees	State	Created	
 Vacation Request for jcooper	200203	3	jstein (U)	Assigned	Mar 16, 2009 2:16 PM	

Filters are used to display a subset of tasks, based on the following filter criteria:

- **Assignee**

From the **My Tasks** page, select from the following:

- **My**: Retrieves tasks directly assigned to the logged-in user
- **Group**: Retrieves the following:
 - * Tasks that are assigned to groups to which the logged-in user belongs
 - * Tasks that are assigned to an application role that the logged-in user is assigned
 - * Tasks that are assigned to multiple users, one of which is the logged-in user
- **My & Group**: Retrieves all tasks assigned to the user, whether through direct assignment, or by way of a group, application role, or list of users
- **Previous**: Retrieves tasks that the logged-in user has updated
- **Reviewer**: Retrieves task for which the logged-in user is a reviewer

From the **Initiated Tasks** page, select **Creator**.

From the **My Staff Tasks** page, select **Reportees**.

From the **Administrative Tasks** page, select **Admin**.

- **Status**: Select from the following: **Any**, **Assigned**, **Completed**, **Suspended** (can be resumed later), **Withdrawn**, **Expired**, **Errored** (while processing), **Alerted**, or **Information Requested**.
- **Search**: Enter a keyword to search task titles, comments, identification keys, and the flex string fields of tasks that qualify for the specified filter criterion.
- **Advanced**: Provides additional search filters.

Note: If a task is assigned separately to multiple reportees, when a manager looks at the My Staff Tasks list, the manager sees as many copies of that task as the number of reportees to whom that task is assigned.

To filter tasks based on assignee or status:

Select options from the **Assignee** and **Status** lists. The task list is automatically updated based on the filter selections.

To filter tasks based on keyword search:

1. Enter a keyword to search task titles, comments, identification keys, and the flex string fields of tasks that qualify for the specified filter criterion.
2. Press **Enter** or click **Refresh**.

To filter tasks based on an advanced search:

Mapped attribute labels can be used in an advanced search if you select task types for which mapped attribute have been defined.

See [Section 9.2.1.1, "How to Specify Mapped Attributes"](#) for more information.

1. Click **Advanced**.
2. (Optional) Select **Save As View**, provide a view name, and use the **Display** page to provide other information, as shown in [Figure 3-4](#) and [Figure 3-5](#).

Figure 3-4 Worklist Advanced Search: Definition Page

The screenshot shows the 'Advanced Search' dialog box with the 'Definition' tab selected. The 'Save Search as View' checkbox is checked. The '* Name' field contains 'userView1'. The 'Assignee' dropdown is set to 'My & Group'. The 'Add Condition' section shows 'Start Date' selected from a dropdown, with 'Match' and 'Any' radio buttons, where 'Any' is selected. There is an empty 'Task Type' field with a search icon. The 'Share View' section has 'Definition only' and 'Data' radio buttons, with 'Data' selected. There is an empty 'Assignees' field with a search icon. At the bottom, there are four buttons: 'Reset', 'Save as View', 'Search', and 'Cancel'.

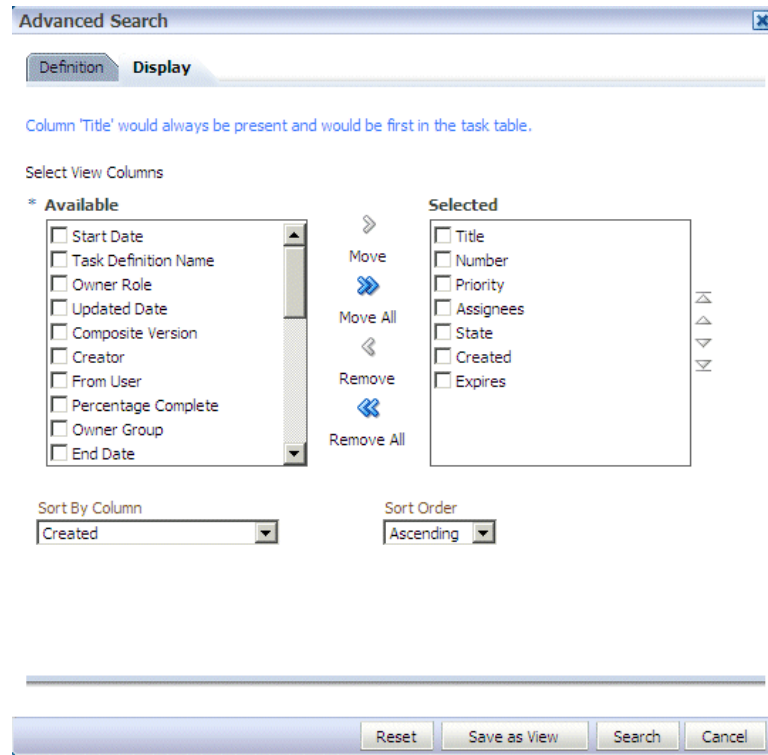
Figure 3–5 Worklist Advanced Search: Display Page

Table 3–2 describes the advanced search view columns available in the **Display** page.

Table 3–2 Advanced Search—View Columns

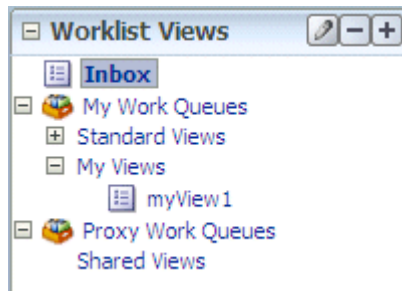
Column	Description
Start Date	The start date of the task (used with ToDo tasks).
Task Definition Name	The name of the task component that defines the task instance.
Owner Role	The application role (if any) that owns the task instance. Task owners can be application roles, users, or groups. If the owner of the task is an application role, this field is set.
Updated Date	The date the task instance was last updated.
Composite Version	The version of the composite that contains the task component that defines the task instance.
Creator	The name of the creator of the task.
From User	The from user for the task.
Percentage Complete	The percentage of the task completed (used with ToDo tasks).
Owner Group	The group (if any) that owns the task instance. Task owners can be application roles, users, or groups. If the owner of the task is a group, this field is set.
End Date	The end date of the task (used with ToDo tasks).
Composite	The name of the composite that contains the task component that defines the task instance.
Due Date	The due date of the task (used with ToDo tasks).

Table 3–2 (Cont.) Advanced Search—View Columns

Column	Description
Composite Distinguished Name	The unique name for the particular deployment of the composite that contains the task component that defines the task instance.
Task Display URL	The URL to display the details for the task.
Updated By	The user who last updated the task.
Outcome	The outcome of the task, for example Approved or Rejected. This is only set on completed task instances.
Task Namespace	A namespace that uniquely defines all versions of the task component that defines this task instance. Different versions of the same task component can have the same namespace, but no two task components can have the same namespace.
Approvers	The approvers of the task.
Application Context	The application to which any application roles associated with the tasks (such as assignees, owners, and so on) belong.
Owner User	The user (if any) that owns the task instance. Task owners can be application roles, users, or groups. If the owner of the task is a user, this field is set.
Identifier	The (optional) custom unique identifier for the task. This is an additional unique identifier to the standard task number.
Category	The category of the task.
Acquired By	The name of the user who claimed the task in the case when the task is assigned to a group, application role, or to multiple users, and then claimed by the user.
Component	The name of the task component that defines the task instance.
Original Assignee User	The name of the user who delegated the task in the case when the user delegates a task to another user.
Assigned	The date that this task was assigned.
Partition	The domain to which the composite that contains the task component that defines the task instance belongs.
Title	The title of the task.
Number	An integer that uniquely identifies the task instance.
Priority	An integer that defines the priority of the task. A lower number indicates a higher priority—typically numbers 1 to 5 are used.
Assignees	The current task assignees (users, groups or application roles).
State	The state of the task instance.
Created	The date that the task instance was created.
Expires	The date on which the task instance expires.
Custom Date 1	Custom flex field 1 with Date datatype
Custom Date 2	Custom flex field 2 with Date datatype
Custom String 1	Custom flex field 1 with String datatype
Custom String 2	Custom flex field 2 with String datatype
Custom Number 1	Custom flex field 1 with Number datatype
Custom Number 2	Custom flex field 2 with Number datatype

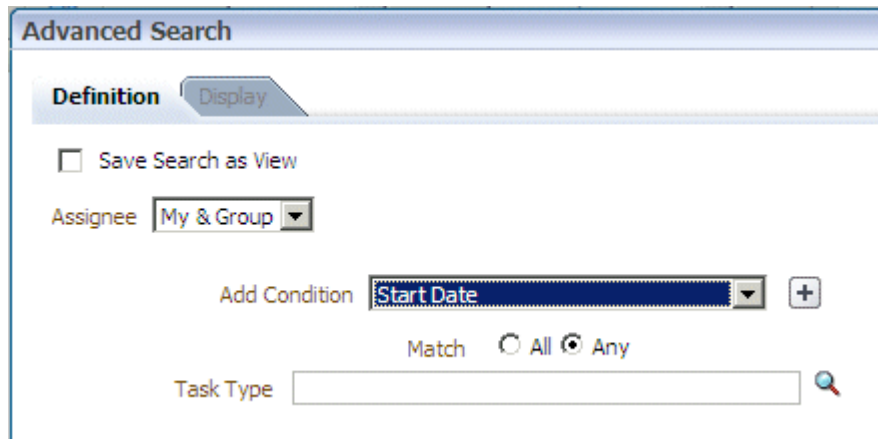
The saved view appears in the **Inbox** under **My Views**, as shown in [Figure 3-6](#).

Figure 3-6 Saving a View



3. Select an assignee, as shown in [Figure 3-7](#).

Figure 3-7 Worklist Advanced Search



4. Add conditions (filters), as shown in [Figure 3-8](#).

Figure 3–8 Adding Filters for an Advanced Search on Tasks

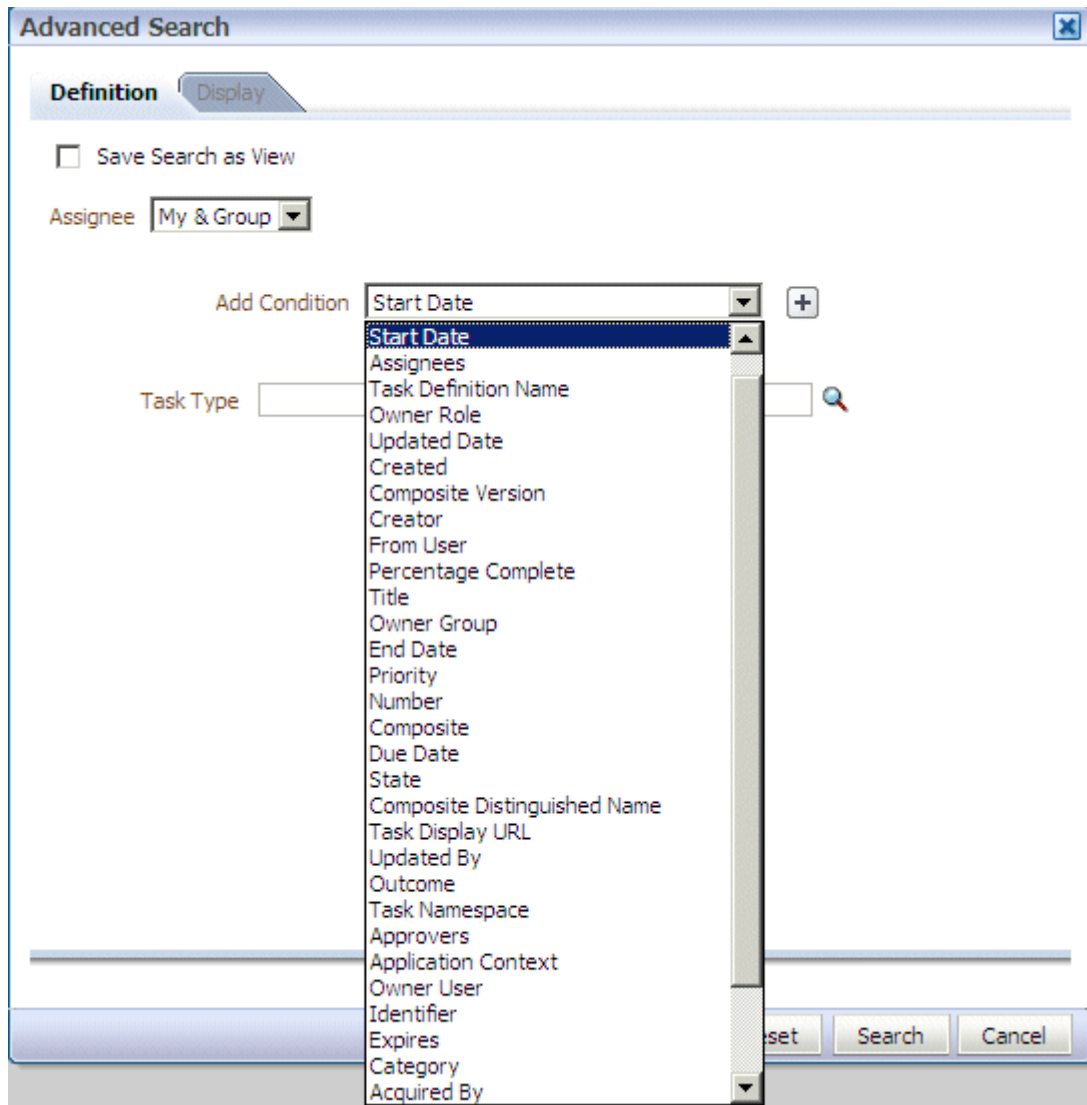


Table 3–3 describes the available conditions.

Table 3–3 Advanced Search: Conditions

Condition	Description
Start Date	The start date of the task (used with ToDo tasks).
Assignees	The current task assignees (users, groups or application roles).
Task Definition Name	The name of the task component that defines the task instance.
Owner Role	The application role (if any) that owns the task instance. Task owners can be application roles, users, or groups. If the owner of the task is an application role, this field is set.
Updated Date	The date that the task instance was last updated.
Created	The date that the task instance was created.
Composite Version	The version of the composite that contains the task component that defines the task instance.
Creator	The name of the creator of the task.

Table 3–3 (Cont.) Advanced Search: Conditions

Condition	Description
From User	The from user for the task.
Percentage Complete	The percentage of the task completed (used with ToDo tasks).
Title	The title of the task.
Owner Group	The group (if any) that owns the task instance. Task owners can be application roles, users, or groups. If the owner of the task is a group, this field is set.
End Date	The end date of the task (used with ToDo tasks).
Priority	An integer that defines the priority of the task. A lower number indicates a higher priority; typically numbers 1 to 5 are used.
Number	An integer that uniquely identifies the task instance.
Composite	The name of the composite that contains the task component that defines the task instance.
Due Date	The due date of the task (used with ToDo tasks).
State	The state of the task instance.
Composite Distinguished Name	The unique name for the particular deployment of the composite that contains the task component that defines the task instance.
Task Display URL	The URL to display the details for the task.
Updated By	The user who last updated the task.
Outcome	The outcome of the task, for example approved or rejected. This is only set on completed task instances.
Task Namespace	The namespace of the task.
Approvers	The approvers of the task.
Application Context	The application to which any application roles associated with the tasks (such as assignees, owners, and so on) belong.
Owner User	The user (if any) that owns the task instance. Task owners can be application roles, users, or groups. If the owner of the task is a user, this field is set.
Identifier	The (optional) custom unique identifier for the task. This is an additional unique identifier to the standard task number.
Expires	The date on which the task instance expires.
Category	The category of the task.
Acquired By	The name of the user who claimed the task in the case when the task is assigned to a group, application role, or to multiple users, and then claimed by the user.
Component	The name of the task component that defines the task instance.
Original Assignee User	The name of the user who delegated the task in the case when the user delegates a task to another user.
Assigned	The date that this task was assigned.
Domain	The domain to which the composite that contains the task component that defines the task instance belongs.

5. Add parameter values, shown in [Figure 3–9](#).

Figure 3–9 Advanced Search

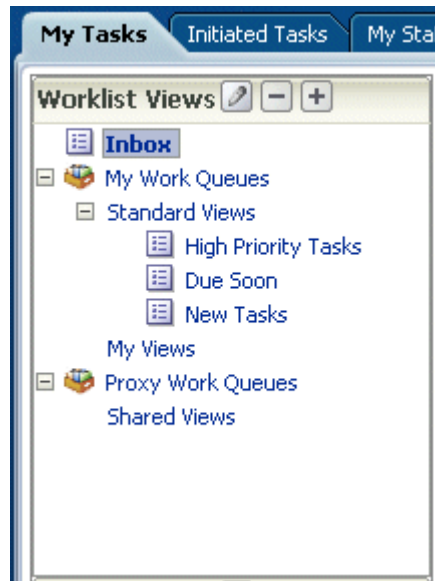
6. Select **Any** or **All** for matching multiple filters.
7. (Optional) Search on a task type.
8. Click **Search**.

The task list with the tasks filtered according to your criteria appears.

3.2.2.2 How to Create and Customize Worklist Views

The **Worklist Views** area, shown in [Figure 3–10](#), displays the following:

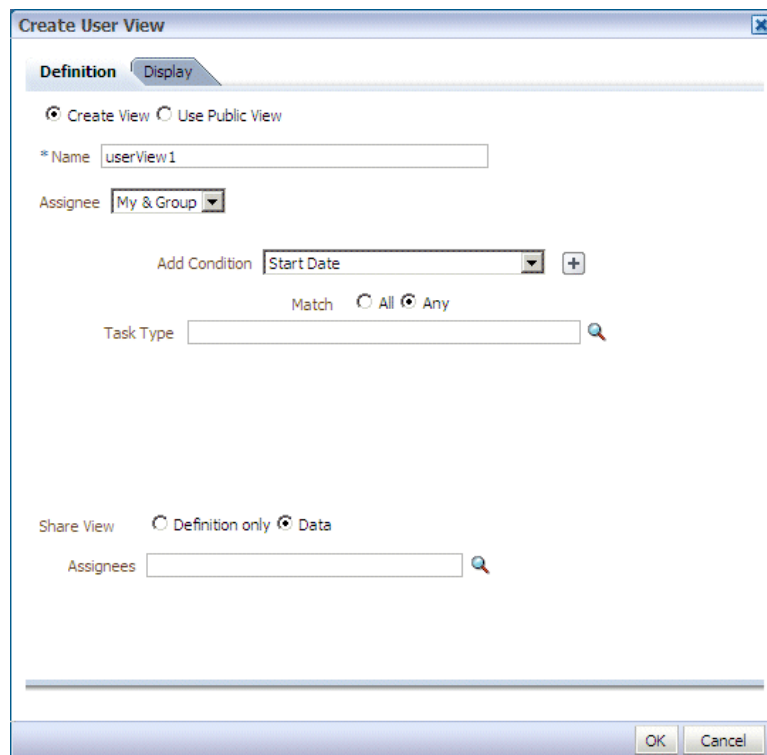
- **Inbox**—Shows all tasks that result from any filters you may have used. The default shows all tasks.
- **My Work Queues**—Shows standard views and views that you defined.
- **Proxy Work Queues**—Shows shared views.

Figure 3–10 Worklist Views

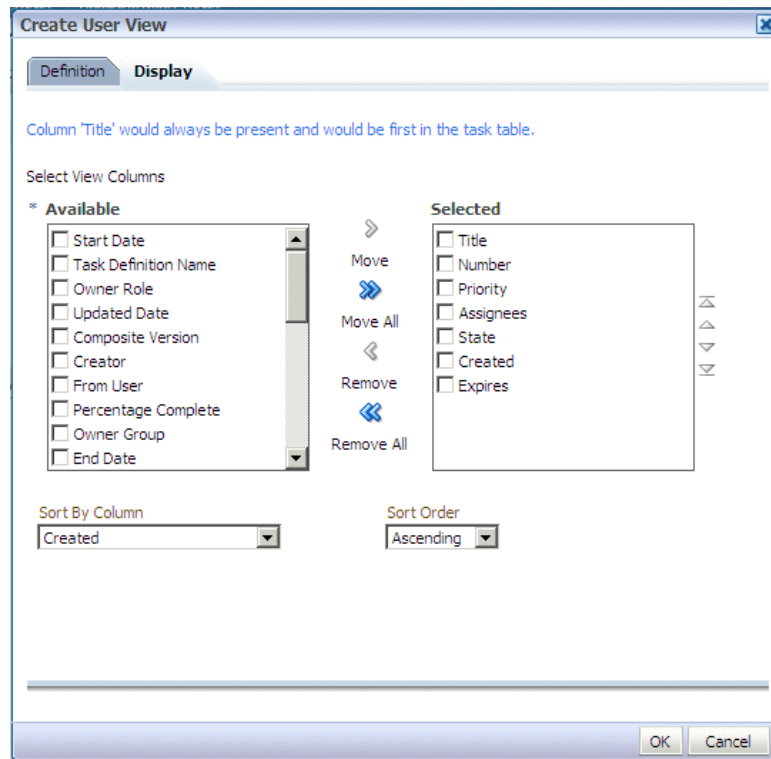
Use **Worklist Views** to create, share, and customize views.

To create a worklist view:

1. In the **Worklist Views** section, click **Add**.
2. Use the **Definition** page of the Create User View dialog box, shown in [Figure 3–11](#).

Figure 3–11 Creating a Worklist View

- **Create View or Use Public View**—Create your own view or browse for a public view to copy.
 - **Name**—Specify a name for your view.
 - **Add to Standard Views**—This option applies to administrators only. Administrators select this option to create the view as a standard view, which then appears in the **Standard Views** list for *all* worklist users.
 - **Assignee**—Select **My**, **Group**, **My&Group**, **Previous**, or **Reviewer**.
 - **Add Condition**—Select a filter from the list and click **Add**. For example, if you select **startDate**, and click **Add**, then a calendar and a list including **on**, **equals**, **not equals**, **greater than**, **less than**, and so on appears.
 - **Task Type**—Browse for a task type or leave the field blank for all types. Mapped attribute labels can be selected in the query and display columns dialog boxes if the selected task types have mapped attribute mappings defined.
 - **Match**—Select **All** or **Any** to match the conditions you added.
 - **Share View**—You can grant access to another user to either the definition of this view, in which case the view conditions are applied to the grantee's data, or to the data itself, in which case the grantee can see the grantor's worklist view, including the data. Sharing a view with another user is similar to delegating all tasks that correspond to that view to the other user; that is, the other user can act on your behalf. Shared views are displayed under **Proxy Work Queues**.
 - **Assignees**—Specify the users (grantees) who can share your view.
3. Use the **Display** page of the Create User View dialog box, shown in [Figure 3-12](#), to customize the fields that appear in the view.

Figure 3–12 *Displaying Fields in a Worklist View*

- **Select View Columns**—Specify which columns you want to display in your task list. They can be standard task attributes or mapped attributes that were mapped for the specific task type. The default columns are the same as the columns in your inbox.
 - **Sort by Column**—Select a column on which to sort.
 - **Sort Order**—Select ascending or descending order.
4. Click **OK**.

To customize a worklist view:

1. In the **Worklist Views** section, click the view name.
2. Click the **Edit** icon.
3. Use the **Definition** and **Display** pages of the Edit User View dialog box to customize the view, as shown in [Figure 3–13](#) and [Figure 3–14](#), and click **OK**.

Figure 3-13 Customizing a Worklist View

Edit User View : myView1

Definition | Display

*Name

Assignee

Add Condition +

Match All Any

Task Type 🔍

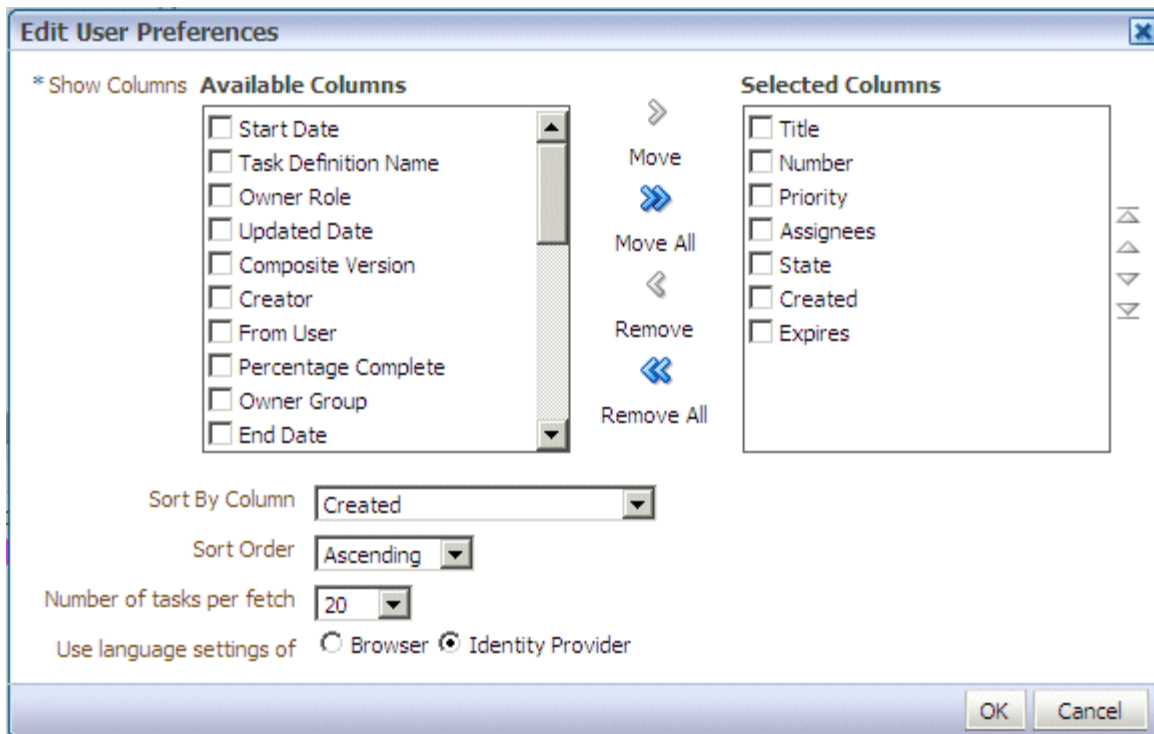
Assignees -

Share View Definition only Data

Assignees 🔍

OK Cancel

Figure 3–14 Customizing Fields in a Worklist View



When you select and move items from the **Available Columns** list to the **Selected Columns** list (or vice-versa), the items remain selected. Therefore, if you select items to move back, the previously selected items are also moved. Ensure that you deselect items after moving them between the lists if you intend to move additional columns.

3.2.3 Searching for Tasks in Process Workspace

For instructions about searching for tasks, see:

- ["To filter tasks based on keyword search:"](#) on page 3-6
- ["To filter tasks based on an advanced search:"](#) on page 3-6

3.3 Claiming and Releasing Tasks in Process Workspace

If a task is assigned to a group or multiple users, then the task must be claimed first. Claim is the only action available in the Task Action list for group or multiuser assignments. After a task is claimed, all applicable actions are listed.

If a task is assigned to a group or multiple users, it can be released by the user who claimed it. Any of the other assignees can then claim and complete the task.

To claim and release tasks:

To claim a task, open it in the Task Details page, then click the **Claim** button.

Similarly, to release a task, open it in the Task Details page, then click the **Release** button.

[Figure 3–15](#) shows part of a Task Details page with the **Claim** button in the upper right corner.

Figure 3–15 Claiming a Task

Vacation Request for jcooper Claim

Details

Contents

Creator: jcooper

From Date: Mar 15, 2009 5:00 PM

To Date: Mar 21, 2009 5:00 PM

Reason: Yearly vacation

History

Task Snapshot Future Participants Full task actions

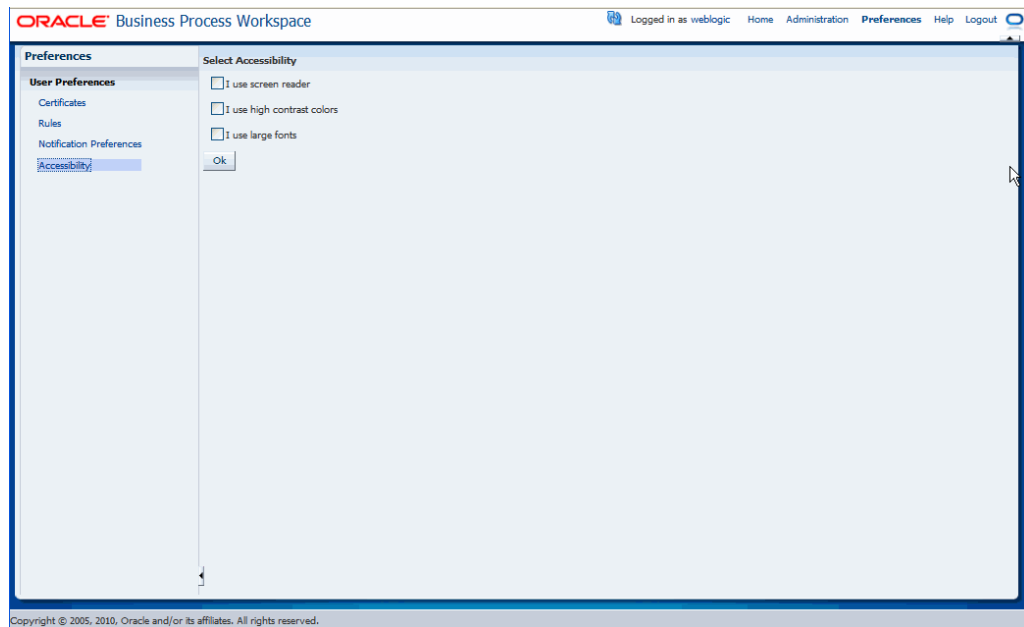
#	Participant	Action	Updated By	Action Date
1	default			
1.1	jstein	Assigned	workflowsystem	Mar 16, 2009 2:16 PM
1.2	jcooper, jlondon	Reassigned	jstein	Mar 16, 2009 2:58 PM

3.4 Setting Accessibility Preferences in Process Workspace

To set accessibility preferences:

1. In the upper right corner of Process Workspace, click **Preferences**.
2. In the Configuration Areas panel, select **Accessibility**. The Select Accessibility page appears in the right pane as shown in [Figure 3–16](#).

Figure 3–16 Selecting Accessibility



3. Select your accessibility preferences, then click **OK**.

3.5 Providing a Digital Certificate in Process Workspace

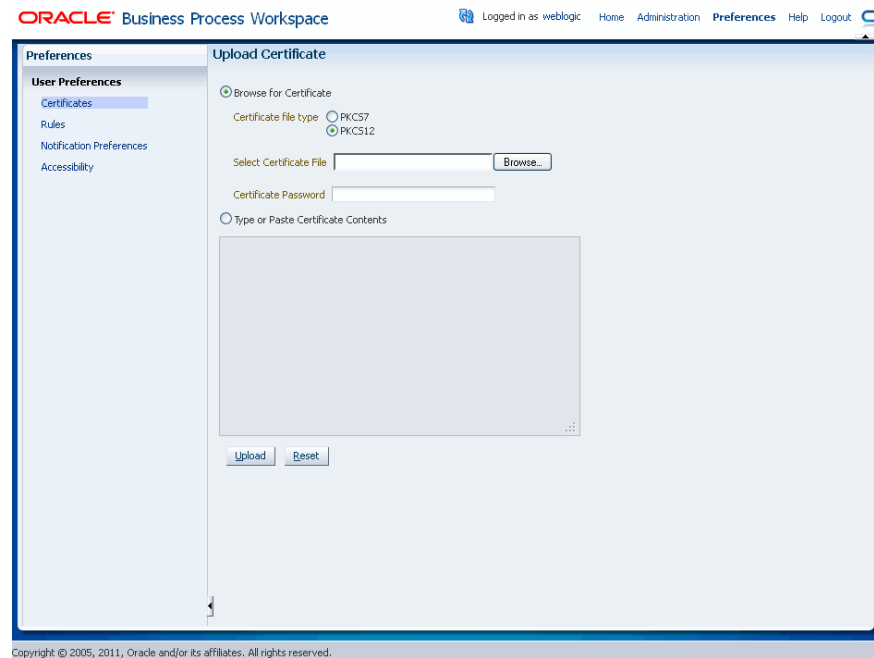
A digital certificate establishes the participant’s credentials. It is issued by a certification authority (CA). It contains your name, a serial number, expiration dates, a copy of the certificate holder's public key (used for encrypting messages and digital signatures), and the digital signature of the certificate-issuing authority so that a recipient can verify that the certificate is real.

To provide a digital certificate:

1. In the upper right corner of Process Workspace, click **Preferences**.
2. In the navigation bar on the left, click **Certificates**.
3. Upload the certificate to use to sign your decision, as shown in [Figure 3–17](#).

When signing a task outcome using your certificate, you must upload the entire chain of certificates through Process Workspace as a .P7B (PKCS7 format) file, not just the one certificate issued to you by the certificate issuer. The entire chain can be exported through Internet Explorer. Mozilla Firefox does not let you export the chain as a .P7B file. Therefore, you can perform the following steps:

- a. Export the chain from Mozilla Firefox as a .P12 file (PKCS12 format that also contains your private key).
- b. Import the .P12 file in Internet Explorer.
- c. Export it again from Internet Explorer as a .P7B file.
- d. Upload it through Process Workspace.

Figure 3–17 Uploading a Certificate

Note the following important points when providing your certificate to the system. Otherwise, you cannot use your certificate to sign your decisions on tasks.

- The PKCS7 file format is a binary certificate format. Select this option if you have a standalone certificate file stored on your disk.
- The PKCS12 file format is a keystore format. Select this option if you have your certificate stored inside a keystore.
- If you want to copy and paste the contents of the certificate, select **Type or Paste Certificate Contents** and paste the BASE64-encoded text into the field. Do not paste a certificate in any other format into this field. Likewise, if you choose to upload a certificate, do not upload a BASE64-encoded certificate. Only PKCS12- and PKCS7- formatted files are supported for uploads.

4. Return to the task list by clicking the **Home** link in the upper right corner of Process Workspace.
5. Click a task to approve or reject.
The task details are displayed.
6. Click either **Approve** or **Reject**.
Details about the digital signature are displayed.
7. For a task that has a signature policy, click **Sign**.
The Text Signing Report dialog box appears.
8. Select the certificate from the list to use to sign your decision.
9. Enter the master password of the Web browser that you are using.
10. Click **OK**.
The Web browser signs the string displayed in the upper half of the Text Signing Request with the certificate you selected and invokes the action (approval or rejection) that you selected. The task status is appropriately updated in the human workflow service.

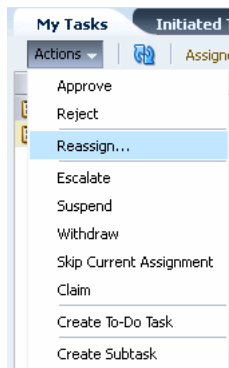
If you are a developer and want more information about how certificates are uploaded and used, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

3.6 Reassigning and Delegating Tasks in Process Workspace

To reassign or delegate a task:

1. From the **Actions** list, select **Reassign**, as shown in [Figure 3–18](#).

Figure 3–18 Reassigning a Task



2. Select **Reassign** or **Delegate**.

Delegate differs from **Reassign** in that the privileges of the delegatee are based on the delegator's privileges. This function can be used by managers' assistants, for example.

3. Provide or browse for a user or group name, as shown in [Figure 3–19](#).

Figure 3–19 Reassigning a Task

A supervisor can always reassign tasks to any of his reportees.

4. Move names to the **Selected** area and click **OK**.

You can reassign to multiple users or groups. One of the assignees must claim the task, as shown in Figure 3–20.

Figure 3–20 Claiming a Task

#	Participant	Action	Updated By	Action Date
1	default			
1.1	jstein	Assigned	workflowsystem	Mar 16, 2009 2:16 PM
1.2	jcooper, jlondon	Reassigned	jstein	Mar 16, 2009 2:58 PM

Note: When task details have been upgraded from an earlier release, you may see a "Request Failed" error when executing the **Reassign** action. Actually, the reassign completes, and when you click OK again, a popup says the task is already assigned.

To eliminate the error message, upgrade your taskflow applications by opening them in Oracle JDeveloper, then redeploy the taskform.

3.7 Adding Comments and Attachments to Tasks in Process Workspace

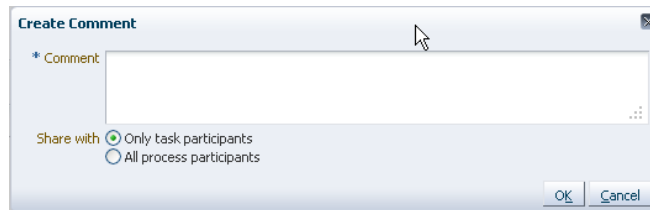
You can add comments and attachments to a task by using the Task Details page.

For details about the Task Details page, see [Section 2.3.1.2, "The Process Workspace Task Details Page"](#)

To add a comment to a task:

1. In the Tasks tab page, from the worklist pane, select the task to which you want to add a comment. The details for that task appear.
2. In the Comments section of the Task Details page, click **Create**. The Create Comment dialog box appears as shown in [Figure 3–21](#).

Figure 3–21 Associating a Comment with a Task



3. In the Create Comment dialog box, enter your comment, then select to share the comment with either of the following:
 - Only task participants. This option shares the comment with previous and future assignees of this particular task.
 - All process participants. This option shares the comment with all participants in the process, regardless of the tasks assigned to them.

Note: If you are the initiator of the task, then your comment is shared with all process participants and not only with task assignees. The option to share with only task participants is not available to you.

4. Click **OK**.

To add an attachment to a task:

1. In the Tasks tab page, from the worklist pane, select the task to which you want to add an attachment. The details for that task appear.
2. In the Attachments section of the Task Details page, click **Add**. The Add Attachment dialog box appears.
3. In the Add Attachment dialog box, select to share the attachment with either of the following:
 - Only task participants. This option shares the attachment with previous and future assignees of this particular task.
 - All process participants. This option shares the attachment with all participants in the process, regardless of the tasks assigned to them.
4. Select the attachment type.

If the task is *not* using Oracle WebCenter Content, then you see the following options:

- URL. Selecting this option opens fields in which you specify the name and URL of the file.
- Desktop File. Selecting this option opens a search field from which to browse for the file on your computer.

If the task *is* using Oracle WebCenter Content, then you see the following options:

- URL. Selecting this option opens fields in which you specify the name and URL of the file.
- Upload File to WebCenter Content. Selecting this option uploads the desktop file to Oracle WebCenter Content. When you select it, another dialog box prompts you for some or all of the following depending on how the task is modeled:
 - Description (optional)
 - Folder name: The folder in WebCenter Content server where the attachment is uploaded. You must type the full folder path in WebCenter Content server
 - Document type: From this list, select the WebCenter Content document type.
 - Account (optional): From this list, select the account name.
 - Revision (optional): Type an integer for revision.
 - Release date (optional): Select the date at which the document is released. Prior to this date, the WebCenter Content document is not visible to WebCenter Content users.
 - Expiration date (optional): The date when the document expires. After this date, the WebCenter Content document is no longer visible to Oracle WebCenter Content users.
- Associate WebCenter Content Document. Selecting this option opens another dialog box prompting you for the document identifier. You can search for it by clicking the spyglass icon and, once you have located it, clicking **OK**.

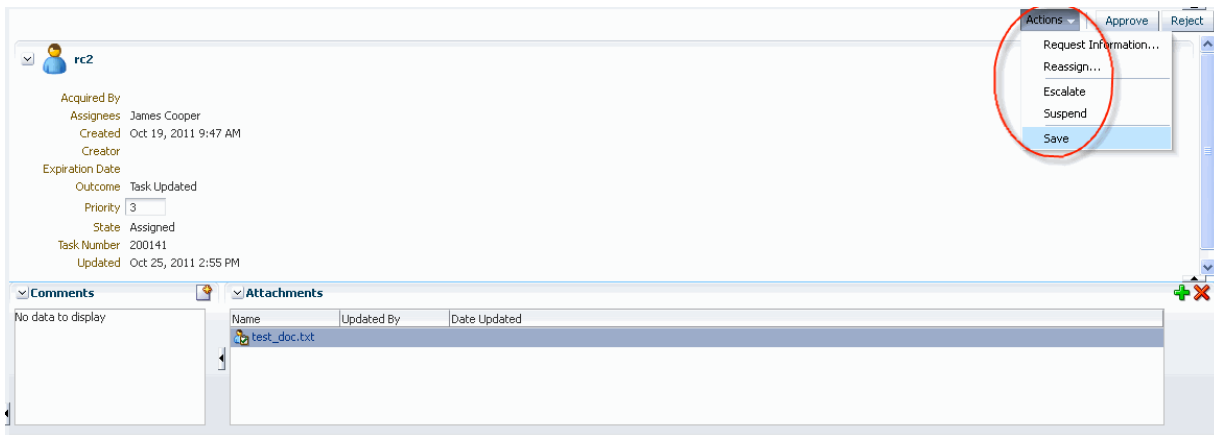
Once you have selected the attachment type, click **OK**.

To delete an attachment from a task:

1. In the Tasks tab page, from the worklist pane, select the task from which you want to delete an attachment. The details for that task appear in the Task Details pane.
2. In the Task Details pane, in the Attachments section, select the attachment you want to delete and click **Delete**. The Delete Attachment dialog box prompts you to confirm the deletion.
3. Click **OK**.
4. In the Task Details pane, from the Actions list, select **Save** as shown in [Figure 3–22](#). The attachment is deleted from the task.

Note: If the attachment is stored in a content server such as WebCenter Content, then it is not deleted from the content server. If the attachment is stored in the SOA workflow repository, then you can access it by viewing the task snapshot from the task history.

Figure 3–22 Deleting an Attachment from a Task

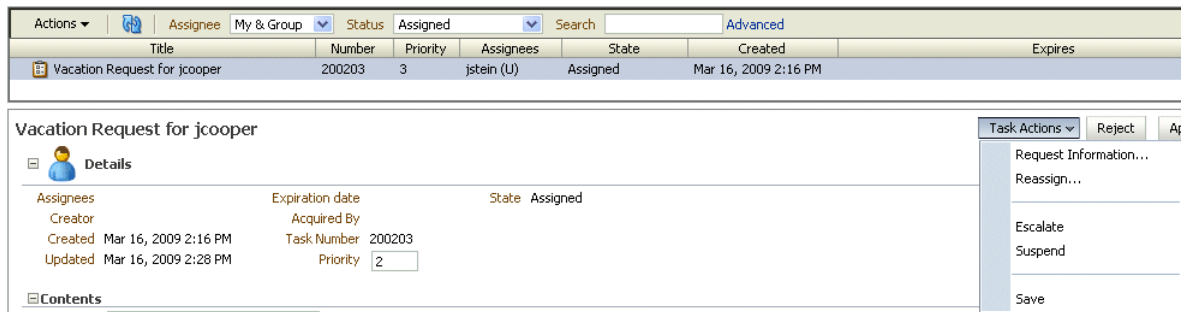


3.8 Requesting Information in Process Workspace

To request information:

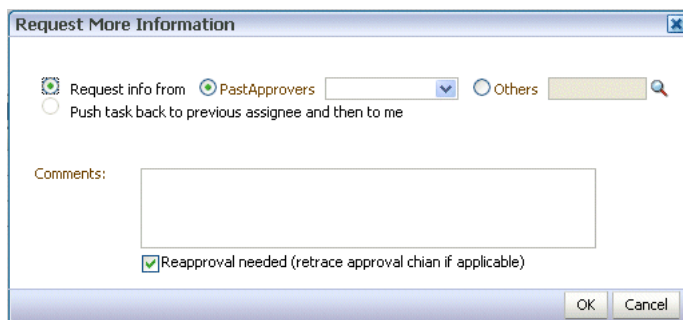
1. From the Task Actions list, select **Request Information**, as shown in [Figure 3–23](#).

Figure 3–23 Requesting Information

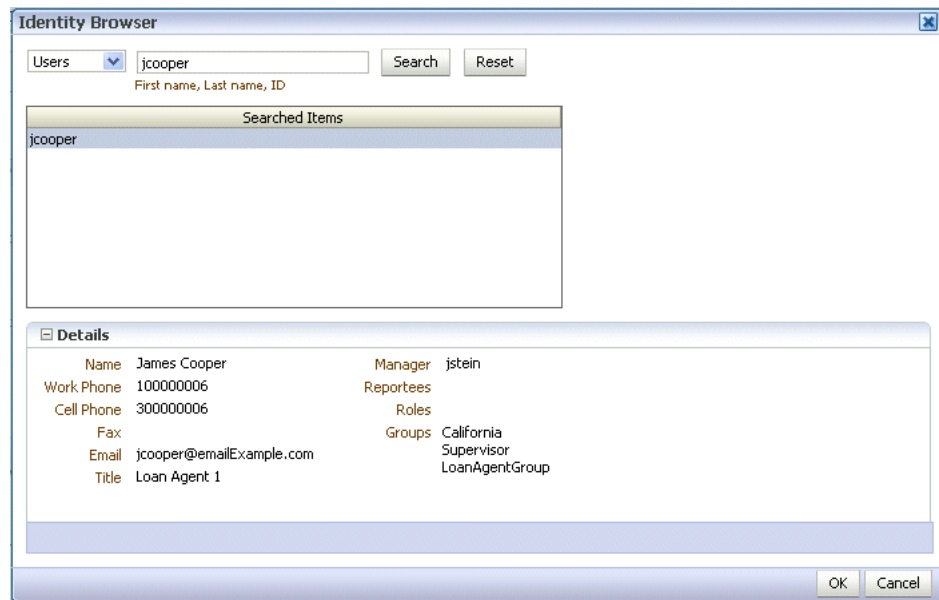


2. Request information from a past approver or search for a user name, or push the task back to the previous assignee, as shown in [Figure 3–24](#).

Figure 3–24 Requesting Information from Past Approvers or Another User, or Pushing the Task Back



If you use the **Search** icon to find a user name, the Identity Browser appears, as shown in [Figure 3–25](#).

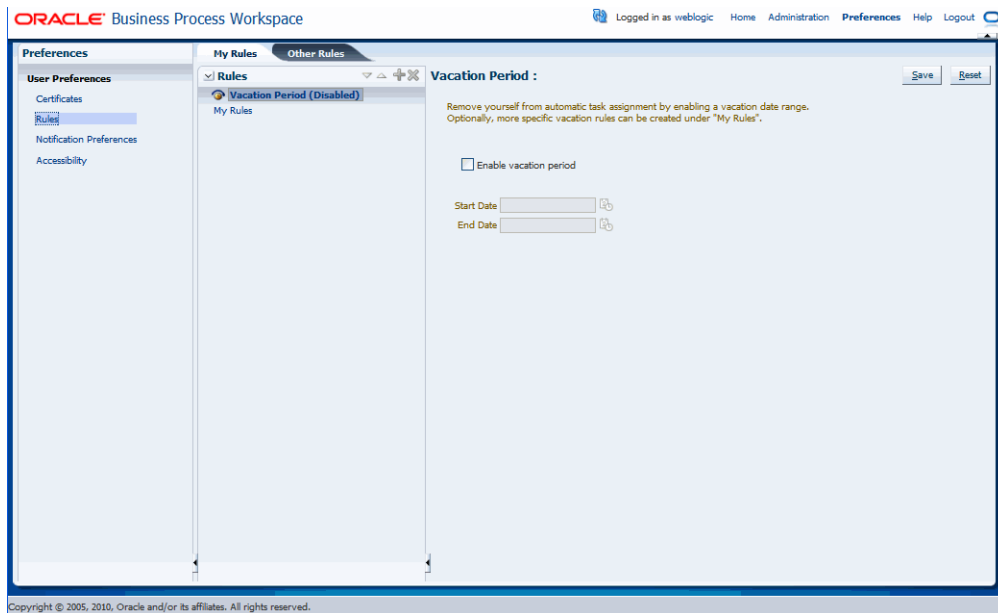
Figure 3–25 Identity Browser

Note: If you are in a multi-tenancy environment, search for a user simply by the user identifier and not by the tenant identifier. For example, if the user identifier is jstein and the tenant identifier is company_name.jstein, you would search by using jstein.

3. Click OK.

3.9 Setting Rules, Vacation Periods, and Notification Preferences in Process Workspace

Rules act on tasks, either a specific task type or all the tasks assigned to a user or group. To set rules, from the Process Workspace toolbar, select **Preferences**. The Preferences window appears as shown in [Figure 3–26](#).

Figure 3–26 Configuration Areas: My Rules Page

A rule cannot always apply to all circumstances in which it is used. For example, if a rule applies to multiple task types, it may not be possible to set the outcome for all tasks, because different tasks can have different outcomes.

Rules are executed in the order in which they are listed.

If a rule meets its filter conditions, then it is executed and no other rules are evaluated. For your rule to execute, you must be the only user assigned to that task. If the task is assigned to multiple users (including you), the rule does not execute.

You cannot specify business rules for ToDo tasks.

This section contains these topics:

- [Section 3.9.1, "How to Create User Rules in Process Workspace"](#)
- [Section 3.9.2, "How to Create Group Rules in Process Workspace"](#)
- [Section 3.9.3, "How to Enable a Vacation Period in Process Workspace"](#)
- [Section 3.9.4, "Specifying Notification Settings"](#)

3.9.1 How to Create User Rules in Process Workspace

To create a user rule:

1. From the Process Workspace toolbar, select **Configuration**. The **Configuration Areas** window is displayed.
2. In the User Preferences area, click **Rules**. The My Rules and Other Rules pages appear in the right pane. The My Rules page is selected.
3. In the **My Rules** page, in the Rules section, select **My Rules**. The My Rule screen appears in the right pane.
4. Provide a name for the rule.
5. If the rule is a vacation rule, select **Use as a vacation rule**. The start and end dates of the rule are automatically synchronized with the vacation period.

For instructions about setting a vacation period that is synchronized with the vacation rule, see [Section 3.9.3, "How to Enable a Vacation Period in Process Workspace."](#)

6. In the **Apply only to task type(s)** field, browse for task types to which the rule applies. If a task is unspecified, then the rule applies to all tasks. If a task type is specified, then any mapped attribute mapped for that task type can be used in the rule condition.
7. Select **Execute rule only between these dates** and provide rule execution dates.
8. In the **IF** area, add rule conditions. These are filters that further define the rule, such as specifying that a rule acts on priority 1 tasks only, or that a rule acts on tasks created by a specific user. The conditions can be based on standard task attributes and any mapped attributes that were mapped for the specific tasks. See [Section 9.2.1.1, "How to Specify Mapped Attributes"](#) for more information.
9. In the **THEN** area, select actions to be taken. User rules do the following actions:
 - **Reassign to**—You can reassign tasks to subordinates or groups you manage. If you were granted the BPMWorkflowReassign role, then you can reassign tasks to any user or group.
 - **Delegate to**—You can delegate to any user or group. Any access rights or privileges for completing the task are determined according to the original user who delegated the task. (Any subsequent delegations or reassignments do not change this from the original delegating user.)
 - **Set outcome to**—You can specify an automatic outcome if the workflow task was designed for those outcomes, for example, accepting or rejecting the task. The rule must be for a specific task type. If a rule is for all task types, then this option is not displayed.
 - **Take no action**—Use this action to prevent other more general rules from applying. For example, to reassign all your tasks to another user while you are on vacation, except for loan requests, for which you want no action taken, then create two rules. The first rule specifies that no action is taken for loan requests; the second rule specifies that all tasks are reassigned to another user. The first rule prevents reassignment for loan requests.
10. Click **Save**.

The new rule appears under the **My Rules** node.

3.9.2 How to Create Group Rules in Process Workspace

Creating a group rule is similar to creating a user rule, with the addition of a list of the groups that you (as the logged-in user) manage. Examples of group rules include:

- Assigning tasks from a particular customer to a member of the group
- Ensuring an even distribution of task assignments to members of a group by using round-robin assignment
- Ensuring that high-priority tasks are routed to the least busy member of a group

Group rules do the following actions:

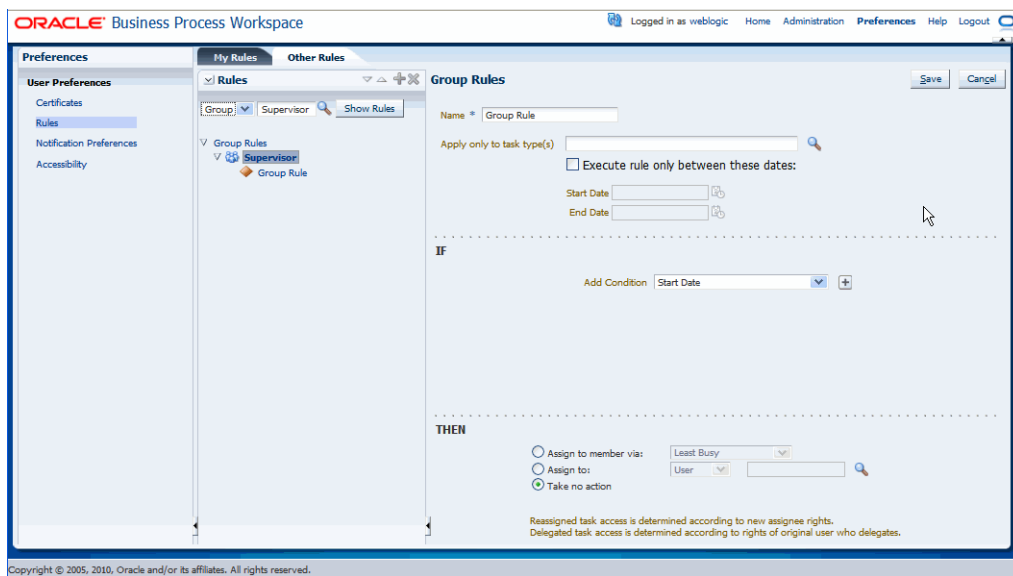
- **Assign to member via**—You can specify a criterion to determine which member of the group gets the assignment. This dynamic assignment criterion can include round-robin assignment, assignment to the least busy group member, or assignment to the most productive group member. You can also add your custom functions for allocating tasks to users in a group.

- **Assign to**—As with user rules, you can assign tasks to subordinates or groups you directly manage. If you have been granted the BPMWorkflowReassign role, then you can reassign tasks to any user or group (outside your management hierarchy).
- **Take no action**—As with user rules, you can create a rule with a condition that prevents a more generic rule from being executed.

To create a group rule:

1. From the Process Workspace toolbar, select **Preferences**. The Preferences window is displayed.
2. In the User Preferences area, click **Rules**. The My Rules and Other Rules pages appear in the right pane. The My Rules page is selected.
3. Click the **Other Rules** tab.
4. Select **Group** from the list.
5. Enter a group name and click the **Search** icon, or enter a group name. The Identity Browser dialog box opens for you to find and select a group.
6. Select the group name under the **Group Rules** node and click **Add**, as shown in [Figure 3–27](#).

Figure 3–27 *Creating a Group Rule*



7. Provide group rule information and click **Save**.
 - Provide a name for the rule.
 - Browse for task types to which the rule applies.
 - Provide rule execution dates.
 - In the **IF** area, add rule conditions.
 - In the **THEN** area, select the actions to be taken: (**Assign to member via**, **Assign to**, or **Take no action**), as shown in [Figure 3–27](#).

The new rule appears under the **Group Rules** node.

3.9.3 How to Enable a Vacation Period in Process Workspace

You can set a vacation period so that you are removed from automatic task assignment during the dates you specify.

Vacation rules are not executed for ToDo tasks. See [Section 3.9.1, "How to Create User Rules in Process Workspace"](#) for how to set a vacation rule that is synchronized with the vacation period.

To enable a vacation period:

1. Click the **Preferences** link. The Preferences page appears.
2. In the User Preferences panel, click **Rules**. The right pane displays the Rules panel with the My Rules page selected. Adjacent and to the right of the My Rules page, the Vacation Period page appears.
3. Select **Enable vacation period**.
4. Provide start and end dates.
5. Click **Save**. The vacation period is enabled.

3.9.4 Specifying Notification Settings

You can configure the notification settings to control how, when, and where you receive messages in cases when you have access to multiple communication channels (delivery types). Specifically, you can define messaging filters (delivery preferences) that specify the channel to which a message should be delivered, and under what circumstances.

For example, you might want to create filters for messages received from customers with different Service Level Agreements (SLA), specifying to be notified through business phone and SMS channels for customers with a premium SLA and by EMAIL for customers with a nonpremium SLA.

3.9.4.1 Messaging Filter Rules

A messaging filter rule consists of *rule conditions* and *rule actions*. A rule condition consists of a rule attribute, an operator, and an associated value. A rule action is the action to be taken if the specified conditions in a rule are true.

3.9.4.1.1 Data Types [Table 3–4](#) lists data types supported by messaging filters. Each attribute has an associated data type, and each data type has a set of predefined comparison operators.

Table 3–4 Data Types Supported by Messaging Filters

Data Type	Comparison Operators
Date	isEqual, isNotEqual, isGreaterThan, isGreaterThanOrEqual, isLessThan, isLessThanOrEqual, Between, isWeekday, isWeekend
Time	isEqual, isNotEqual, Between
Number	isEqual, isNotEqual, Between, isGreaterThan, isGreaterThanOrEqual, isLessThan, isLessThanOrEqual
String	isEqual, isNotEqual, Contains, NotContains

Note: The String data type does not support regular expressions.

3.9.4.1.2 Attributes Table 3–5 lists the predefined attributes for messaging filters.

Table 3–5 Predefined Attributes for Messaging Filters

Attribute	Data Type
Total Cost	Number
From	String
Expense Type	String
To	String
Application Type	String
Duration	Number
Application	String
Process Type	String
Status	String
Subject	String
Customer Type	String
Time	Time
Group Name	String
Processing Time	Number
Date	Date
Due Date	Date
User	String
Source	String
Amount	Number
Role	String
Priority	String
Customer Name	String
Expiration Date	Date
Order Type	String
Organization	String
Classification	String
Service Request Type	String

3.9.4.2 Rule Actions

For a given rule, a messaging filter can define the following actions:

- **Send No Messages:** Do not send a message to any channel.
- **Send Messages to All Selected Channels:** Send a message to all specified channels in the address list.
- **Send to the First Available Channel:** Send a message serially to channels in the address list until one successful message is sent. This entails performing a send to the next channel when the current channel returns a failure status. This filter action is not supported for messages sent from the human workflow layer.

3.9.4.3 Managing Messaging Channels

In Oracle BPM Worklist, messaging channels represent both physical channels, such as business mobile phones, and also email client applications running on desktops. Specifically, Oracle BPM Worklist supports the following messaging channels:

- EMAIL
- IM
- MOBILE
- SMS
- VOICE
- WORKLIST

Note the following about message channels:

- Addresses for messaging channels are fetched from the configured identity store.
- SMS and MOBILE notifications are sent to the mobile phone number.
- VOICE notifications are sent to the business phone number.
- No special notification is sent when the messaging channel preference is WORKLIST. Instead, log in to Oracle BPM Worklist to view tasks.
- EMAIL is the default messaging channel preference when a preferred channel has not been selected.

You can use the **Messaging Channels** tab to view, create, edit, and delete messaging channels.

3.9.4.3.1 Viewing Your Messaging Channels You can display your existing messaging channels.

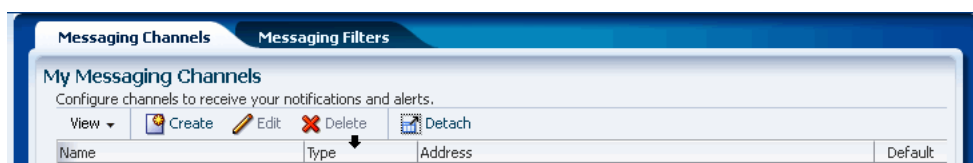
To view messaging channels:

1. Click the **Preferences** link.
2. Click the **Notification Preferences**.
3. Click the **Messaging Channels** tab.

The My Messaging Channels list appears ([Figure 3–28](#)) and displays the following information:

- **Name:** The name of the messaging channel.
- **Type:** The type of messaging channel, such as EMAIL or SMS.
- **Address:** The address for the channel, such as a phone number or email address.
- **Default:** Specifies whether this channel is the default messaging channel.

Figure 3–28 Messaging Channels



4. Click **View > Columns** and select the columns to display or hide.

You can also click **View > Reorder Columns** to display a dialog to reorder the displayed columns.

Messaging channel names and addresses are retrieved from the underlying identity store, such as Oracle Internet Directory.

3.9.4.3.2 Creating, Editing, and Deleting a Messaging Channel Oracle BPM Worklist uses an underlying identity store, such as Oracle Internet Directory, to manage messaging channels and addresses. Therefore, you cannot directly create, modify, or delete messaging channels using Oracle BPM Worklist.

To perform these actions, contact the system administrator responsible for managing your organization's identity store.

3.9.4.4 Managing Messaging Filters

You can use the **Messaging Filters** tab to define filters that specify the types of notifications you want to receive along with the channels through which to receive these notifications. You can do this through a combination of comparison operators (such as *is equal to*, *is not equal to*), attributes that describe the notification type, content, or source, and notification actions, which send the notifications to the first available messaging channels, all messaging channels, or to no channels (effectively blocking the notification).

For example, you can create a messaging filter called *Messages from Lise*, that retrieves all messages addressed to you from your boss, Lise. Notifications that match all of the filter conditions might first be directed to your business mobile phone, for instance, and then to your business email if the first messaging channel is unavailable.

3.9.4.4.1 Viewing Messaging Filters You can display your existing messaging filters.

To view your messaging filters:

1. Click the **Notification** tab.
2. Click the **Messaging Filters** tab.

The My Messaging Filters list appears (Figure 3–29) and displays the following information:

- **Filter Name:** The name of the messaging filter
- **Description:** An optional description of the messaging filter

Figure 3–29 *Messaging Filters*



3. Click **View > Columns** and select the columns to display or hide.

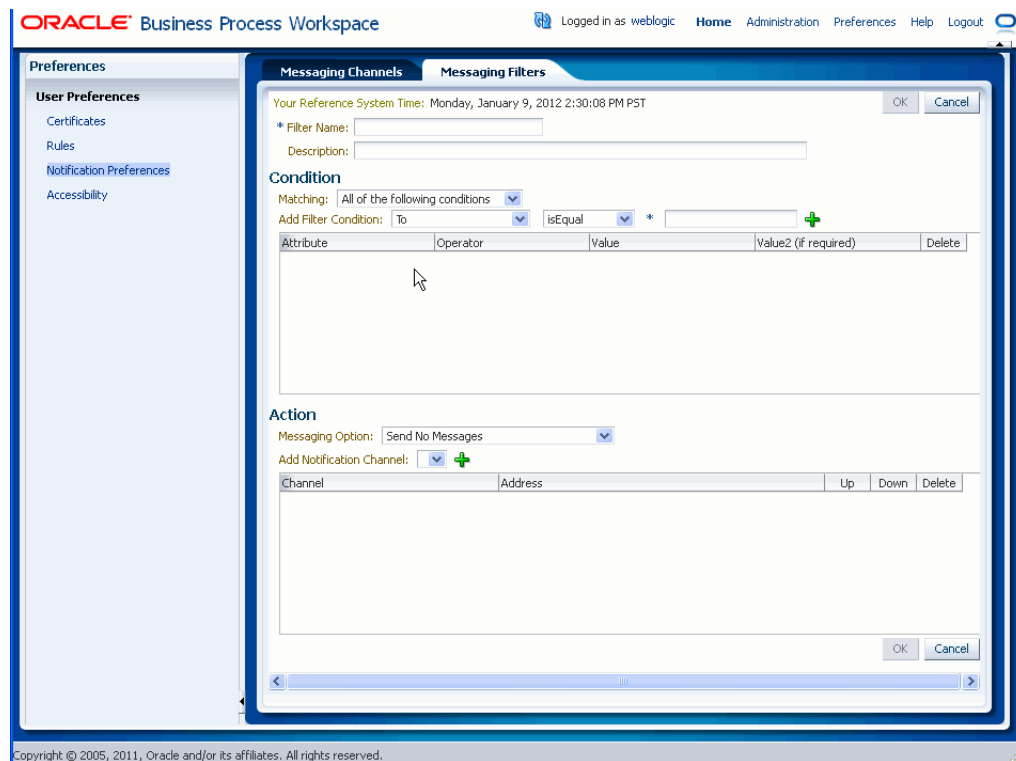
You can also click **View > Reorder Columns** to display a dialog to reorder the displayed columns.

3.9.4.4.2 Creating Messaging Filters To create a messaging filter:

1. Click **Create**.

The Messaging Filters page appears, as shown in Figure 3–30.

Figure 3–30 Adding a Messaging Filter



2. Specify the following information:
 - **Filter Name:** The name of the messaging filter.
 - **Description:** An optional description for the messaging filter.
3. Define the filter conditions using the lists and fields in the **Condition** section, as follows:
 - a. Select whether notifications must meet all of the conditions or any of the conditions by selecting either the **All of the following conditions** or the **Any of the following conditions** options.
 - b. Select the attribute from the list.
 - c. Select the operator, such as **isEqual**, from the list.
 - d. Type the value of the condition in the text box.
 - e. Click **Add** to add the condition to the list.
 - f. Repeat these steps to add more filter conditions. To remove a filter condition, click **Delete**.
4. Select from the following messaging options in the **Action** section:
 - **Send No Messages:** Do not send a message to any channel.
 - **Send Messages to All Selected Channels:** Send a message to all specified channels in the address list.
 - **Send to the First Available Channel:** Send a message serially to channels in the address list until one successful message is sent. This entails performing a send to the next channel when the current channel returns a failure status.

5. To set the delivery channel, select a channel from the **Add Notification Channel** list and click **Add**. To remove a channel, click **Delete**.
6. Use the up and down arrows to prioritize channels. If available, the top-most channel receives messages meeting the filter criteria if you select *Send to the First Available Channel*.
7. Click **OK**.

The messaging filter appears on the My Messaging Filters page. The My Messaging Filters page enables you to edit or delete the channel. Click **Cancel** to dismiss the dialog without creating the filter.

3.9.4.4.3 Editing a Messaging Filter To edit a messaging filter:

1. Select the filter on the My Messaging Filters page.
2. Click **Edit**.
3. Click **OK** to update the messaging filter. Click **Cancel** to dismiss the dialog without modifying the filter.

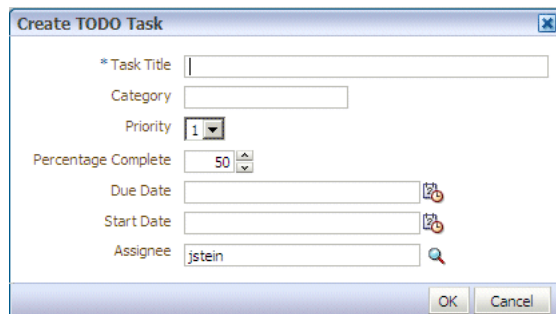
3.9.4.4.4 Deleting a Messaging Filter To delete a messaging filter:

1. Select the filter on the My Messaging Filters page.
2. Click **Delete**. A confirmation dialog appears.
3. Click **OK** to delete the messaging filter. Click **Cancel** to dismiss the dialog without deleting the filter.

3.10 Creating ToDo Tasks and Subtasks in Process Workspace

Use the Create ToDo Task dialog, shown in [Figure 3–31](#), to create a top-level ToDo task for yourself or others. This task is not associated with a business task.

Figure 3–31 The Create ToDo Task Dialog



ToDo tasks appear in the assignee’s **Inbox**.

You can create ToDo tasks that are children of other ToDo tasks or business tasks. A ToDo task can have only one level of child ToDo tasks. When all child ToDo tasks are 100% complete, the parent ToDo task is also marked as completed. If the parent ToDo task is completed, then child ToDo tasks are at 100% within the workflow system. If the parent is a business task, the child ToDo is not marked as completed. You must set the outcome and complete it. If you explicitly set a ToDo task to 100%, there is no aggregation on the parent task.

ToDo tasks can be reassigned, escalated, and so on, and deleted (logical delete) and purged (physical delete). Reassignment, escalation, and so on of the parent task does

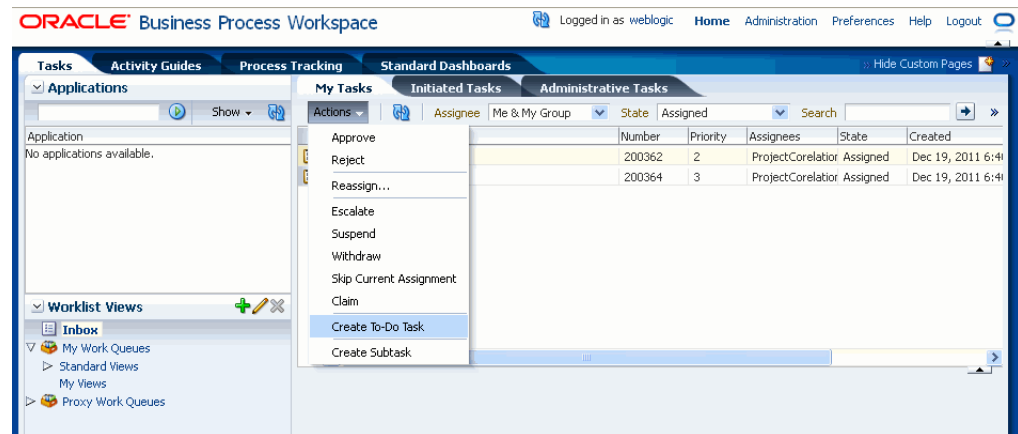
not affect the assignment of any child ToDo tasks. The completion percentage of a ToDo task can be reset to less than 100% after it is completed.

Assignment rules (such as vacation rules) are not applied to ToDo tasks. You cannot specify business rules for ToDo tasks.

To create a ToDo task:

1. From the **Actions** list, select **Create TODO Task**, as shown in [Figure 3–32](#).

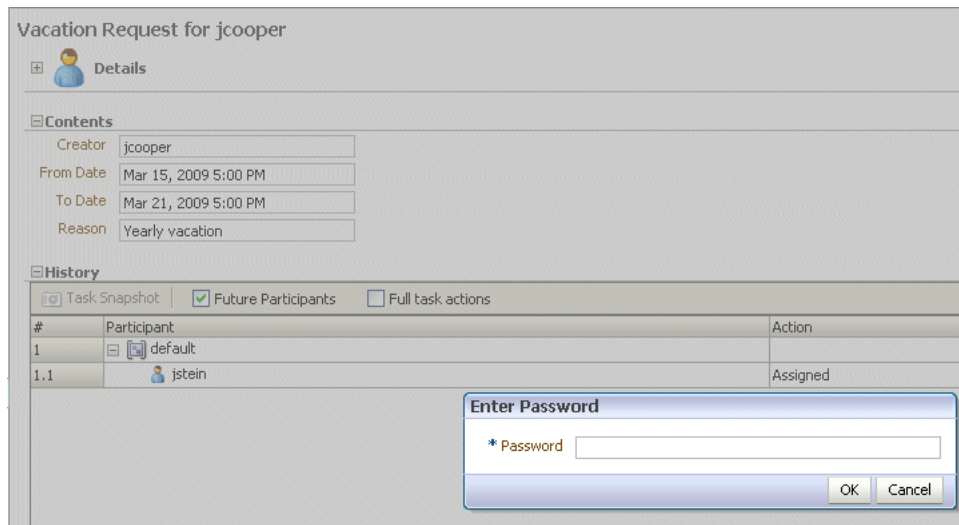
Figure 3–32 *Creating a ToDo Task*



2. Provide details in the Create ToDo Task dialog, shown in [Figure 3–31](#), and click **OK**.
 - **Task Title:** Enter anything that is meaningful to you.
 - **Category:** Enter anything that is meaningful to you.
 - **Priority:** Select from 1 (highest) to 5 (lowest)
 - **Percentage Complete:** This attribute indicates how much of the task is completed. 100% sets the attribute as completed.
 - **Due Date:** The due date does not trigger an expiration. You can also see overdue tasks. The start date need not be the current date.
 - **StartDate:** The task start date.
 - **Assignee:** You can assign yourself or someone else.

3.11 Acting on Tasks that Require Passwords in Process Workspace

If a human task was set up to require a password, then when you act on it, you must provide the password when prompted, as shown in [Figure 3–33](#).

Figure 3–33 Acting on a Task That Requires a Password

3.12 Acting on a Task that Requires a Digital Signature in Process Workspace

Oracle Business Process Management Workspace supports the signature policy created in the human task:

- **No signature required** — Participants can send and act on tasks without providing a signature.
- **Password required** — Participants must specify their login passwords.
- **Digital certificate (signature) required** — Participants must possess a digital certificate before being able to send and act on tasks. A digital certificate contains the digital signature of the certificate-issuing authority so that anyone can verify that the certificate is real. A digital certificate establishes the participant's credentials. It is issued by a certification authority (CA). It contains your name, a serial number, expiration dates, a copy of the certificate holder's public key (used for encrypting messages and digital signatures), and the digital signature of the certificate-issuing authority so that a recipient can verify that the certificate is real.

The evidence store service is used for digital signature storage and nonrepudiation of digitally-signed human workflows.

For more information about digital signatures and the evidence store service, see [Section 3.14, "Evidence Store Service and Digital Signatures"](#).

When you act on a task that has a signature policy, the **Sign** button appears, as shown in [Figure 3–34](#).

Figure 3–34 Digital Signature Task Details

Digital Signature Task Details Sign

[Back To History](#)

Approve Order

Task Number: 200002	Creator: jstein	Assignees: jcooper
State: Assigned	Created Date: 5/15/09 6:56:47 AM	Acquired By:
Outcome	Updated Date: 5/15/09 6:56:47 AM	
Priority: <input type="text" value="3"/>	Expiration Date:	

Customer Information

CustID 10
 ID 23
 Street
 City
 State
 Zip
 Country

Next

To use a certificate for digitally signing tasks, you must first upload the certificate.

To upload a certificate for a digital signature:

1. In the upper right corner of Oracle BPM Worklist, click **Preferences**.
2. In the navigation bar on the left, click **Certificates**.
3. Upload the certificate to use to sign your decision, as shown in [Figure 3–35](#).

Figure 3–35 Uploading a Certificate

ORACLE Business Process Workspace Logged in as: weblogic Home Administration Preferences Help Logout

Preferences

User Preferences

- Certificates
- Rules
- Notification Preferences
- Accessibility

Upload Certificate

Browse for Certificate

Certificate file type: PKCS7 PKCS12

Select Certificate File

Certificate Password

Type or Paste Certificate Contents

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When signing a task outcome using your certificate, you must upload the entire chain of certificates through Oracle BPM Worklist as a .P7B (PKCS7 format) file, not just the one certificate issued to you by the certificate issuer. The entire chain can be exported through Internet Explorer. Mozilla Firefox does not enable you to export the chain as a .P7B file. Therefore, you can perform the following steps:

- a. Export the chain from Mozilla Firefox as a .P12 file (PKCS12 format that also contains your private key).
- b. Import the .P12 file in Internet Explorer.
- c. Export it again from Internet Explorer as a .P7B file.
- d. Upload it through Oracle BPM Worklist.

Note the following important points when providing your certificate to the system. Otherwise, you cannot use your certificate to sign your decisions on tasks.

- The PKCS7 file format is a binary certificate format. Select this option if you have a standalone certificate file stored on your disk.
 - The PKCS12 file format is a keystore format. Select this option if you have your certificate stored inside a keystore.
 - If you want to copy and paste the contents of the certificate, select **Type or Paste Certificate Contents** and paste the BASE64-encoded text into the field. Do not paste a certificate in any other format into this field. Likewise, if you choose to upload a certificate, do not try to upload a BASE64-encoded certificate. Only PKCS12 and PKCS7 formatted files are supported for uploads.
4. Return to the task list by clicking the **Home** link in the upper-right corner of Process Workspace.
 5. Click a task to approve or reject. The task details are displayed.
 6. Click either **Approve** or **Reject**. Details about the digital signature are displayed.
 7. For a task that has a signature policy, click **Sign**. The Text Signing Report dialog appears.
 8. Select the certificate from the list to use to sign your decision.
 9. Enter the master password of the web browser that you are using.
 10. Click **OK**.

The web browser signs the string displayed in the upper half of the Text Signing Request with the certificate you selected and invokes the action (approval or rejection) that you selected. The task status is appropriately updated in the human workflow service.

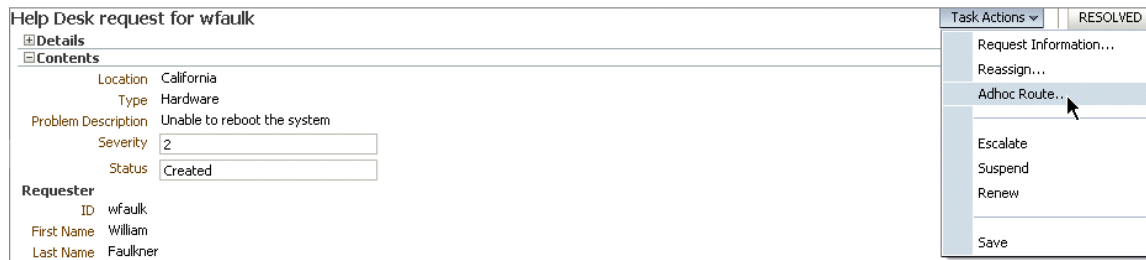
3.13 Routing Tasks in Process Workspace

If the human task was designed to permit ad hoc routing, or if no predetermined sequence of approvers was defined, then the task can be routed in an ad-hoc fashion in the worklist. For such tasks, a **Route** button appears on the task details page. From the Route page, you can look up one or more users for routing. When you specify multiple assignees, you can select whether the list of assignees is for simple (group assignment to all users), sequential, or parallel assignment.

To route a task:

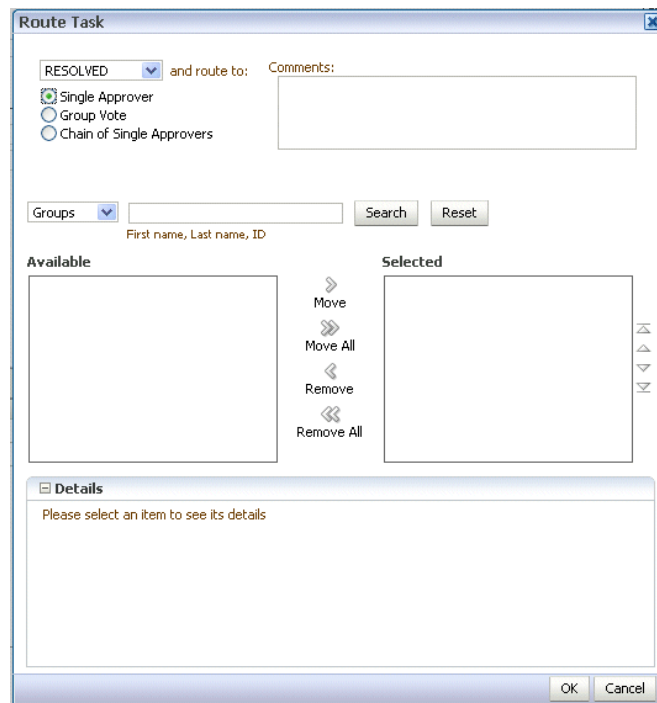
1. From the **Task Actions** list, select **Adhoc Route**, as shown in [Figure 3–36](#).

Figure 3–36 Ad Hoc Routing



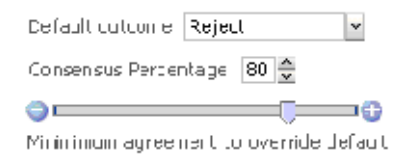
2. Select an action and a routing option, as shown in [Figure 3–37](#).

Figure 3–37 Routing a Task



- **Single Approver:** Use this option for a single user to act on a task. If the task is assigned to a role or group with multiple users, then one member must claim the task and act on it.
- **Group Vote:** Use this option when multiple users, working in parallel, must act, such as in a hiring situation when multiple users vote to hire or reject an applicant. You specify the voting percentage that is needed for the outcome to take effect, such as a majority vote or a unanimous vote, as shown in [Figure 3–38](#).

Figure 3–38 Providing Consensus Information



- **Chain of Single Approvers:** Use this option for a sequential list of approvers. The list can comprise any users or groups. (Users are not required to be part of an organization hierarchy.)
- 3. Add optional comments for the next participant on the route.
- 4. Provide or search for user or group names; then move the names to the **Selected** area.
- 5. Click **OK**.

3.14 Evidence Store Service and Digital Signatures

The evidence store service is used for digital signature storage and nonrepudiation of digitally-signed human workflows. A digital signature is an electronic signature that authenticates the identity of a message sender or document signer. This ensures that the original content of the message or document sent is unchanged. Digital signatures are transportable, cannot be imitated by others, and are automatically time-stamped. The ability to ensure that the original signed message arrived means that the sender cannot repudiate it later. Digital signatures ensure that a human workflow document:

- Is authentic
- Has not been forged by another entity
- Has not been altered
- Cannot be repudiated by the sender

A cryptographically-based digital signature is created when a public key algorithm signs a sender's message with a sender's private key.

During design time, signatures are enabled for the task. During runtime in Process Workspace, when a user approves or rejects the task, the web browser:

- Asks the user to choose the private key to use for signing.
- Generates a digital signature using the private key and task content provided by Oracle BPM Worklist.

Notes:

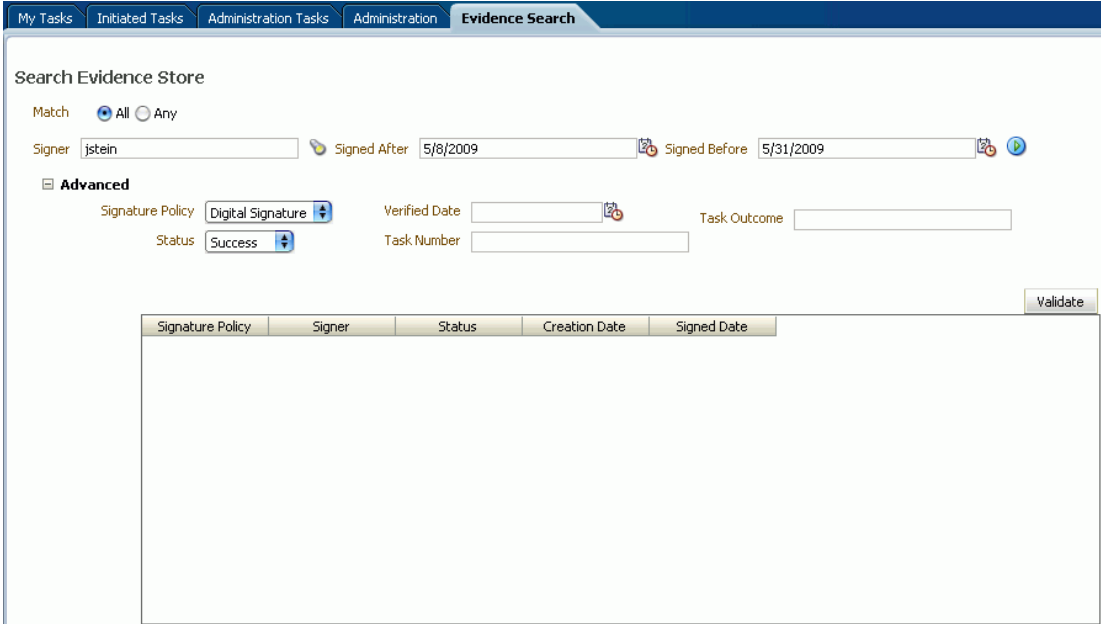
- The certificate refers to a Personal Information Exchange Syntax Standard (PFX) file that includes a certificate and a private key, and is protected by a simple text password. PFX specifies a portable format for storing or transporting a user's private keys, certificates, miscellaneous secrets, and so on.
 - The possession of a private key that corresponds to the public key of a certificate is sufficient to sign the data, because the signature is verifiable through the public key in the certificate. However, no attempt is made to correlate the name of a user of a certificate with the person updating it. For example, user `jstein` can sign using the private key of user `cdickens` if `jstein` has that private key.
-
-

The following digital signature features are supported:

- PKCS7 signatures based on X.509 certificates
- Browser-based, digitally-signed content without attachments

You can search the evidence store, as shown in [Figure 3-39](#).

Figure 3-39 The Evidence Store



Working on Process Instances in Process Workspace

This chapter, primarily for owners of process instances in Oracle Business Process Management Workspace, describes how to initiate and cancel process instances, search, view details, associate comments and attachments, perform bulk operations, and customize the presentation of process instances.

This chapter contains these topics:

- [Section 4.1, "Initiating Process Instances in Process Workspace"](#)
- [Section 4.2, "Searching for Process Instances in Process Workspace"](#)
- [Section 4.3, "Viewing the Details of a Process Instance in Process Workspace"](#)
- [Section 4.4, "Performing a Bulk Operation in Process Workspace"](#)
- [Section 4.5, "Canceling a Process Instance in Process Workspace"](#)
- [Section 4.6, "Customizing the Presentation of Process Instances in Process Workspace"](#)

For information about troubleshooting human workflow issues, see section "Human Workflow Troubleshooting" of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

4.1 Initiating Process Instances in Process Workspace

To initiate a process instance, you begin with the Applications panel located at the top of the navigation pane.

To initiate a process:

1. In the Process Tracking page, in the Applications panel, click the process you want to initiate. The dialog box for that process instance appears.

Note: If your browser has pop-up blocking enabled, then enable pop-ups for task flow servers; otherwise the application does not launch and the dialog box does not appear.

2. Create any comments or add any attachments.

To add a comment:

- a. In the Comments section, click **Create**. The Create Comment dialog box appears.

- b. Enter your comment and click **OK**. The comment is added at the process level.

To add an attachment:

- a. In the Attachments section, click **Add**. The Add Attachment dialog box appears.
- b. Select the attachment type. If you select Desktop File, a dialog box enables you to enter the path name of the file or browse to find it. If you select URL, you are prompted for the name of the file and the URL.
- c. After you have specified the attachment, click **OK**. The attachment is added at the process level.

The process instance is initiated and is assigned to you as the initiator.

4.2 Searching for Process Instances in Process Workspace

You can perform either a basic search or an advanced search for process instances. This section contains these topics:

- [Section 4.2.1, "How to Perform a Basic Search for Process Instances"](#)
- [Section 4.2.2, "How to Perform an Advanced Search for Process Instances"](#)

4.2.1 How to Perform a Basic Search for Process Instances

For a basic search, you enter all or part of the name of a process instance in the Search field.

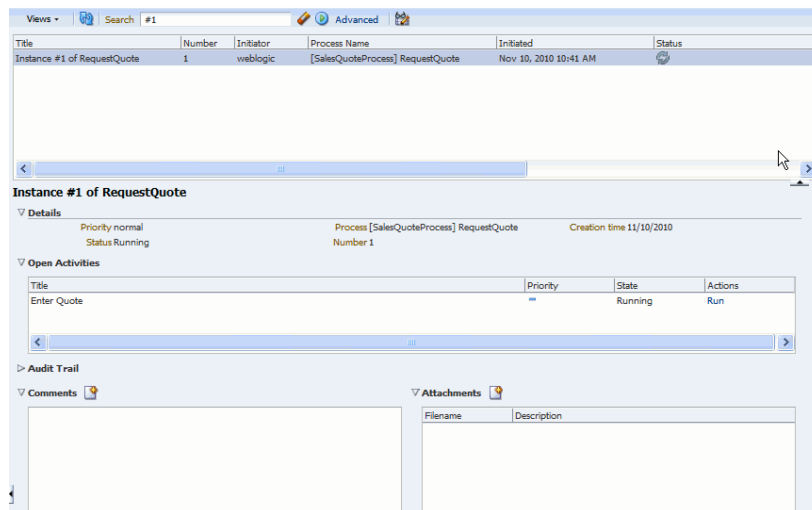
To perform a basic search for a process instance:

Select the Process Tracking page and, in the Search field, enter all or part of the name of the instance for which you are searching. Note that the search results are based on the Description column of the Process Tracking page.

To retrieve a list of all instances, enter a percent sign (%).

Search results are displayed as shown in the example in [Figure 4-1](#).

Figure 4-1 Search Results



The Details section displays the priority, process name, when the instance is due to complete, status, creation time, and the assignee.

If the process instance has any gateways resulting in multiple threads (paths) that are still running, the Open Activities section display the status of each thread.

The Audit Trail section displays audit information—in either tabular form, tree view, or graphically depending on your selection.

4.2.2 How to Perform an Advanced Search for Process Instances

You can perform a search based on one or more conditions you specify.

To perform an advanced search for a process instance:

1. In the Process Tracking page, click **Advanced**. The Advanced Search dialog box appears.
2. From the Processes list, select each of the processes you want to include in the view.
3. From the Assigned list, select one of the following: Anyone, at Any Role; Me, or Unassigned in my Role(s); Me.
4. From the Status list, select one the following:

Table 4–1 Add View Status List

Status	Description
All	Displays all instances.
All Open	The work items displayed include all instances that have the following status: In Process, Pending Migration, Suspended, and Errored.
In Process	The work item is active; it has not reached the end of the process.
Completed	The work item reached the end of the process.
Aborted	The work item is no longer active, and did not reach the end of the process.
Errored	The work item has thrown an exception during processing.
Pending Migration	The work item is awaiting migration to a new implementation.
Suspended	The work item is in suspended state. An item is suspended if a new implementation of the same composite revision is deployed, and the previously deployed composite has some components with the newer BPM process definition.

5. Click **OK**.

4.3 Viewing the Details of a Process Instance in Process Workspace

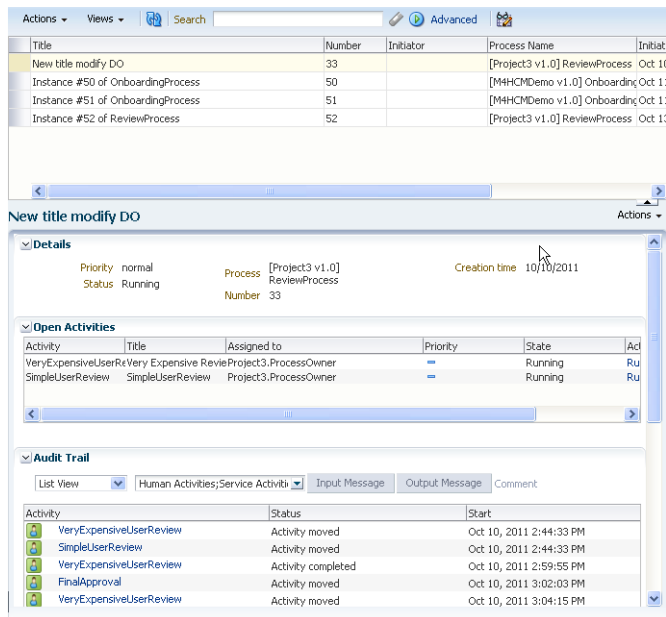
The ability of a user to see process instances depends on the user's roles. [Table 4–2](#) maps the various roles to their corresponding levels of visibility.

Table 4–2 Visibility into Process Instances

Role	Visibility into Process Instance
Administrator—that is, a user with the WorkflowAdmin role or the Administrator role	Can see all information related to all process instances
Process owner	At any given time, can see the instance details of the process instance
User with a swimlane role	Can see any unassigned instance associated with that role
Task assignee	Can see the instance details of that task

To view the details of a process instance:

In the Process Tracking page, from the process instance list, select the instance whose details you want to view. The Work Item Detail panel opens in the lower right section of the page as shown in [Figure 4–2](#).

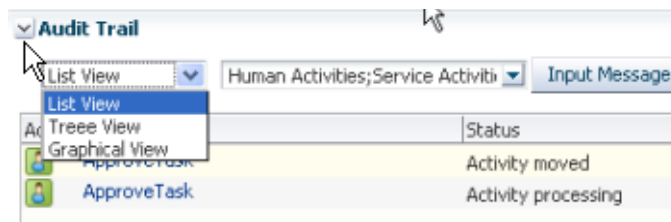
Figure 4–2 Work Item Details Panel

For information about the Work Item Details panel, see [Section 2.3.3.1, "Navigating the Process Workspace Process Tracking Page."](#)

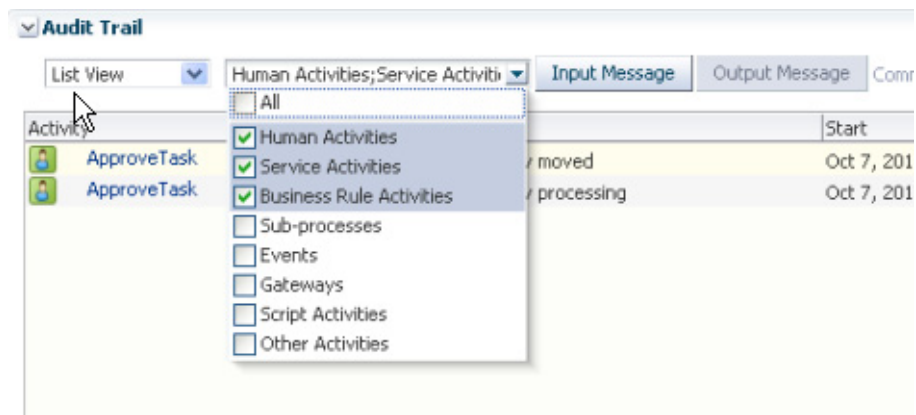
You can also use this panel to create comments and add attachments as described in [Section 4.3.2, "Associating Comments and Attachments with a Process Instance in Process Workspace"](#)

4.3.1 Viewing the Audit Trail in Process Workspace

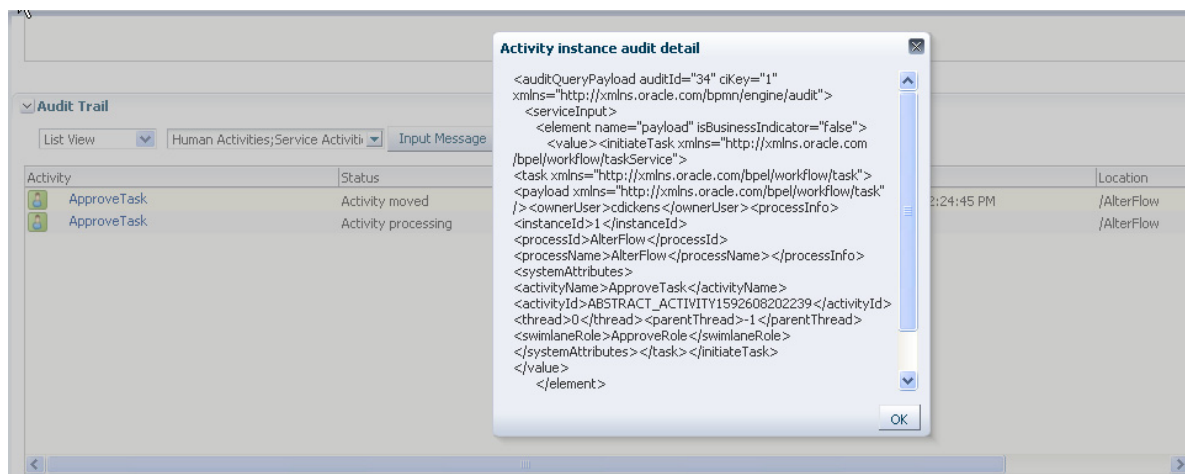
The Audit Trail section of the Work Item Details panel displays audit details in a list view, a tree view, or a graphical view. Select the view from the list in the upper left corner of the Audit Trail section as shown in [Figure 4–3](#).

Figure 4-3 Selecting the Audit Details View

You can select the type of activity, sub-process, gateway, or event you want to audit. To do this, select from the list at the top of the Audit Details section as shown in Figure 4-4.

Figure 4-4 Selecting Activities for Audit Details

If you are an administrator or process owner, and if the selected activity includes an input or output payload, then you can display the input or output message for that activity. To do this, select the activity, then click either **Input Message** or **Output Message**. The message appears in a pop-up as shown in Figure 4-5.

Figure 4-5 Displaying Activity Input and Output Messages

4.3.2 Associating Comments and Attachments with a Process Instance in Process Workspace

To associate a comment with a process instance:

1. From the worklist, select the process instance with which you want to associate a comment.
2. In the details panel, in the Comments section, click **New**.
3. Enter your comment and click **OK**.

To associate an attachment with a process instance:

1. From the worklist, select the process instance with which you want to associate an attachment.
2. In the details panel, in the Attachments section, click **New**. The Add Attachment dialog box appears.
3. In the Description field, optionally enter a description for the attachment.
4. In the Filename field, enter the path to the file, or click **Browse** to navigate to it.
5. Click **OK**.

Note:

- If you add an attachment to a process instance, and later delete it from the corresponding task, then the attachment is also deleted from the process instance.
 - In an environment with servers clustered for high availability purposes, file uploading is not supported in the event of a failover. If the active server shuts down, then the uploading process is not assumed by the other server, and the upload fails.
-
-

4.4 Performing a Bulk Operation in Process Workspace

In this release, the only available bulk operation you can perform is Cancel.

To perform a bulk operation:

1. In the Process Tracking page, from the process instance list, select several instances. In the Instance Details panel, a message indicates how many instances are currently selected to be processed. Also, the Actions list is updated with the options that can be performed over the group of instances that were selected.
2. Select the operation in the Actions list. The selected operation is performed on the instances you specified.

4.5 Canceling a Process Instance in Process Workspace

Only process owners can cancel a process instance.

To cancel a process instance:

- From the Actions list at the end of the row for the instance you want to cancel, select **Cancel**.

- Select the instance and, from the Actions list on the toolbar of the Process Tracking page, select **Cancel**

4.6 Customizing the Presentation of Process Instances in Process Workspace

A presentation is the column arrangement used when viewing instances in the Work Items panel. You can use an existing presentation or create a new one to be associated with that view.

You can choose the columns that are presented in any view displayed in the Work Items panel.

To customize the presentation of a process instance:

1. From the Views panel, select the view whose presentation you want to customize. The view is displayed in the Work Items panel.
2. From the Work Items toolbar, click **Edit Presentation**. This displays the Presentation dialog box in which you can select and sort the columns in your presentation.
3. From the Available Columns list, select the columns you want to include in your view and move them to the Presentation Columns list by clicking the right arrow.
4. To sort the columns:
 - a. Select an individual item in the Presentation Columns list.
 - b. Move it into place by using the vertical arrows to the right of the list.
 - c. Repeat for each column you want to sort.
5. Click **OK**.

Note: The Work Items panel displays process instances in two places: in the Process Tracking page and when using the Standard Dashboards page. You can customize the presentation of this panel as it appears in both places. However, if you first change the presentation in the Process Tracking page, and then change the presentation in the Standard Dashboards page, the latter configuration overrides whatever presentation you have configured in the Process Tracking page. When you navigate back to the Process Tracking page, the presentation will be whatever you configured in the Standard Dashboards page.

Working with Activity Guides in Process Workspace

This chapter describes activity guides in Oracle Business Process Management Workspace. They can organize and lead you through the various processes in which you have assigned tasks.

This chapter contains these topics:

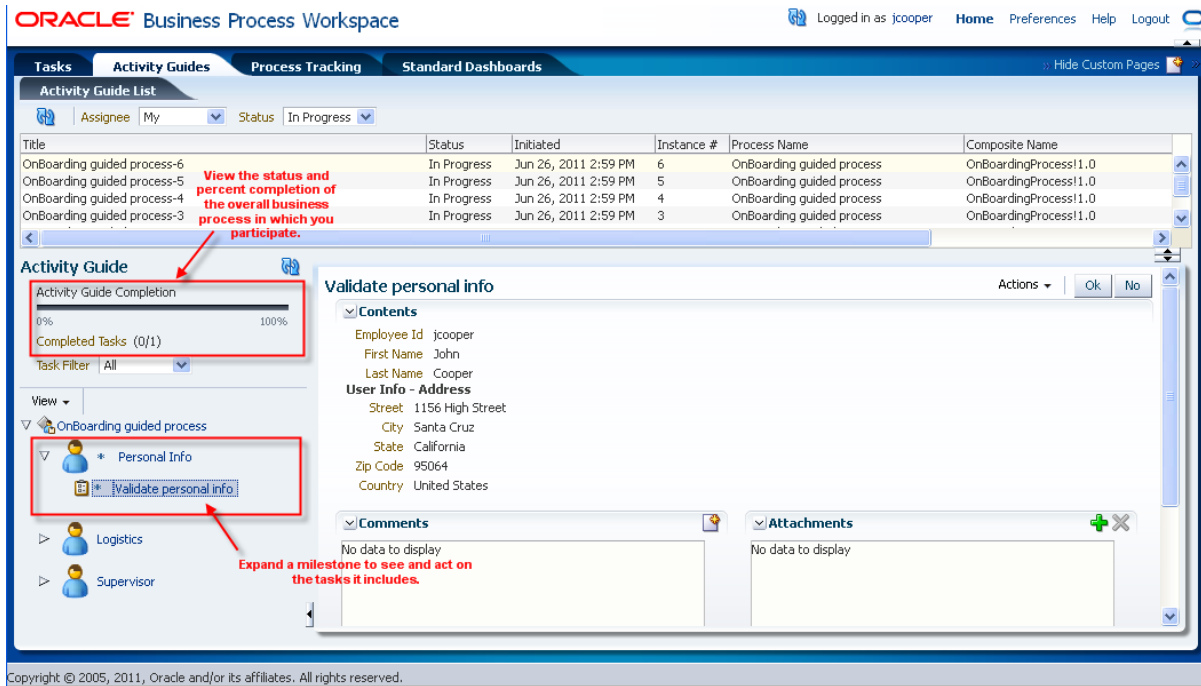
- [Section 5.1, "Understanding Activity Guides"](#)
- [Section 5.2, "Navigating Activity Guides"](#)
- [Section 5.3, "Showing or Hiding the Activity Guide Tab Page"](#)

5.1 Understanding Activity Guides

Activity guides organize your tasks into milestones. Each milestone is a specific set of tasks for you to complete, either on your own or in collaboration with others. For each milestone, the activity guide tells you which tasks to complete and in which order. You complete a milestone by completing all the tasks it contains for you. Depending on the nature of the task, you can save an unfinished task and resume it later.

[Figure 5-1](#) shows an example of an activity guide.

Figure 5–1 Sample Activity Guide



Using an activity guide, you can:

- Expand a milestone to see and act on the tasks it includes.
- View the status and percent completion of the overall business process in which you participate.

5.1.1 Why Use Activity Guides

As in the example in Figure 5–1, an activity guide can help organize the tasks involved in an onboarding process. The activity guide moves the user through the correct sequence of steps in the process. In this example, one milestone is *Personal Info*, which includes the task *Validate personal info*.

In an activity guide, users can act on only those tasks presently needing their attention in the current milestone. Once they have completed all their tasks for that milestone, they can act on the tasks for the next milestone. They cannot act on tasks in future milestones or on those assigned to other users.

5.2 Navigating Activity Guides

When you select the Activity Guides tab, the tab page displays the Activity Guide List.

The upper section of the Activity Guide List shows a process list displaying all the processes currently moving through the system.

- To get the latest updates to these processes, click the **refresh Activity Guide process list** icon.
- To filter the data for the Assignee, select from the following:
 - **My:** Retrieves all activity guide process instances that have active tasks assigned to the logged-in user and those that report to that user.

- **Reportees:** Retrieves all activity guide process instances that have active tasks assigned to those that report to the logged-in user
- **Previous:** All activity guides processes instances whose tasks have been completed by the logged-in user
- To filter the data according to the status of the processes, select one of the following:
 - In Progress
 - Completed
 - Errored

[Table 5–1](#) lists and describes the columns in the process list displayed in the Activity Guide List subtab.

Table 5–1 Process List

Column	Description
Title	Two possible values: <ul style="list-style-type: none"> ■ Combination of Process Name and Instance Number ■ Input provided by the end user when instantiating the process
Status	Current status of the activity guide process
Initiated	Date the process is initiated
Instance #	A number assigned to the activity guide process when the process gets instantiated from the Oracle Fusion Middleware Control
Process Name	Title provided by the process designer in the BPMN editor while modeling the Activity Guides Process
Composite Name	Oracle BPM composite name with revision number
Last Updated	Most recent date the activity guide was updated

To display a process activity guide in the lower section of the page, select the process from the process list. To display a process activity guide in a separate tab page, right-click the process in the process list and select **Open in separate tab**. This separate tab page refreshes to whatever process you later select from the process list.

The left section of the activity guide displays the guide’s navigation panel described in [Table 5–2](#).

Table 5–2 Activity Guide Navigation Panel

Element	Description
Activity Guide Refresh	Refreshes the navigation panel if any action is performed in the current activity guide process outside of Process Workspace.
Activity Guide Completion progress bar	Shows the percentage of completion of the current activity guide process.
Completed Tasks	Number of tasks the currently logged-in user has completed out of the total number tasks in the current activity guide process.

Table 5–2 (Cont.) Activity Guide Navigation Panel

Element	Description
Task Filter	<p>For the current activity guide process, specifies the type of task to display in the task details pane. Options:</p> <ul style="list-style-type: none">▪ All▪ Required▪ In Progress▪ Completed▪ Optional (Tasks that are not mandatory in the process, but that still require a user to explicitly skip)

The right section of the activity guide displays the details of the selected node in the activity guide process tree.

For information about the Task Details page, see [Section 2.3.1.2, "The Process Workspace Task Details Page"](#).

5.3 Showing or Hiding the Activity Guide Tab Page

If you are an administrator, you can specify whether to show or hide the Activity Guide tab page. If you choose to show it, you can make it the default tab when a user logs in.

For instructions on how to show or hide the Activity Guide tab, and to make it the default, see [Section 9.1.8, "How to Show or Hide the Default Tab Pages in Process Workspace"](#).

Creating and Editing Custom Pages in Process Workspace

This chapter describes how to customize the default layout in Oracle Business Process Management Workspace, and also how process designers and administrators can create new layouts and associate them with different sets of roles. This enables them to define the experience for the various kinds of users of each project.

A layout is a set of pages. It contains information about the pages it contains and about the panels each page contains.

Process Workspace provides its own default layout, but you can customize that layout by adding new pages and panels.

You can choose which pages to hide or show by selecting from the **Hide Tabs** list in the toolbar.

Depending on your roles, you may see several layouts at the same time.

This chapter contains these topics:

- [Section 6.1, "Creating Custom Pages in Process Workspace"](#)
- [Section 6.2, "Establishing Communication Between Panels in Process Workspace"](#)
- [Section 6.3, "Editing Custom Pages and Panels in Process Workspace"](#)

For information about troubleshooting human workflow issues, see section "Human Workflow Troubleshooting" of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

6.1 Creating Custom Pages in Process Workspace

You can design and add new pages and panels to customize your layout. This section contains these topics:

- [Section 6.1.1, "How to Create a Custom Page in Process Workspace"](#)
- [Section 6.1.2, "How to Add an External URL to a Customized Page in Process Workspace"](#)
- [Section 6.1.3, "How to Add an Applications Panel to a Customized Page in Process Workspace"](#)
- [Section 6.1.4, "How to Add a Dashboards Panel to a Customized Page in Process Workspace"](#)
- [Section 6.1.5, "How to Add a Process Instance Panel to a Customized Page in Process Workspace"](#)

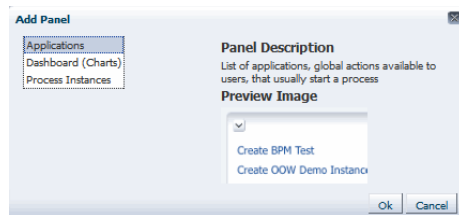
- [Section 6.1.6, "How to Grant and Manage Access to Customized Pages in Process Workspace"](#)

6.1.1 How to Create a Custom Page in Process Workspace

To create a custom page:

1. In the upper right corner of Process Workspace, click **Add Page**. The new page appears.
2. In the upper right corner of the new page, click **Add Panel**. The Add Panel dialog box appears with the Applications item selected, as shown in [Figure 6–1](#).

Figure 6–1 Adding an Applications Panel



You can choose the type of application panel to add: application, dashboard, or process instance.

6.1.2 How to Add an External URL to a Customized Page in Process Workspace

You can set your customized page to open an external web page such as `cnn.com` or `oracle.com`. To do this, in the newly created page, select **Show External URL** and add the URL.

Note: Do not enter the external URL of a website that has frame bursting enabled. To include such websites, add them as external applications as explained in [Section 9.1.7, "How to Enable Customized Applications and Links in Process Workspace."](#)

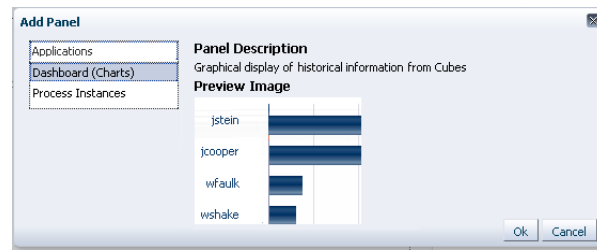
6.1.3 How to Add an Applications Panel to a Customized Page in Process Workspace

To add an Applications panel to a customized page:

1. From the Add Panel dialog box, select Applications, then click **Ok**. The Applications panel appears on the page.
2. Specify the name of the Applications panel and any configurable properties.
3. Click **Apply**.

6.1.4 How to Add a Dashboards Panel to a Customized Page in Process Workspace

From the Add Panel dialog box, you can also select Dashboards (Charts), as shown in [Figure 6–2](#).

Figure 6–2 Adding a Dashboards (Charts) Panel

This dialog box enables you to include either charts or a chart selector in your new page. Choosing either one provides you with the corresponding preview image.

To add a Dashboards panel to a customized page:

1. From the Add Panel dialog box, select Dashboards (Charts), then click **Ok**. The Dashboards panel appears on the page.
2. In the **Panel label** section, specify the name of the Dashboards panel.
3. In the **Panel properties** section, from the **Data Source** list, select a data source for this dashboard panel. The default options are:
 - Workload per Process
 - Performance per Process
 - Workload per Participant
 - Performance per Participant

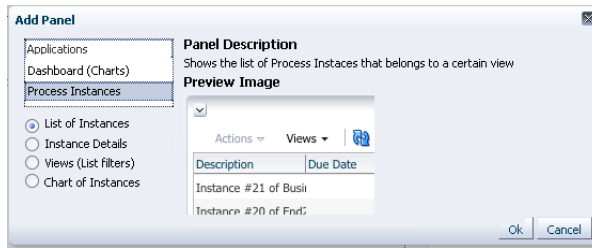
You can also specify a custom data source. To do this:

- a. In the Dashboards panel, in the Panel Properties section, to the right of the **Data Source** field, click the spy-glass icon. The Data Sources dialog box appears.
- b. In the navigator pane on the left, click **New**. A Data Source dialog box appears for you to create a new data source.
- c. Specify the fields as described in [Section 7.2.1, "Specifying Graph Content."](#)
- d. When you are finished specifying the data source, click **Ok**.
4. Specify the action to be triggered when clicking the graph or widget. Options are:
 - Update another widget: Updates any widget configured to listen to this widget
 - Update a view: Updates any view configured to listen to this widget
5. Specify any communication that is to take place with other panels. For information, see [Section 6.2, "Establishing Communication Between Panels in Process Workspace"](#) on page 6-6.

6.1.5 How to Add a Process Instance Panel to a Customized Page in Process Workspace

From the Add Panel dialog box, you can select Process Instances, as shown in [Figure 6–3](#).

Figure 6–3 Adding a Process Instances Panel



Selecting this option enables you to include one of the following types of process instance panels in your new page: list of instances, instance details, views (list filters), and chart instances. Choosing any one of these displays the corresponding preview image.

To add a Process Instance panel:

1. From the Add Panel dialog box, select Process Instances, select the type of Process Instances panel, then click **Ok**. The type of Process Instances panel you selected appears on the page.
2. In the **Panel label** section, specify the name of the Process Instance panel.
3. If the **Panel properties** section appears for the type of panel you selected, set the properties as required.
4. Specify any communication that is to take place with other panels. For information, see [Section 6.2, "Establishing Communication Between Panels in Process Workspace."](#)

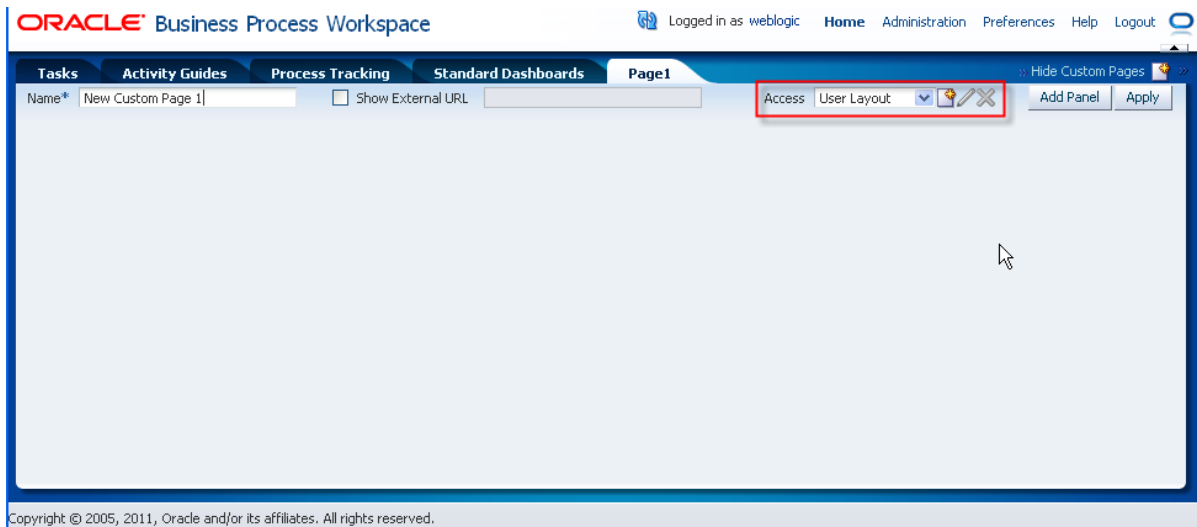
6.1.6 How to Grant and Manage Access to Customized Pages in Process Workspace

An administrator can specify the roles that can access a custom page that the administrator has created. Non-administrative users cannot grant access to custom pages.

To specify access to a custom page:

1. In the custom page you are adding, next to the Access field, click **Add Access Properties**.

Figure 6–4 Specifying Access to a Custom Page



The Add Access Properties dialog appears.

2. In the Add Access Properties dialog box:
 - Enter an identifier and a name for this page layout.
 - From the Roles list on the left, select the roles to which you are granting access in this layout. Move them to the list on the right and click **OK**.

Note:

- Only an administrator can grant access to custom pages that the administrator has created. Non-administrative users cannot grant access to custom pages.
 - To grant access to a role, you yourself must be associated with that role, otherwise it will not appear in the Role list.
-
-

The layout you have just created appears in the Access list. That layout now specifies the roles with access to this custom page.

To edit access properties for a custom page:

1. In the custom page you are adding, next to the Access field, click **Edit Access Properties**. The Edit Access Properties dialog box appears.
2. Enter your changes, then click **OK**. The layout as you have just edited it appears in the Access list. It now specifies the roles with access to this custom page.

Note: You can add new roles to a layout without removing previously granted roles.

To delete access properties for a custom page:

In the custom page you are adding, next to the Access field, click **Delete Access Properties**.

If the layout is a custom one, then you are prompted to confirm the deletion.

To maintain the custom page for the current user when a custom layout is deleted, the user must first save the page to the default layout. Only then should the user create the custom layout, modify the page, and save it to the new layout. If the user does not first save the page to the default layout, then the page is deleted for all members of the roles defined in the custom layout, including the current user.

If the user had right away created the custom layout and set it on the page before saving the page, then

Any custom pages previously associated with this custom layout remain, but are now associated with the default layout.

If the custom page uses the default layout, then the custom page is deleted. Users previously authorized to see this custom page will no longer see it.

6.2 Establishing Communication Between Panels in Process Workspace

You can establish communication between two panels so that an action in one panel is triggered by an action in the other. For example, you can configure a Process Instance panel to listen for actions that occur in a View List panel. Then, when a user selects a given view in the View List panel, that action triggers the use of that view in the Process Instance panel.

6.2.1 How to Establish Communication Between Panels in Process Workspace

To establish communication between panels, you configure one panel, designed with listening capabilities, to monitor actions in one or more source panels. An action occurring in a source panel then triggers an action in the listening panel.

Note: Communication can be established only between panels on the same page.

To establish communication between panels:

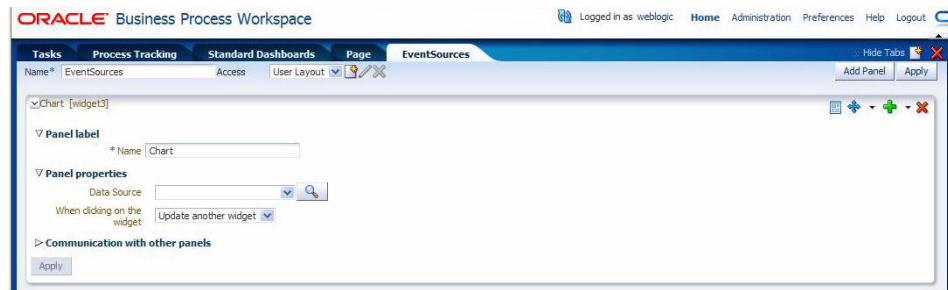
1. In the custom page, click **Edit Mode**. The entire page is available for editing.
2. Create a source panel and select the appropriate option from the **Data Source** list.
3. Create a listening panel. This time, do not select anything from the **Data Source** list.
4. Expand **Communication with other panels**, and, in the **Selected event sources** window, select the source panel created in step 2.
5. In each panel, click **Apply**.

Once you have done this, any action in the source panel triggers a corresponding action in the listening panel. For example, when two dashboard panels are communicating, clicking any graphical bars in the source panel triggers the use of that view in the listening panel.

6.3 Editing Custom Pages and Panels in Process Workspace

Figure 6–5 shows an example of a custom page as it initially appears, with the panel available for editing.

Figure 6–5 Example of a Custom Page



The custom page has three sections:

- Panel Label, which has a text field for specifying a name for the page
- Panel Properties, which has a field labeled Data Source, in which you can enter all or part of the name of a data source. You can also click the adjacent **Browse** button to search for a data source. This section also has a field labeled **When clicking on the widget**. It has an adjacent list from which you select the action you want triggered when clicking a widget.
- Communication with Other Panels described in [Section 6.2.1, "How to Establish Communication Between Panels in Process Workspace"](#)

This editable display of the panel enables you to define the name and properties for the new page and establish communication with other panels. In addition, the icons in the upper right corner of the new page enable you to:

- Switch to View Mode—that is, the manner in which the page is ordinarily viewed. After you switch to View Mode, you can switch back to Edit Mode.
- Move the panel up, right, left, or down.
- Add another panel to the right, left, above, or below this one.
- Remove this panel.

Using Dashboards in Process Workspace

This chapter describes how users of Oracle Business Process Management Workspace can use and customize standard dashboards—that is, the graphs and drill-downs based on data previously computed in a process cube schema. Dashboards reflect the standard metrics gathered during the execution of a process.

This chapter contains these topics:

- [Section 7.1, "Using Standard Dashboards"](#)
- [Section 7.2, "Creating Custom Dashboards"](#)

For information about troubleshooting human workflow issues, see section "Human Workflow Troubleshooting" of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

7.1 Using Standard Dashboards

Standard dashboards are the graphs and drill-downs based on data previously computed in a process cube schema. They reflect the standard metrics gathered during the execution of a process.

In each of the standard dashboards, clicking a bar graph in the left pane causes data to be displayed graphically in the right pane. Clicking an item in the right pane displays certain data in the Work Items panel in the lower pane. This section explains how each type of dashboard operates.

You can customize the presentation of the Work Items panel in the lower pane. For information on how to do this, see [Section 4.6, "Customizing the Presentation of Process Instances in Process Workspace"](#).

This section contains these topics:

- [Section 7.1.1, "Participant Dashboards"](#)
- [Section 7.1.2, "Process Dashboards"](#)

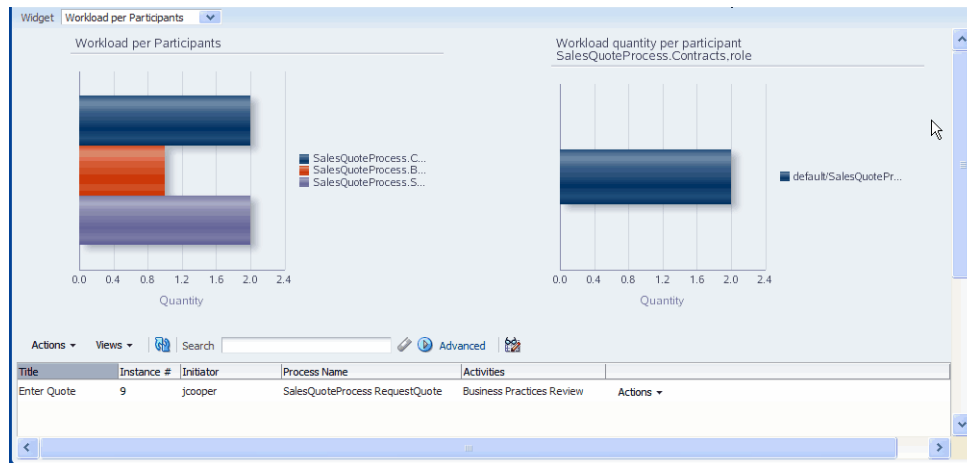
7.1.1 Participant Dashboards

Two types of standard participant dashboards enable you to analyze:

- The workload of participants
- The performance of participants

7.1.1.1 Participant Workload Dashboard

[Figure 7–1](#) shows an example of a participant workload dashboard.

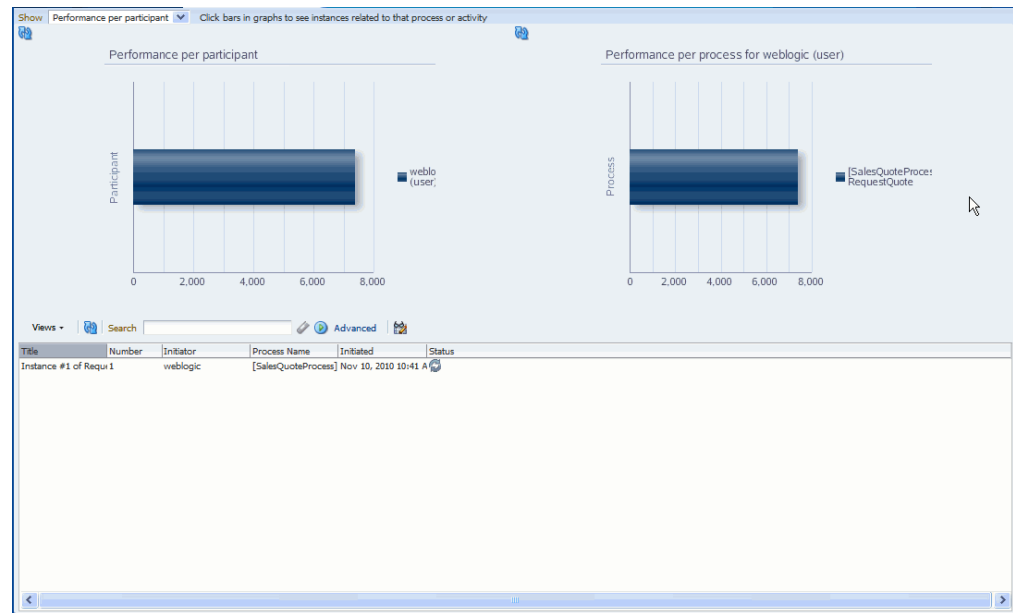
Figure 7-1 Participant Workload Dashboard

The left panel of a participant workload dashboard displays the total number of active instances waiting for completion for each participant across all processes. When you drill down into the chart for a specific participant, the right panel displays the total number of active instances waiting for completion by process for either the selected participant or the selected role. The last drill-down displays the active instances waiting for completion for either the selected participant or the selected role and process.

Note: In this release, participant information in a workload dashboard is for the physical role corresponding to the swimlane for the task. When the swimlane role is not defined, the corresponding participant information is null.

7.1.1.2 Participant Performance Dashboard

Figure 7-2 shows a participant performance dashboard.

Figure 7–2 Participant Performance Dashboard

The left panel of a participant performance dashboard displays the average time taken by participants across all processes. When you drill down into the chart for a specific participant, the right panel displays the average time taken to complete instances by process for the selected participant. The last drill-down displays the list of completed instances for either the selected participant or the selected role and process.

Note: In this release, for processes that have user tasks with multiple users, user information is captured only for the last user that updated the task.

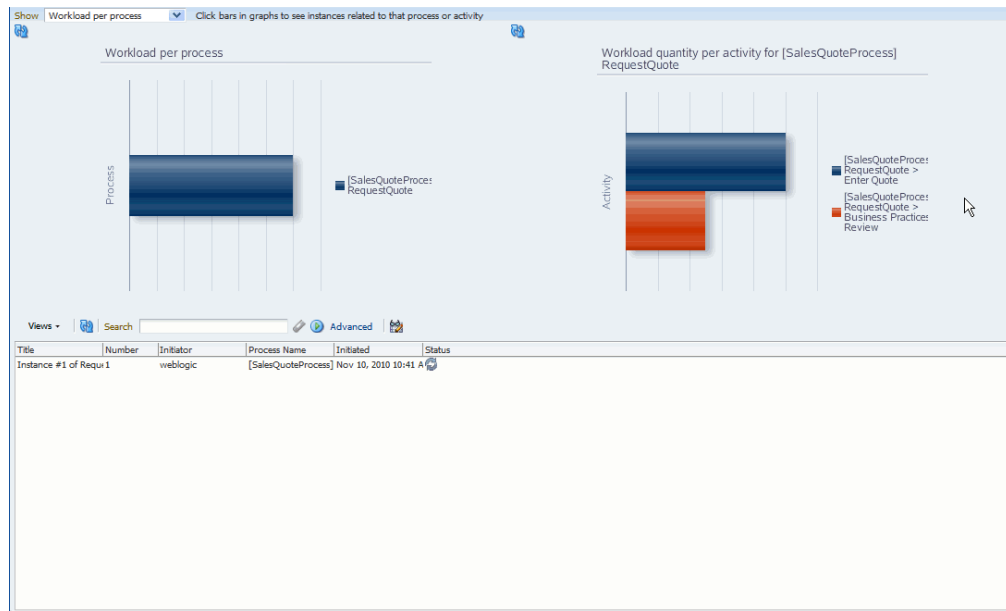
7.1.2 Process Dashboards

Two types of standard process dashboards enable you to analyze:

- The number of process instances waiting for completion
- The average time taken per process

7.1.2.1 Process Workload Dashboard

Figure 7–3 shows a process workload dashboard.

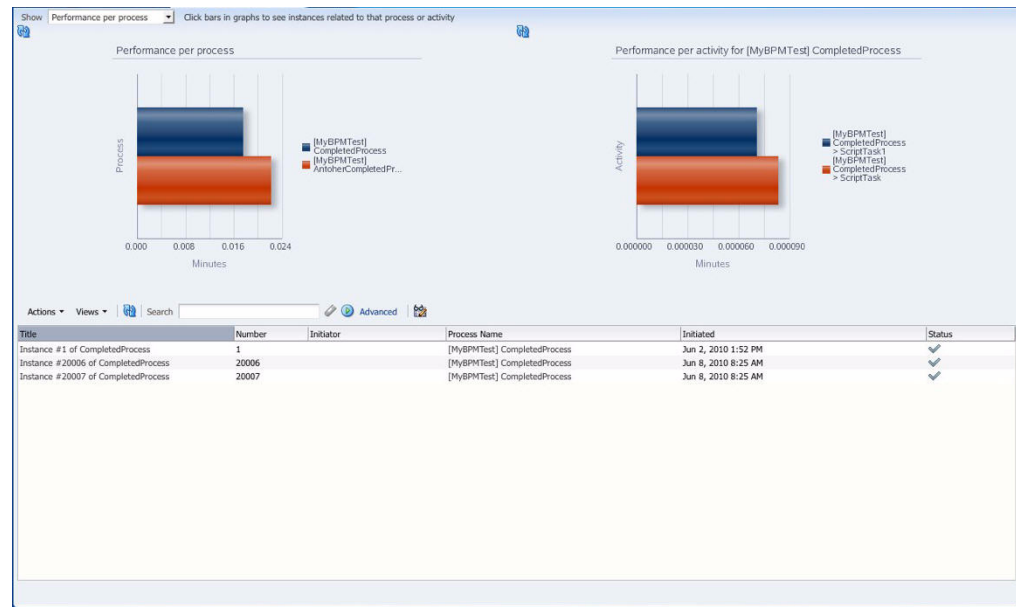
Figure 7-3 Process Workload Dashboard

The left panel in the process workload dashboard displays the total number of active instances waiting for completion per process. When you drill down into a specific process, the right panel displays the total number of active instances waiting for completion for activities in the selected process. The last drill-down displays the active instances waiting for completion for the selected activity and process.

7.1.2.2 Process Performance Dashboard

The left panel in the process performance dashboard displays the average time taken per process. When you drill down into a specific process, the right panel displays the average time taken to complete by activities in the selected process. The last drill-down displays the completed instances for the selected activity and process.

Figure 7-4 shows a process performance dashboard.

Figure 7–4 Process Performance Dashboard

7.2 Creating Custom Dashboards

As with standard dashboards, custom dashboards are the graphs and drill-downs based on data previously computed in a process cube schema. They reflect the standard and user-defined metrics gathered during the execution of the process. They enable you to define new graphs using both standard metrics and user-defined metrics specified by using business indicators.

For instructions about adding a custom dashboard, see [Section 6.1.1, "How to Create a Custom Page in Process Workspace"](#) on page 6-2.

7.2.1 Specifying Graph Content

Graph content is specified by defining a data source.

For information about invoking the data source dialog box, see [Section 6.1.4, "How to Add a Dashboards Panel to a Customized Page in Process Workspace."](#)

Specify the following data source information:

- Name: Provide a data source identifier
- Title: Provide the title used while displaying the data source
- Graph Type: Select one of the following list of graph types:
 - Area
 - Percent Area
 - Stacked Area
 - Horizontal Bar
 - Horizontal Percent Bar
 - Horizontal Stacked Bar
 - Bar

- Percent Bar
- Stacked Bar
- Line
- Percent Line
- Stacked Line
- Pie
- Pie Bar
- Multiple Pie
- **Process:** Select the process from the list. All business indicators associated with the selected process become available for the data source definition.
- **Data Type:** Select one of the following supported data types:
 - Workload
 - Activity and Measurement Sampling
 - Process Level Sampling

Dimensions

- **Series:** Specify the dimension.
Use Range: Select to use ranges for dimensions with ranges.
- **Group:** Specify the dimension used to group the dimensions used in a series.
Use Range: Select to use ranges for dimensions with ranges.
- **Drilldown to Series**
Use Range: Select to use ranges for dimensions with ranges.

Table 7-1 summarizes the standard dimensions available based on the Data Type selection. Additionally, all the process specific dimensions are available.

Table 7-1 Standard Dimensions Available

	Workload	Activity and Measurement Sampling	Process Sampling
Dimension: Series	Revision Role Activities Participant	Revision Role Activities Participant Completion Date	Revision Completion Date
Dimension: Group	Participant	Participant Completion Date	Completion Date

Measure

- **Variable:** Specify the measurement
Table 7-2 summarizes list of standard measurements available based on the Data Type selection. Additionally, all the process-specific measurements are available.

Table 7–2 Standard Measurements Available

	Workload	Activity and Measurement Sampling	Process Sampling
Variable	Instances Task Avg. Time Task Median Process Avg. Time Process Median Time	Task Time	Task Time

- **Operation Type:** Specify the aggregation functions to be applied on the measurement variables selected.

[Table 7–3](#) summarizes the operation types that can be used with various Data Type selections.

Table 7–3 Operation Types Allowed

	Workload	Activity and Measurement Sampling	Process Sampling
Operation Type	Avg Sum	Avg Sum Min Max	Avg Sum Min Max

- **Value Type:** Select one of the following values: Value, Day(s), Hours, Minutes, Seconds, Percentage

Note: If a new process is deployed while you have a dashboards page open, the new process will not be listed in the Data Sources dialog box until you log out of Process Workspace and then log back in.

Filters

You can add filter conditions based on the measure variables, series, and groups. You can add the filter condition only if a process is selected from the Process list. If "All" is selected in the Process list, then the Filters section is disabled.

Note: If you add a filter for business indicators, that filter filters out the values initially based on the condition given. Aggregation—either the sum or the average—then applies to the resulting set of items.

For example, if the user tries to compute the average of all business indicator values greater than 1000, the user will set a filter for this—for example: BI <Greater or equals> 1000 and set Operation type as "avg". The result is that the business indicator values greater than 1000 are collected first, and then the computation for the average calculation takes place.

Managing Workloads Among Users in Process Workspace

This chapter describes how supervisors can use Oracle Business Process Management Workspace to view and update all tasks assigned to the users who report to them.

This chapter contains these topics:

- [Section 8.1, "Managing the Availability of Users in Process Workspace"](#)
- [Section 8.2, "Distributing Work among Users in a Group"](#)
- [Section 8.3, "Setting Rules"](#)
- [Section 8.4, "Setting Assignment Rules for Tasks with Multiple Assignees"](#)
- [Section 8.5, "Reassigning or Delegating Tasks in Process Workspace"](#)
- [Section 8.6, "Using Reports to Manage Workflows in Process Workspace"](#)
- [Section 8.7, "Using Dashboards to Manage Workflows in Process Workspace"](#)
- [Section 8.8, "Handling Escalations in Process Workspace"](#)

For information about troubleshooting human workflow issues, see section "Human Workflow Troubleshooting" of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

8.1 Managing the Availability of Users in Process Workspace

If a user is unavailable for a period of time and must delegate some or all assigned tasks to another user, then the user rules can automatically reassign the tasks based on certain conditions. More specifically, if a user is going on vacation, a vacation period can be associated with a rule to create a vacation rule.

For more information about creating user rules, see [Section 3.9.1, "How to Create User Rules in Process Workspace."](#)

For more information about setting a vacation rule, see [Section 3.9.3, "How to Enable a Vacation Period in Process Workspace."](#)

8.2 Distributing Work among Users in a Group

To distribute work among users in a group, you create a rule for that group. Creating a group rule is similar to creating a user rule, with the addition of a list of the groups that you, as the logged-in user, manage.

For information about creating user rules, see [Section 3.9.1, "How to Create User Rules in Process Workspace."](#)

Examples of group rules include:

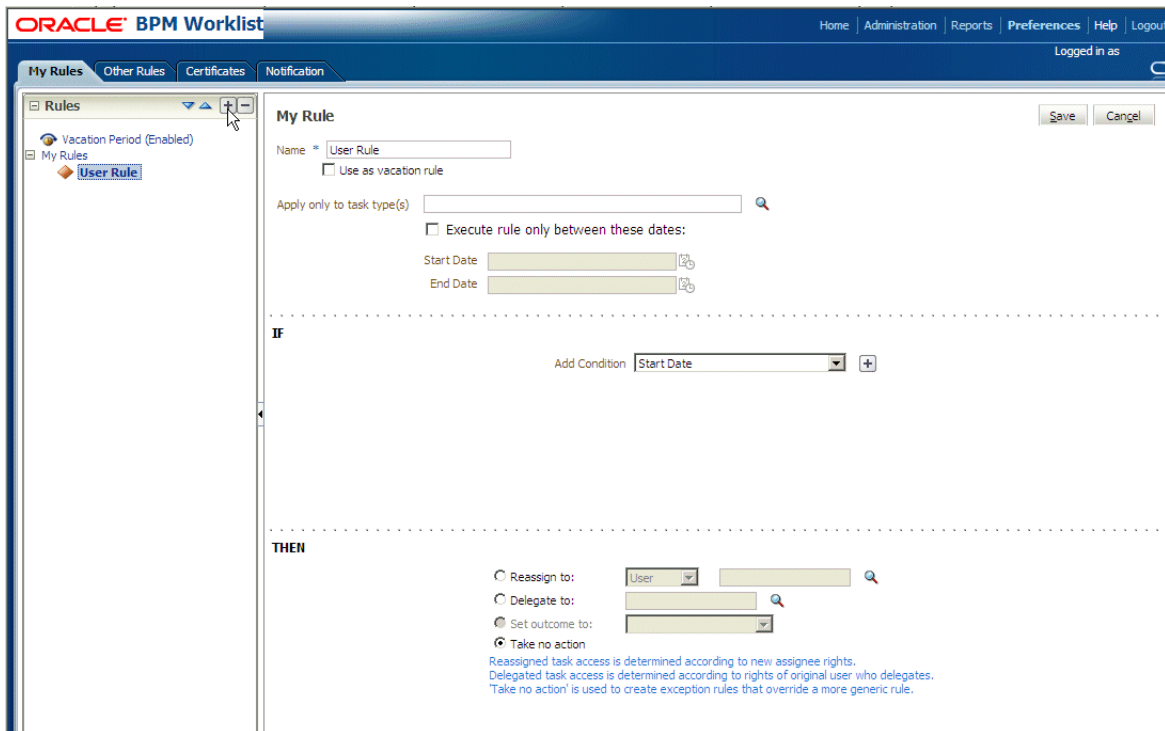
- Assigning tasks from a particular customer to a member of the group
- Ensuring an even distribution of task assignments to members of a group by using round-robin assignment
- Ensuring that high-priority tasks are routed to the least busy member of a group

For information about creating a group rule, see [Section 3.9.2, "How to Create Group Rules in Process Workspace"](#).

8.3 Setting Rules

Rules act on tasks, either a specific task type or all the tasks assigned to a user or group. [Figure 8–1](#) shows where you set rules, including vacation rules (different from the vacation period settings described in [Section 3.9.3, "How to Enable a Vacation Period in Process Workspace"](#)).

Figure 8–1 *Creating a Rule*



A rule cannot always apply in all circumstances in which it is used. For example, if a rule applies to multiple task types, it may not be possible to set the outcome for all tasks, since different tasks can have different outcomes.

Rules are executed in the order in which they are listed. Rules can be reordered by using the up and down buttons in the header, as shown in [Figure 8–1](#).

If a rule meets its filter conditions, then it is executed and no other rules are evaluated. For your rule to execute, you must be the only user assigned to that task. If the task is assigned to multiple users (including you), the rule does not execute.

You cannot specify business rules for ToDo tasks

8.3.1 How To Create User Rules

Specify the following when creating a user rule:

- Rule name
- If the rule is a vacation rule. See [Section 3.9.3, "How to Enable a Vacation Period in Process Workspace,"](#) for how to set the vacation period that is synchronized with the vacation rule.
- Which task or task type the rule applies to—If unspecified, then the rule applies to all tasks. If a task type is specified, then any attributes mapped for that task type can be used in the rule condition.
- When the rule applies
- Conditions on the rule—These are filters that further define the rule, such as specifying that a rule acts on priority 1 tasks only, or that a rule acts on tasks created by a specific user. The conditions can be based on standard task attributes and any mapped attributes that have been mapped for the specific tasks. See [Section 9.2.1.1, "How to Specify Mapped Attributes,"](#) for more information.

User rules do the following actions:

- **Reassign to**—You can reassign tasks to subordinates or groups you manage.
- **Delegate to**—You can delegate to any user or group. Any access rights or privileges for completing the task are determined according to the original user who delegated the task. (Any subsequent delegations or re-assignments do not change this from the original delegating user.)
- **Set outcome to**—You can specify an automatic outcome if the workflow task was designed for those outcomes, for example, accepting or rejecting the task. The rule must be for a specific task type. If a rule is for all task types, then this option is not displayed.
- **Take no action**—Use this action to prevent other more general rules from applying. For example, to reassign all your tasks to another user while you are on vacation, except for loan requests, for which you want no action taken, then create two rules. The first rule specifies that no action is taken for loan requests; the second rule specifies that all tasks are reassigned to another user. The first rule prevents reassignment for loan requests.

To create a user rule:

1. Click the **Preferences** link
The **My Rules** tab is displayed.
2. In the **Rules** area, click **My Rules** and click **Add**.
3. In the **My Rule** area, do the following and click **Save**:
 - Provide a name for the rule.
 - Select **Use as a vacation rule** if you are creating a vacation rule. The start and end dates of the rule are automatically synchronized with the vacation period.
 - Browse for task types to which the rule applies.
 - Select **Execute rule only between these dates** and provide rule execution dates.
 - In the **IF** area, add rule conditions.

- In the **THEN** area, select actions to be taken: **Reassign to**, **Delegate to**, **Set outcome to**, or **Take no action**), as shown in [Figure 8-2](#).

The new rule appears under the **My Rules** node.

8.3.2 How To Create Group Rules

Creating a group rule is similar to creating a user rule, with the addition of a list of the groups that you (as the logged-in user) manage. Examples of group rules include:

- Assigning tasks from a particular customer to a member of the group
- Ensuring an even distribution of task assignments to members of a group by using round-robin assignment
- Ensuring that high-priority tasks are routed to the least busy member of a group

Group rules do the following actions:

- **Assign to member via**—You can specify a criterion to determine which member of the group gets the assignment. This dynamic assignment criterion can include round-robin assignment, assignment to the least busy group member, or assignment to the most productive group member. You can also add your custom functions for allocating tasks to users in a group.
- **Assign to**—As with user rules, you can assign tasks to subordinates or groups you directly manage.
- **Take no action**—As with user rules, you can create a rule with a condition that prevents a more generic rule from being executed.

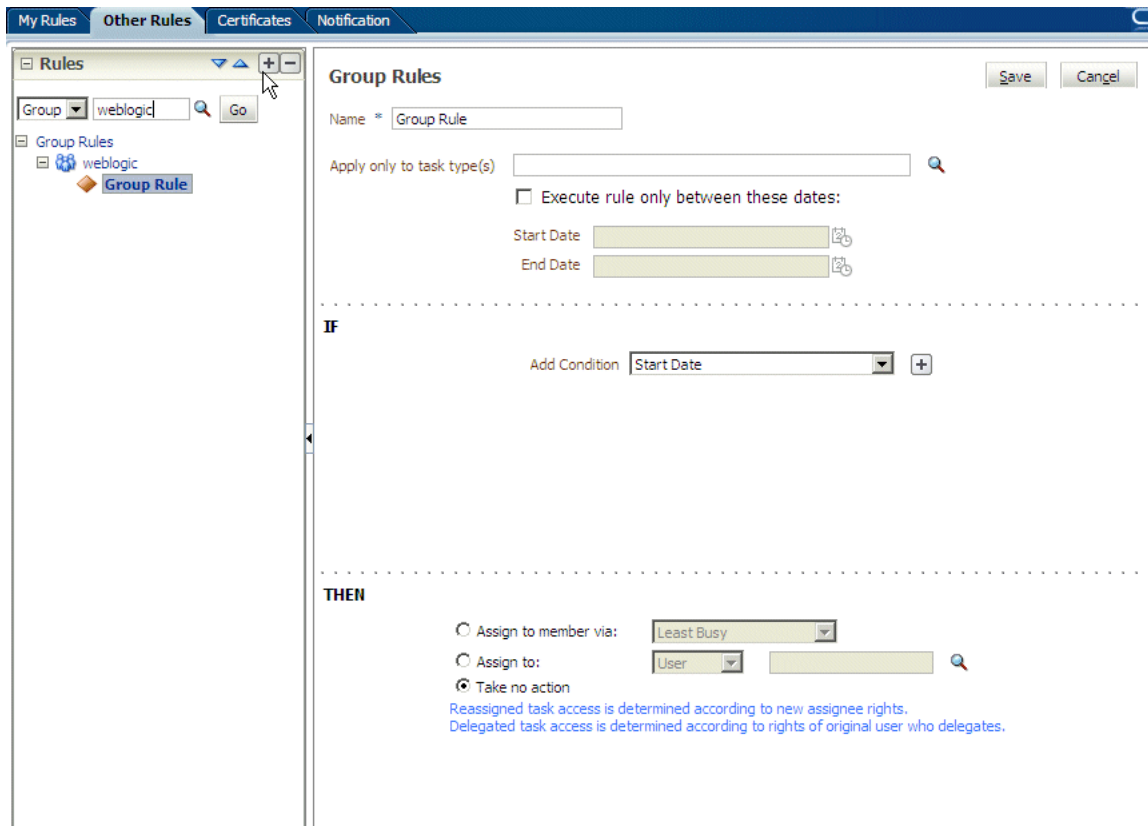
To create a group rule:

1. Click the **Preferences** link
2. Click the **Other Rules** tab.
3. Select **Group** from the list.
4. Enter a group name and click the **Search** icon, or enter a group name.

The Identity Browser opens for you to find and select a group.

5. Select the group name under the **Group Rules** node and click **Add**, as shown in [Figure 8-2](#).

Figure 8–2 Creating a Group Rule



6. Provide group rule information and click **Save**.
 - Provide a name for the rule.
 - Browse for task types to which the rule applies.
 - Provide rule execution dates.
 - In the **IF** area, add rule conditions.
 - In the **THEN** area, select the actions to be taken (or none) (**Assign to member via**, **Assign to**, or **Take no action**), as shown in Figure 8–2.

The new rule appears under the **Group Rules** node.

8.4 Setting Assignment Rules for Tasks with Multiple Assignees

If a task has multiple assignees, then assignment rules are not evaluated for the task, and the task is not automatically routed. This is because each of the task's assignees can define assignment rules, which can potentially provide conflicting actions to take on the task. Only tasks that are assigned exclusively to a single user are routed by the assignment rules.

For example, consider the following sequence:

1. A rule is created for user cdickens to reassign all assigned requests to user jstein.
2. User jcooper reassigns the allocated tasks to cdickens and cdoyle.
3. Cdickens claims the task, and the task appears in their inbox.

The task is not automatically reassigned to jstein. The task is routed to jstein, following the assignment rule set for cdickens, if user jcooper explicitly re-assigns the task only to cdickens instead of reassigning the task to multiple users (cdickens and cdoyle).

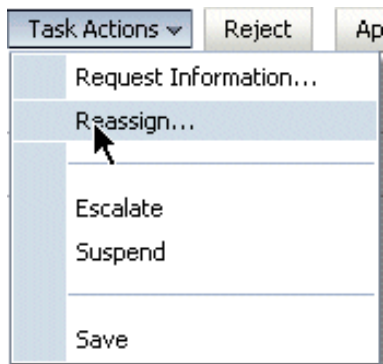
8.5 Reassigning or Delegating Tasks in Process Workspace

A supervisor can reassign or delegate tasks to reportees. A user with BPMWorkflowReassign privileges can delegate a task to anyone.

To reassign or delegate a task:

1. From the **Task Actions** list, select **Reassign**, as shown in [Figure 8-3](#).

Figure 8-3 Reassigning a Task



2. Select **Reassign** or **Delegate**.

Delegate differs from **Reassign** in that the privileges of the delegate are based on the delegator's privileges. This function can be used by managers' assistants, for example.

3. Provide or browse for a user or group name, as shown in [Figure 8-4](#).

Figure 8–4 Reassigning a Task

Reassign Task

Reassign tasks to one or more users.
This will transfer ownership of the task and remove it from your worklist.

Reassign (transfer task to another user or group)
 Delegate (allow specified user to act on my behalf)

Users Search Reset

First name, Last name, ID

Available

- jausten
- jstein
- jverne

Selected

- jcooper
- jlondon

Move
 Move All
 Remove
 Remove All

Details

Name	Jack London	Manager	sfitzger
Work Phone	100000008	Reportees	
Cell Phone	300000008	Roles	QATeam
Fax		Groups	LoanAgentGroup CentralRegion
Email	jlondon@emailExample.com		
Title	Loan Agent 1		

OK Cancel

A supervisor can always reassign tasks to any of his reportees.

4. Move names to the **Selected** area and click **OK**.

You can reassign to multiple users or groups. One of the assignees must claim the task, as shown in [Figure 8–5](#).

Figure 8–5 Claiming a Task

Vacation Request for jcooper Claim

Details

Contents

Creator: jcooper

From Date: Mar 15, 2009 5:00 PM

To Date: Mar 21, 2009 5:00 PM

Reason: Yearly vacation

History

Task Snapshot Future Participants Full task actions

#	Participant	Action	Updated By	Action Date
1	default			
1.1	jstein	Assigned	workflowsystem	Mar 16, 2009 2:16 PM
1.2	jcooper, jlondon	Reassigned	jstein	Mar 16, 2009 2:58 PM

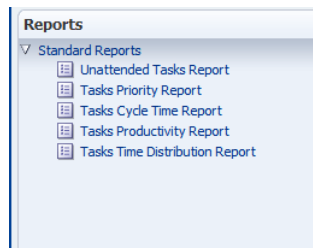
Note: When task details have been upgraded from an earlier release, you can see a "Request Failed" error when executing the **Reassign** action. Actually, the reassign completes, and when you click OK again, a popup says the task is already assigned.

To eliminate the error message, upgrade your taskflow applications by opening them in Oracle JDeveloper, then redeploy the task form.

8.6 Using Reports to Manage Workflows in Process Workspace

Reports are available on the Tasks page in the Reports panel. Report results cannot be saved.

Figure 8–6 shows the Reports panel displaying the standard report types available.

Figure 8–6 Oracle Business Process Management Workspace Reports

For more information about reports, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

8.7 Using Dashboards to Manage Workflows in Process Workspace

Dashboards provide a variety of analytical information about the workload on users for the different processes being executed. For example, if a specific user has many tasks assigned to her, and she is making little progress, this would indicate that all those corresponding processes are blocked. Having this information enables you to reassign those tasks to someone else and, if necessary some user or group routing rules can be specified to manage the issue in the short term.

For more information about dashboards, see [Chapter 7, "Using Dashboards in Process Workspace"](#).

8.8 Handling Escalations in Process Workspace

Escalations are among the system actions you can perform from the Task Details page.

For more information about the Task Details page, see [Section 2.3.1.2, "The Process Workspace Task Details Page"](#).

If a user escalates a task, it is automatically assigned to whomever is specified in the escalation path.

The escalation path is specified by the administrator. If no escalation path is specified, then the task escalates to the user's supervisor who can reassign it from there.

If a task is assigned to a role, but none of the role members have claimed the task, then the task is escalated as specified in the escalation path for that role. If the task is assigned to a role and a role member has claimed the task, then the escalation goes to the role member's supervisor.

For information about how an administrator specifies the escalation path, see [Section 10.5.2, "How to Specify the Escalation Path for a Role"](#).

Managing Process Workspace (for Administrators)

This chapter explains the various tasks an administrator can perform in Process Workspace, including setting the display of the Work Items panel, and administering and configuring task-related information.

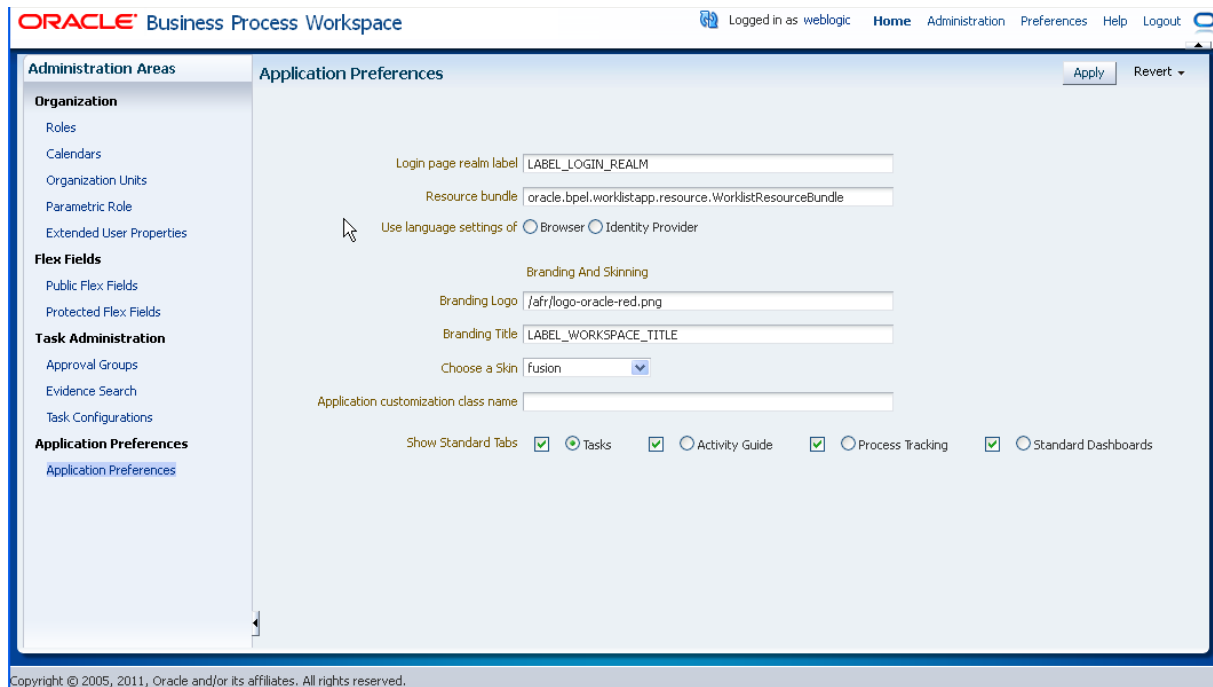
This chapter contains these topics:

- [Section 9.1, "Setting the Display of the Work Items Panel in Process Workspace"](#)
- [Section 9.2, "Administering and Configuring Task-Related Information in Process Workspace"](#)
- [Section 9.3, "Using the User Metadata Migration Utility"](#)

9.1 Setting the Display of the Work Items Panel in Process Workspace

To set the display of the Work Items panel, administrators can specify various application preferences. To do this in Process Workspace, click **Administration**, then click **Application Preferences**.

Figure 9–1 Setting Application Preferences



This section contains these topics:

- [Section 9.1.1, "How to Specify the Login Page Realm Label in Process Workspace"](#)
- [Section 9.1.2, "How to Specify the Resource Bundle in Process Workspace"](#)
- [Section 9.1.3, "How to Specify the Language Locale Information in Process Workspace"](#)
- [Section 9.1.4, "How to Specify a Branding Logo in Process Workspace"](#)
- [Section 9.1.5, "How to Specify the Branding Title in Process Workspace"](#)
- [Section 9.1.6, "How to Choose a Skin in Process Workspace"](#)
- [Section 9.1.7, "How to Enable Customized Applications and Links in Process Workspace"](#)
- [Section 9.1.8, "How to Show or Hide the Default Tab Pages in Process Workspace"](#)

9.1.1 How to Specify the Login Page Realm Label in Process Workspace

If the identity service is configured with multiple realms, then, when a user logs in to Oracle BPM Worklist, the login page displays a list of realm names. LABEL_LOGIN_REALM specifies the resource bundle key used to look up the label to display these realms.

You can change the term *realm* to fit the user community—terms such as *country*, *company*, *division*, or *department* may be more appropriate. To change the term *realm*, customize the resource bundle, specify a resource bundle key for this string, and then set the **Login page realm label** parameter to point to that resource bundle key.

For information about customizing the resource bundle, see [Appendix B, "Customizing a Resource Bundle"](#).

For information about specifying a resource bundle, see [Section 9.1.2, "How to Specify the Resource Bundle in Process Workspace"](#).

9.1.2 How to Specify the Resource Bundle in Process Workspace

The resource bundle provides the strings displayed in the Worklist Application. By default, the class path to the resource bundle is:

As an administrator, you can add or modify strings shown in the application by creating a custom resource bundle. You can then use the **Resource Bundle** field in the Application Preferences page to specify the class path to your custom resource bundle.

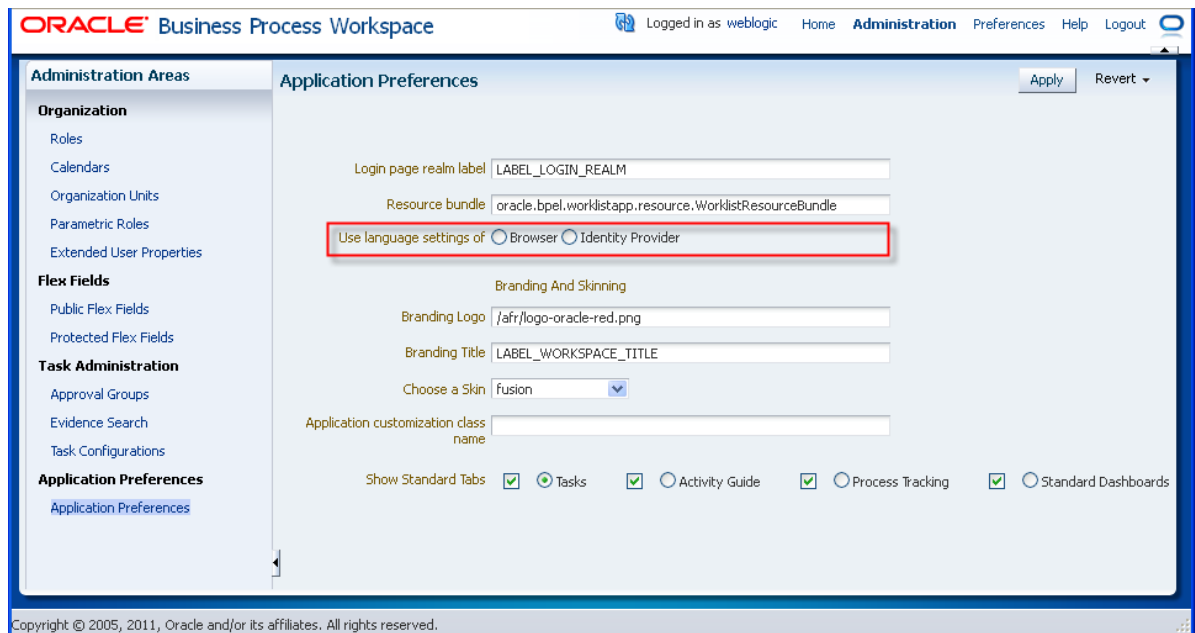
For more information about customizing the resource bundle, see [Appendix B, "Customizing a Resource Bundle."](#)

9.1.3 How to Specify the Language Locale Information in Process Workspace

From the Application Preferences page, you can specify how the Process Workspace display language is determined. Information about the language locale can be derived from either the user's browser or the identity provider that stores information on worklist users.

You reach the Application Preferences page by clicking **Administration** on the global toolbar at the very top of Process Workspace, then, under Administration Areas, selecting **Application Preferences**. The Application Preferences panel appears in the right pane. To specify the display language, in the **Use language settings of** field, select either **Browser** or **Identity Provider**.

Figure 9–2 Specifying Language Local Information



9.1.4 How to Specify a Branding Logo in Process Workspace

A branding logo is the image displayed in the top left corner of every page of the Worklist Application. The Oracle logo is the default, and you can change it to one of your choosing.

Note: The ideal image size is 120px x 40px (length x width) for proper display. Although images with high resolution and size are compressed to fit the branding logo size, smaller images display better.

To specify the branding logo:

Do one of the following:

- Refer to an external image-hosting website. To do this: In the **Branding Logo** field, enter the URL of the image.
- Upload an image to a particular location on the server and, in the **Branding Logo** field, enter its relative path, for example, `/afr/my_logo.png`.
- Refer to an image from the shared library. To do this: In the **Branding Logo** field, enter the path of the logo name as found in the shared library, for example, `/my_logo.png`

Note: Customizing the branding logo from either the Worklist Application or Process Workspace changes the logo in both applications. For example, if you change the logo from Worklist Application, then the Process Workspace logo is changed automatically.

For more information about deploying images in a shared library, see [Appendix D, "Deploying Images and JAR files as Part of a Shared Library JAR file"](#).

9.1.5 How to Specify the Branding Title in Process Workspace

You can specify the title for your site, changing the default title, *BPM Worklist*, to one that you choose.

To specify the branding title:

Do one of the following:

- In the **Branding Title** field, enter a simple string for your title.
- In the **Branding Title** field, enter a label that refers to a key-value pair in the Resource Bundle. In this way, you can internationalize your title, for example, `LABEL_WORKLIST_TITLE`.

9.1.6 How to Choose a Skin in Process Workspace

A skin determines the look and feel of your graphical interface.

To choose a skin:

Do one of the following:

- From the **Choose a Skin** list, select one of the default ADF skins
- Upload your own customized skin `.css` file in a `.JAR` file and deploy it as a part of shared library. Then, when you restart your application from the console, your custom skin appears in the **Choose a Skin** list.

To create a customized skin:

1. Create a directory structure similar to the following example:

```
C:\temp\META-INF\adf\oracle\skin\images
    META-INF\skins\custom.css
    META-INF\trinidad-skins.xml
```

Note that, in this example, you can change the word *custom* to the name of your own customized skin.

2. Make sure the content of `trinidad-skins.xml` file is as follows:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<skins xmlns="http://myfaces.apache.org/trinidad/skin">
  <skin>
    <id>custom.desktop</id>
    <family>custom</family>
    <extends>custom.desktop</extends>
    <render-kit-id>org.apache.myfaces.trinidad.desktop</render-kit-id>
    <style-sheet-name>skins/custom.css</style-sheet-name>
  </skin>
</skins>
```

3. Create the `.JAR` file by issuing the following command from the `c:\temp` directory:

```
jar -cvf customSkin.jar META-INF/
```

4. Copy this Jar file to the directory `/scratch/username/sharedLib`.

Note: Refer to the images in your CSS file this way:

```
../adf/oracle/skin/images/example.gif (with the two
trailing dots).
```

This allows the search for the META-INF root to start one directory above the META-INF/skin directory in which the `.css` file is located.

For more information about deploying images in a shared library, see [Appendix D, "Deploying Images and JAR files as Part of a Shared Library JAR file"](#).

9.1.7 How to Enable Customized Applications and Links in Process Workspace

For Process Workspace, you can create customized external applications and links that become available in the External Applications panel. Moreover, in both Process Workspace and the Worklist Application, you can specify the columns that appear in the Task Details pane.

To enable customized applications:

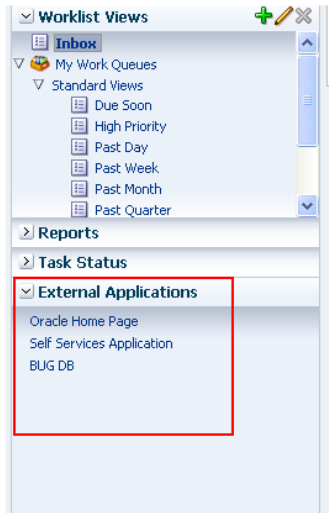
1. In the Application Preferences page, enter the class name of your custom application in the **Application customization class name** field.
2. Restart the application from the console.

Depending on your customization, you can now see its effects.

If your customization is for Process Workspace and involves either creating an external application or specifying inbox columns in the Task Details pane or both, you will see the following:

- Your custom application listed in the External Applications panel of the Process Workspace Home page as shown in [Figure 9–3](#).

Figure 9–3 External Applications Panel in Process Workspace



- The columns of the Task Details inbox adjusted according to your specifications.

For information about customizing applications, see [Appendix C, "Customizing Applications in Process Workspace and the Worklist Application"](#).

9.1.8 How to Show or Hide the Default Tab Pages in Process Workspace

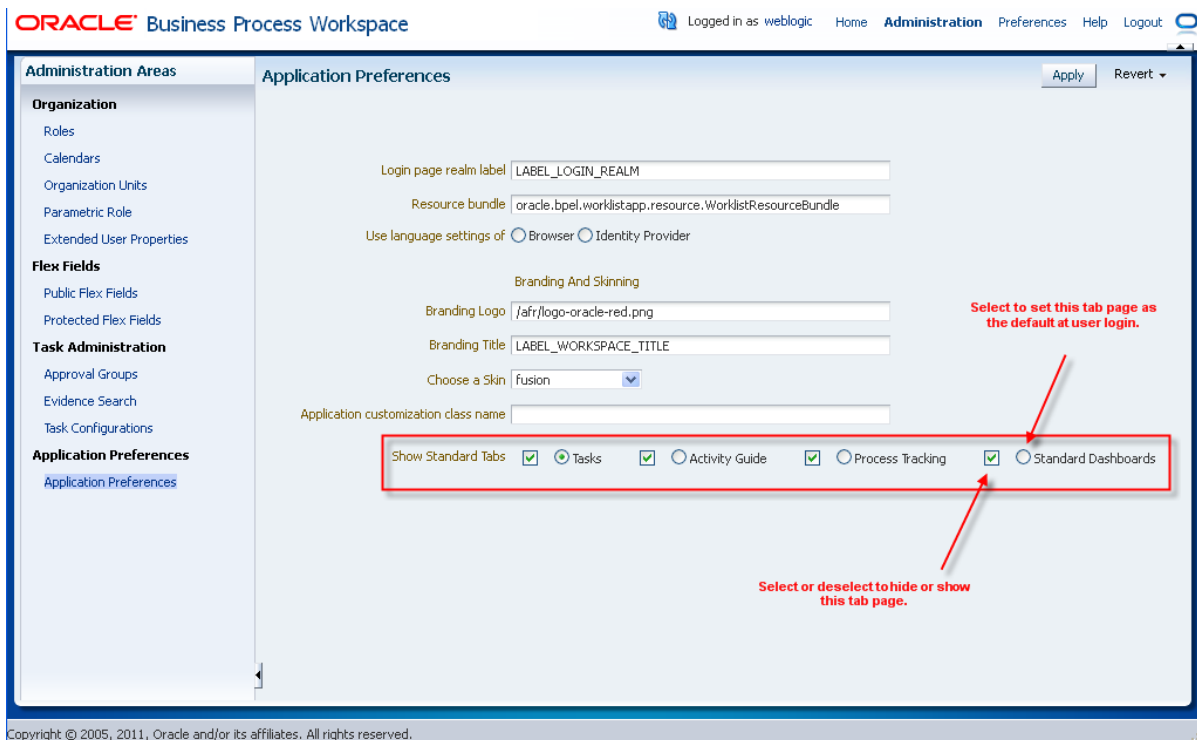
If you are an administrator, you can specify whether to show or hide the Process Workspace standard tabs, for example, Tasks, Activity Guides, Process Tracking, and Standard Dashboards. Also, from the tabs you decide to show, you can select the one to be the default tab when a user logs in.

To Show or Hide the Standard Process Workspace Tabs:

1. Select **Administration**, then **Application Preferences**.
2. From the **Show Standard Tabs** row, select the checkboxes for the tabs you want to show, or deselect them for the tabs you want to hide.
3. From the tabs you decide to show, specify which is the default tab when a user logs in. Do this by selecting the radio button next to the check box for that tab. If you do not select a default tab, then the standard tabs will not show or hide as you specified.

[Figure 9–4](#) shows the Application Preferences page with the **Show Standard Tabs** row highlighted. It calls out a check box for selecting a tab to show or hide, and a radio button for selecting a tab to be the default at user login.

Figure 9–4 Show Standard Tabs Selection



9.2 Administering and Configuring Task-Related Information in Process Workspace

This section contains these topics:

- [Section 9.2.1, "Managing Mapped Attributes \(Flex Fields\) in Process Workspace"](#)
- [Section 9.2.2, "Administering Approval Groups in Process Workspace"](#)
- [Section 9.2.3, "Using Task Configuration in Process Workspace"](#)
- [Section 9.2.4, "Using Evidence Search in Process Workspace"](#)
- [Section 9.2.5, "Managing Exceptions in Process Workspace"](#)

9.2.1 Managing Mapped Attributes (Flex Fields) in Process Workspace

Human workflow mapped attributes (formerly referred to as flex fields) store and query use case-specific custom attributes. These custom attributes typically come from the task payload values. Storing custom attributes in mapped attributes provides the following benefits:

- They can be displayed as a column in the task listing
- They can filter tasks in custom views and advanced searches
- They can be used for a keyword-based search

For example the Requester, PurchaseOrderID, and Amount fields in a purchase order request payload of a task can be stored in the mapped attributes. An approver logging into Process Workspace can see these fields as column values in the task list and decide which task to access. The user can define views that filter tasks based on the mapped attributes. For example, a user can create views for purchase order approvals based on

different amount ranges. If the user must also retrieve tasks related to a specific requester or a purchase order ID, the user can specify this in the keyword field and perform a search to retrieve the relevant tasks.

For the mapped attributes to be populated, an administrator must create mapped attribute mappings, as follows:

1. Specify a label for the mapped attribute to be populated.
2. Map the payload attribute that contains the data to the label.

These mappings are valid for a certain task type. Therefore, each task type can have different mapped attribute mappings. After the mapping is complete and a new task is initiated, the value of the payload is transferred to the mapped attribute that has just been mapped. Tasks initiated before the mapping do not contain the value in the mapped attribute. Only top-level simple type attributes in the payload can be transferred to a mapped attribute. Complex attributes or simple types nested inside a complex attribute cannot be promoted. It is important to define the payload for a task in the Human Task Editor, keeping in mind which attributes from the payload may be promoted to a mapped attribute. All text and number mapped attributes are automatically included in the keyword-based search.

Essentially, the Human Task Editor is used only when defining the payload for a task. All other operations are performed at runtime.

Directory naming is not available concomitantly with the flex file naming convention.

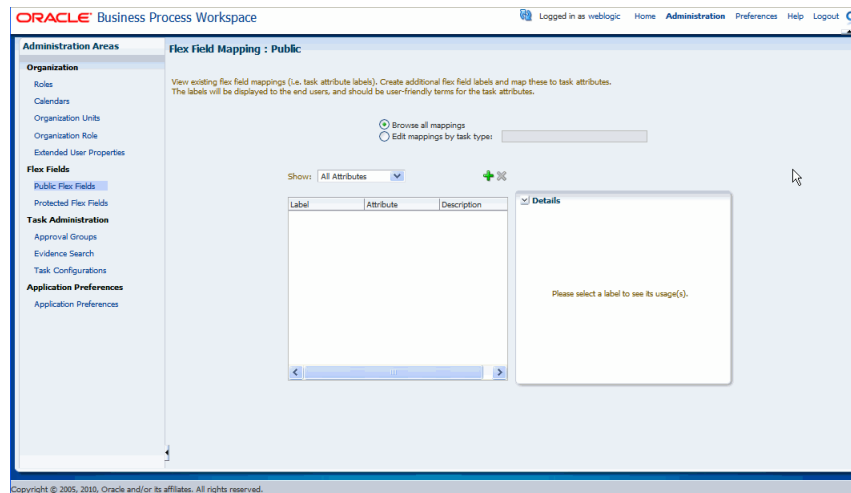
Note: Mapped attributes must be defined before instances of the business process are generated. Only instances generated after mapped attributes are created reflect the correct mapped attributes. Older instances of the business process do not reflect subsequent mapped attribute changes.

For more information about how to map mapped attributes, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

9.2.1.1 How to Specify Mapped Attributes

An administrator, or users with the necessary privileges, can use mapped attributes, shown in [Figure 9-5](#), to transfer data from the payload to inline mapped attributes. By promoting data to mapped attributes, the data becomes searchable and can be displayed as columns on the task list.

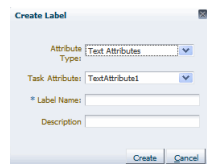
Administrators and users with the appropriate privileges can map both public and protected mapped attributes. They see both a **Public Flex Fields** node and a **Protected Flex Fields** node in the **Administration** panel as shown in [Figure 9-5](#).

Figure 9–5 Specifying a Mapped Attribute

For more information about public and protected mapped attributes, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

To create labels:

To create a mapped attribute mapping, an administrator first defines a semantic label, which provides a more meaningful display name for the mapped attribute. Click **Add** to use the Create Label dialog box shown in [Figure 9–6](#).

Figure 9–6 Creating a Label

As the figure shows, **labelName** is mapped to the task attribute **TextAttribute1**. The payload attribute is also mapped to the label. In this example, the **Text** attribute type is associated with **labelName**. The result is that the value of the **Text** attribute is stored in the **TextAttribute3** column, and **labelName** is the column label displayed in the user's task list. Labels can be reused for different task types. You can delete a label only if it is not used in any mappings.

A mapped payload attribute can also be displayed as a column in a custom view and used as a filter condition in both custom views and workflow rules. The display name of the payload attribute is the attribute label that is selected when doing the mapping.

Note the following restrictions:

- Only simple type payload attributes can be mapped.
- A mapped attribute (and thus a label) can be used only once per task type.
- Data type conversion is not supported for the number or date data types. For example, you cannot map a payload attribute that is assigned the `string` datatype to a label that is assigned the datatype `number`.

To browse all mappings:

1. Click **Browse all mappings**.

2. Select a row in the label table to display all the payload attributes mapped to a particular label.

To edit mappings by task type:

1. Click **Edit mappings by task type**, optionally provide a task type, and click **Search**.
2. Select a task type and click **OK**.
3. With the task type displayed in the **Edit mappings by task type** field, click **Go**.
4. Select a mapping label and click **Select**.

9.2.2 Administering Approval Groups in Process Workspace

An approval group consists of a name and a predefined set of users configured to act on a task in a certain pattern. This pattern is similar to a human workflow routing slip pattern where users can act on tasks in serial or parallel. An approval group also can contain a nested approval group in the pattern.

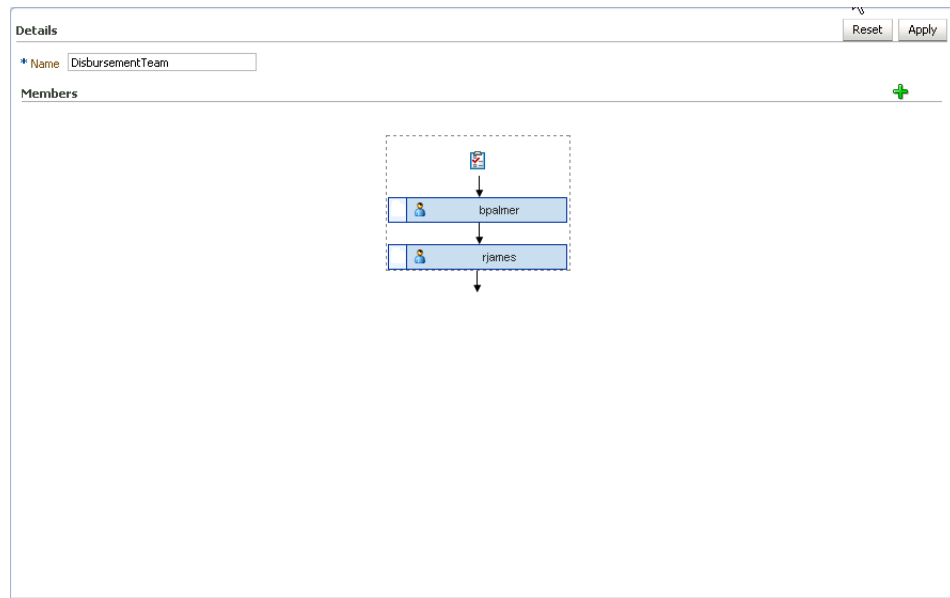
The name of an approval group is necessary when specifying the approval group list builder as discussed in *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*. The pattern configured in the approval group is used by default to order the users who must act on the task. However, when creating the list builder, the default pattern can be overridden by specifying the voting method.

The sections that follow describe the user interface that enables users with administrator rights to manage approval groups.

9.2.2.1 How to View Approval Groups

To view approval groups:

1. From the Process Workspace toolbar, click **Administration**. The Administration Areas panel appears in the left pane.
2. Under Task Administration, click **Approval Groups**. The Groups page appears in the right pane.
3. In the navigation pane of the Approval Groups page, select an approval group. A details page for that approval group appears in the right pane, similar to the one shown in [Figure 9-7](#).

Figure 9–7 Oracle Business Process Management Workspace: Approval Group Detail

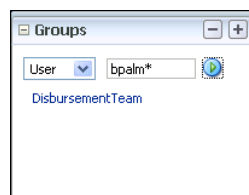
The figure shows that the DisbursementTeam approval group has two users, bpalmer and rjames. The users will act on a task in a specific sequence configuration.

9.2.2.2 How to Search for an Approval Group

You can search for an approval group either by user name or group name.

- To search by user name:**
1. From the Process Workspace toolbar, click **Administration**. The Administration Areas panel appears in the left pane.
 2. Under Task Administration, click **Approval Groups**. The Approval Groups page appears in the right pane.
 3. Select **User** from the list.
 4. Enter the full user name for the user in the field. (You also can perform a wildcard search (*) with a partial user name.)
 5. Click the action (>) button.

A list of all approval groups to which the user belongs displays in the left pane, as shown in [Figure 9–8](#).

Figure 9–8 User Name Search Results

Clicking the approval group name refreshes the details pane on the right with the structure of that group.

- To search by group name:**
1. In the left pane, select **Group** from the list.

2. Enter the full group name in the field. (You also can perform a wildcard search (*) with a partial group name.)
3. Click the action (>) button.

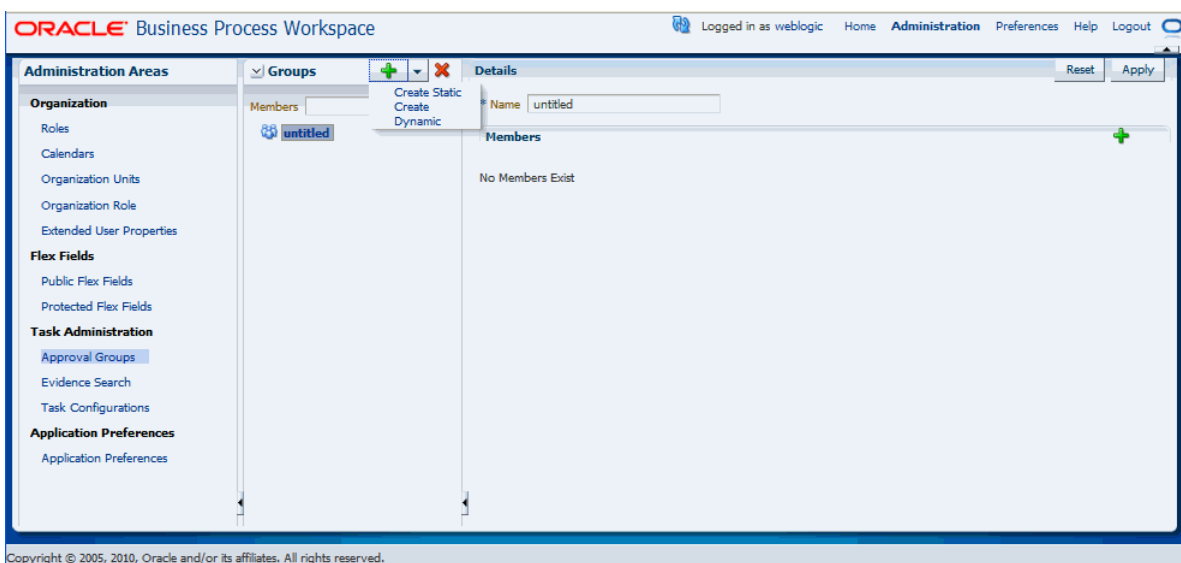
A list of all matching approval groups displays in the left pane.

Clicking on the approval group name refreshes the Details pane on the right with the structure of that group.

9.2.2.3 How to Add a Static Approval Group

To add a static approval group: 1. Click the **Add (+)** button and select **Create Static** from the list, as shown in [Figure 9-9](#).

Figure 9-9 Create Approval Group: Select Static Group



2. Enter a new name for the group.
 3. Click **Apply**.
- You can add members to the new approval group.

9.2.2.4 How to Add a New Member to a Static Approval Group

Members of a static approval group can be either users or other approval groups.

To add a new user member to an approval group: 1. From the Details page shown in [Figure 9-10](#), click the **Add (+)** icon.

The other icons enable you to edit, delete, and reorder members in the approval sequence.

The Add to Group dialog box appears.

2. Select **User**.
3. Do one of the following:
 - Enter a full user name and click **OK**.

The dialog box closes and the new member appears in the **Members** section of the **Details** pane.

- Click the magnifying glass to search for a user.

If you click the magnifying glass, an Identity Browser pop-up dialog appears.

4. Select **Users** from the list.
5. Enter a full name in the text-entry field and click **Search**. (You also can perform a wildcard search (*) with a partial user name.)

The Identity Browser dialog refreshes and the search results appear.

6. Choose a user from the list.

The details for that user appear in the **Details** section of the dialog.

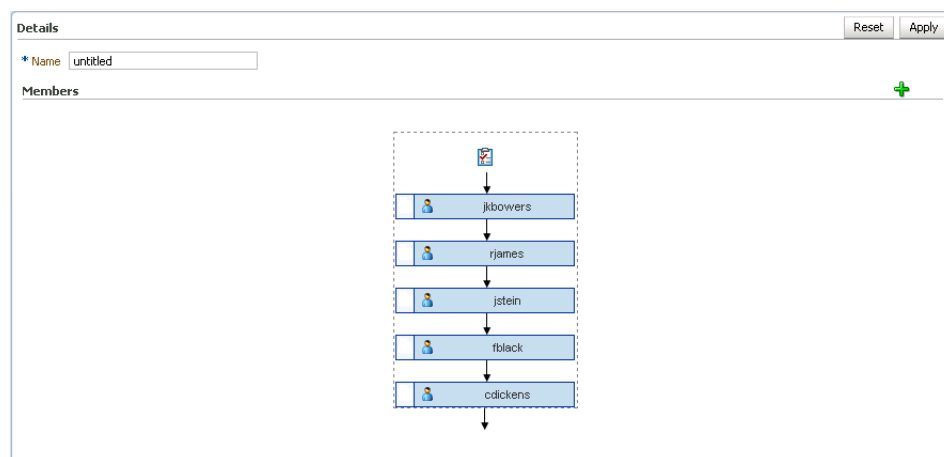
7. Click **OK**.

8. Click **OK** again to close the Add to Group dialog.

A node representing the selected user appears in the approval group structure in the **Members** section of the **Details** pane.

You can add more members to the approval group by repeating the steps above. The resulting approval group structure will look similar to the one shown in [Figure 9–10](#).

Figure 9–10 Approval Group Structure: Multiple Members



9.2.2.5 How to Delete a Member from an Approval Group

To delete a member from an approval group: 1. Choose the appropriate member node from the approval group structure.

2. Click the **Delete** icon.

The approval group structure refreshes and the member node has been deleted.

9.2.2.6 How to Move an Approval Group's Members

To change the sequence order of an approval group: 1. Choose a member node to move.

2. Use the Push Member Up (^) and Push Member Down (v) icons to move the member to the desired location.

9.2.2.7 How to Nest Approval Groups

Nesting an approval group means making it part of another approval group.

To nest an approval group: 1. Click the **Add** icon.

2. Select **Approval Group**.

3. Click the magnifying glass.

Another Add to Group dialog box appears.

4. From the left pane, choose the approval group you want to add.

Its structure appears in the right pane.

5. Click **OK**.

6. Click **OK** again to close the Add to Group dialog box.

The new approval group appears in the approval group's structure.

9.2.2.8 How to Rename an Approval Group

To rename an approval group: 1. Enter the new name of the approval group in the **Name** field.

2. Click **Apply**.

The name change is reflected in other approvals groups in which this approval group is nested.

9.2.2.9 Using Dynamic Approval Groups

Dynamic Approval Groups provide a way to create approval groups through a custom Java class at runtime. This requires the following:

- Writing a custom dynamic approval group class for the custom implementation by the developer
- Registering the custom dynamic approval group using the worklist apps UI by the IT department
- Making the class file available in a globally well known directory that is part of the Service Integration class path

9.2.2.9.1 How to Write a custom Dynamic Approval Group Class To define a dynamic approval group, the user must define an implementation class using the interface file `IDynamicApprovalGroup.java`, defined by AMX for dynamic approval groups in the package `oracle.bpel.services.workflow.task`. This package contains only one public method that gets the approval group members. The Task object will be the only input parameter. The primary key list can be obtained from the task `task/systemAttributes/collectionTarget`.

Example 9–1 Implementation Class

```
***** IDynamicApprovalGroup.java *****
```

```
public interface IDynamicApprovalGroup {

    /**
     * Get members of this dynamic approval group
     * @param task Property bag containing information required to generate
     * the approver list
     */
}
```

```

    * @return list of IApprovalListMember including sequence, member, member_
      type; null for empty group
    * The primary key list can be obtained from task:
      task/systemAttributes/collectionTarget
    */

    public List getMembers(Task task )
        throws WorkflowException;
}
*****

```

Figure 9–11 shows a code snippet for a sample dynamic approval group class.

Figure 9–11 Code for Dynamic Approval Group Class

```

package oracle.bpel.services.workflow.repos.test;

import java.util.ArrayList;
import java.util.List;
import oracle.bpel.services.workflow.WorkflowException;
import oracle.bpel.services.workflow.task.IDynamicApprovalGroup;
import oracle.bpel.services.workflow.runtimeconfig.impl.RuntimeConfigUtil;
import oracle.bpel.services.workflow.runtimeconfig.model.ApprovalGroupMember;
import oracle.bpel.services.workflow.task.model.Task;
import oracle.bpel.services.workflow.IWorkflowConstants;

public class SampleDynAprGrp1 implements IDynamicApprovalGroup {
    public List getMembers(Task task)
        throws WorkflowException
    {
        // Add logic later to do conditional return of different group members
        // based on some task attribute
        List approversList=new ArrayList();
        ApprovalGroupMember taskAssignee1 = RuntimeConfigUtil.getFactory().createApprovalGroupMember();
        taskAssignee1.setMember("jlonson");
        taskAssignee1.setType(IWorkflowConstants.IDENTITY_TYPE_USER);
        taskAssignee1.setSequence(1);
        approversList.add(taskAssignee1);
        ApprovalGroupMember taskAssignee2 = RuntimeConfigUtil.getFactory().createApprovalGroupMember();
        taskAssignee2.setMember("wfaulk");
        taskAssignee2.setType(IWorkflowConstants.IDENTITY_TYPE_USER);
        taskAssignee2.setSequence(2);
        approversList.add(taskAssignee2);
        ApprovalGroupMember taskAssignee3 = RuntimeConfigUtil.getFactory().createApprovalGroupMember();
        taskAssignee3.setMember("jstein");
        taskAssignee3.setType(IWorkflowConstants.IDENTITY_TYPE_USER);
        taskAssignee3.setSequence(3);
        approversList.add(taskAssignee3);
        ApprovalGroupMember taskAssignee4 = RuntimeConfigUtil.getFactory().createApprovalGroupMember();
        taskAssignee4.setMember("achrist");
        taskAssignee4.setType(IWorkflowConstants.IDENTITY_TYPE_USER);
        taskAssignee4.setSequence(4);
        approversList.add(taskAssignee4);
        return approversList;
    }
}

```

9.2.2.9.2 How to Register the Custom Dynamic Approval Group Class For more information, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*

9.2.2.9.3 How to Make the Custom Dynamic Approval Group Class Available To make the class file available in a globally well-known directory that is part of the Service Integration class path, put your class files in the following WebLogic Server directory:

\$BEAHOME/AS11gR1SOA/soa/modules/oracle.soa.ext_11.1.1/classes

For example, for the Java class *oracle.apps.DynamicAG*, the path would be

\$BEAHOME/AS11gR1SOA/soa/modules/oracle.soa.ext_

11.1.1/classes/oracle/apps/DynamicAG.class. You **must** restart WebLogic Server after you put your class files there.

9.2.2.9.4 How to Add a Dynamic Approval Group The following procedure explains how to add a dynamic approval group.

1. In the left pane, click the **Add (+)** button and select **Create Dynamic** from the list
2. Enter a name and a class for the group.
3. Click **Apply** to save the group.

9.2.2.10 How to Delete an Approval Group

To delete an approval group: 1. In the Approval Group page, choose the approval group you want to delete.

2. Click the **Delete (-)** button.
A confirmation dialog box appears.
3. Click **OK**.

The approval group is deleted.

Note: If the approval group you deleted is nested in other approval groups, it also is deleted from those parent groups.

9.2.3 Using Task Configuration in Process Workspace

Task Configuration in Process Workspace lets business users and administrators review the rules that were configured automatically by the workflow designer. These predefined rules can be changed for a specific customer based on the customer's applicable corporate policies.

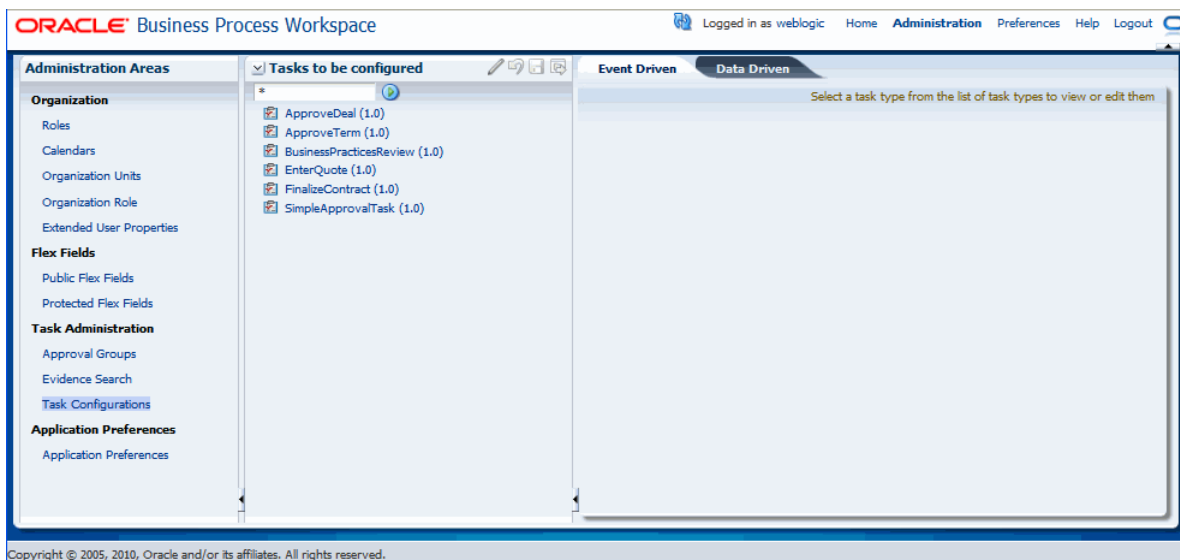
For example, if a corporate policy requiring two levels of approvals for expense amounts greater than 1000 is changed to a policy requiring three levels, the customer can use this web-based application to change the rule rather than having its IT department modify the rule in the underlying process and then deploy it again. Any change made to the rule will be applied starting with the next instance; instances that are already in progress will use the current rule definitions.

Task Configuration enables you to edit the event driven and data-driven rules associated with an approval flow at run time; that is, when the workflow has already been deployed.

To access the **Task Configuration** page:

1. From the Process Workspace toolbar, click **Administration**. The Administration Panel appears in the left pane.
2. In the Administration Panel, under Task Administration, click **Task Configuration**. The Task Configuration page appears in the right pane, as illustrated in [Figure 9-12](#).

Figure 9–12 Task Configuration: Main Page



The **Tasks to be configured** section in the right pane lists all workflow tasks that have been configured to use approval-flow rules. It also provides a search capability. In the view mode, the right panel displays the default configuration and rules for overriding the approval-flow list builder configuration. The rule configurations are displayed based on the stages defined in the approval flow.

9.2.3.1 How to Edit Event-Driven Settings

This section contains information about event-driven settings (task metadata).

To edit an event-driven setting: 1. From the Process Workspace toolbar, click **Administration**. The Administration Panel appears in the left pane.

2. In the Administration Panel, under Task Administration, click **Task Configuration**. The Task Configuration page appears in the right pane.

3. In the **Tasks to be configured** pane, select a task. The main page refreshes in edit mode.

4. Make your changes and click **Apply** to save them.

Note: An improper or incomplete rules definition in a list-creation rule set can cause runtime errors. Errors can be caused by the following:

- No rule was defined in the rule set.
- None of the conditions defined in the rule was met.

Ensure that rules are properly defined to handle all conditions.

9.2.3.1.1 How to Specify Routing Settings The **Event Driven** page contains a limited set of the routing options available in the Human Task Editor.

Approval aggregation requirements can be any of the following:

- None
- Once per task

- Once per stage

9.2.3.1.2 How to Define Expiration and Escalation Policies Defining expiration and escalation policies in Process Workspace is similar to how it is done in the Human Task Editor. For more information, see the section "How to Escalate, Renew, or End the Task" in the chapter "Designing Human Tasks" in *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

9.2.3.1.3 How to Specify Notification Settings Creating or updating notification settings for a task in Process Workspace is similar to how it is done in the Human Task Editor. For more information, see the section "How to Specify Participant Notification Preferences" in the chapter "Designing Human Tasks" in *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

9.2.3.1.4 How to Allow Task Access Access-rule settings can be set to control the actions a user can perform and is similar to how it can be done in the Human Task Editor. Content and action permissions can be specified based on the logical role of a user, such as creator (initiator), owner, assignee, and reviewers.

For more information, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

9.2.3.2 How to Edit Data-Driven Settings

To edit a data-driven setting (a rule or condition):

1. From the Process Workspace toolbar, click **Administration**. The Administration Panel appears in the left pane.
2. In the Administration Panel, under Task Administration, click **Task Configuration**. The Task Configuration page appears in the right pane.
3. In the Task Configuration page, select the **Data Driven** page.
4. In the **Tasks to be configured** pane, select a task.
The right panel refreshes in edit mode.
5. Do any of the following:
 - Add
 - Update
 - Delete
 - Change assertions (which depend on the type of list builder for which the rule has been configured)
 - Add variables
6. When you have finished making your changes, click **Apply**.
The changes are saved to the rule definitions in the rules dictionary.

For more information about editing tasks see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

9.2.3.2.1 How to Add a Variable

To add a variable:

1. In the Data Driven page, click **Add variable**.
The Add Variable window appears.

2. Enter a name for the variable.
3. Click the down arrow to select a variable type from the list.

The types displayed in the list correspond to those that are available in the rule dictionary (built-in and others that have been registered).

4. Enter a value.
5. Click **OK**.

The variable can now be used to define conditions.

9.2.3.2.2 How to Define Conditions You can set the left and right sides of a condition by selecting operands from condition browsers. Clicking the magnifying glass icon displays the browsers.

The operator for comparing the operands of the condition will change based on the type of operand selected for the left side of the condition.

You also can define more complex conditions using the Expression Builder.

For more information, see the section "Creating ADF Data Binding EL Expressions" in *Oracle Fusion Middleware Fusion Developer's Guide for Oracle Application Development Framework*. See also the section "Creating EL Expressions" in *Oracle Fusion Middleware Web User Interface Developer's Guide for Oracle Application Development Framework*.

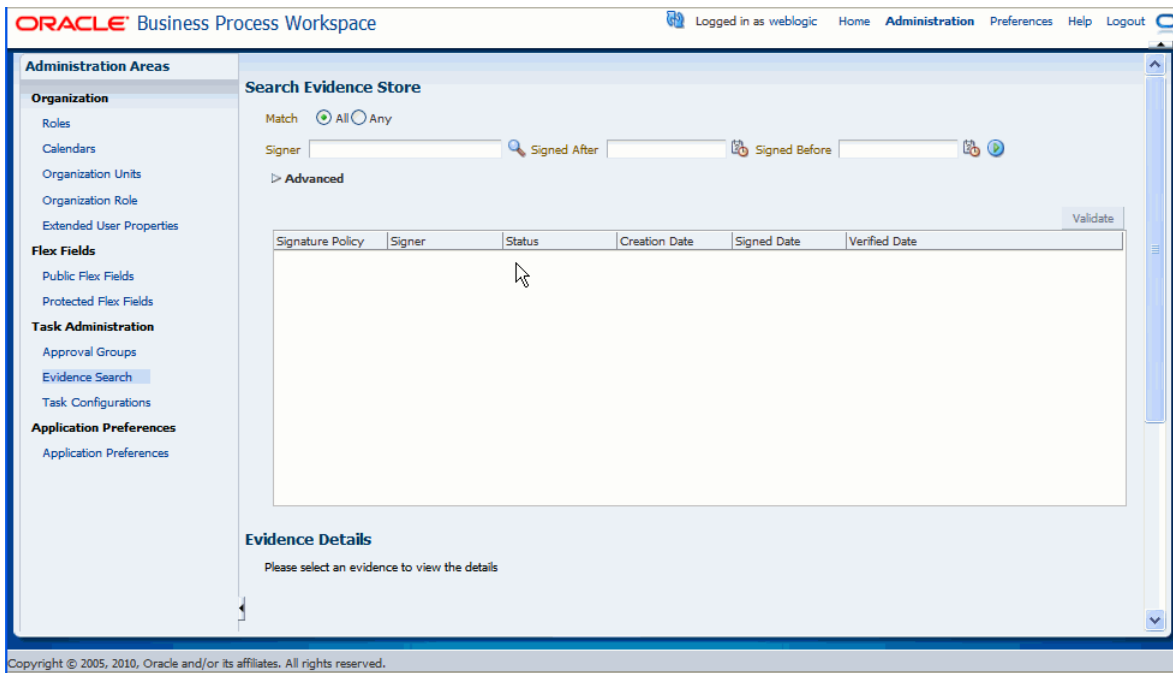
9.2.3.2.3 How to Define Assertions You can specify an assertion by selecting the appropriate rule function from the list.

9.2.4 Using Evidence Search in Process Workspace

The evidence store service is used for digital signature storage and nonrepudiation of digitally signed human tasks.

To search the evidence store:

1. In the Process Workspace toolbar in the upper right corner, click **Administration**. The Administration Areas panel appears in the left pane.
2. In the Administration Areas panel, under Task Administration, select **Evidence Search**. The Evidence Search page appears in the right pane, as shown in [Figure 9-13](#).

Figure 9–13 Searching the Evidence Store

3. Fill in the search fields, then click **Search Evidence Store**.

For information about the evidence store for digital signatures, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

9.2.5 Managing Exceptions in Process Workspace

Under certain circumstances—for example, an employee who has left the company being assigned to a task—an exception can occur. When an exception occurs, the task gets put into an alerted state. The task then gets assigned to the error assignee or, if one is not specified, to the administrator.

For information about configuring the error assignee, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

There are other scenarios in which an exception can happen.

9.3 Using the User Metadata Migration Utility

The user metadata migration utility, `hwfMigrator`, is a tool that automates the process of migrating workflow user-configurable data from one Service Integration server to another by executing a shell script. The tool also includes a property file that contains key-value pairs and all the input parameters required to perform the migration operation. You customize the property file and then perform the migration by executing the shell script.

For information about using the User Metadata Migration Utility, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

For information about moving Oracle BPM from a test site to a production site, see *Oracle Application Server Administrator's Guide*.

Managing Your Organization in Process Workspace (for Administrators)

This chapter describes how administrators of Oracle Business Process Management Suite can model an organization by defining organizational units, business calendars, business holidays, roles, and other user properties.

This section contains these topics:

- [Section 10.1, "Understanding Deployment of Organization Entities in Process Workspace"](#)
- [Section 10.2, "Managing Holiday Rules in Process Workspace"](#)
- [Section 10.3, "Managing Calendar Rules in Process Workspace"](#)
- [Section 10.4, "Managing Other Users' or Groups' Rules \(as an Administrator\) in Process Workspace"](#)
- [Section 10.5, "Managing Roles in Process Workspace"](#)
- [Section 10.6, "Managing Parametric Roles in Process Workspace"](#)
- [Section 10.7, "Managing Extended User Properties in Process Workspace"](#)
- [Section 10.8, "Managing Organizational Units in Process Workspace"](#)

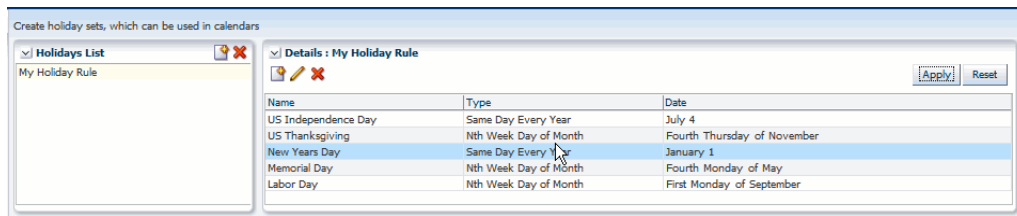
10.1 Understanding Deployment of Organization Entities in Process Workspace

For information about organizational units, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

When a process is deployed, the various organization entities—for example, the organizational unit, calendar, and so on—are created. Those entities can then be modified only through Process Workspace. Later, when the process is redeployed, data in Oracle BPM Studio does not overwrite any changes made during run time.

10.2 Managing Holiday Rules in Process Workspace

Figure 10–1 *Holiday Rules*



Business holidays are collections of holidays that can be applied to calendar rules. Then, when computing the duration of a process, the calendar takes into account the specified holidays.

You can create as many holiday rules as needed for different calendar rules. For example, if you apply holiday rules for India, the United States, and China to a given calendar, then those various national holidays are taken into account when the duration of a process is computed.

When you create a business holiday rule, you specify the holiday name, date, and holiday type. [Table 10–1](#) lists and describes the holiday types.

Table 10–1 *Holiday Types*

Holiday Type	Description
Same Day Every Year	On the same day each year
Current Year	In the current year only
Nth Week Day of Month	In a specified week, on a specified day, in a specified month each year—for example, in the United States, Thanksgiving Day is celebrated each year on the fourth Thursday of November
Nth Day of Reference Holiday	On a day in relation to another specified holiday—for example, on the day after Thanksgiving Day
Closest week day	The closest day to a given date—for example, in the United States, the Independence Day holiday may be celebrated on the weekday closest to the Fourth of July.

To create a holiday rule:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Calendars**. The Calendars page appears.
3. In the Holidays List section, click **Add a Holidays List**. The Add a Holidays List dialog prompts you for the name of the new holiday list.
4. Enter the name of the new holidays list and click **OK**. The new holidays list appears in the holidays list.
5. Select the new holidays list. The details for the new list appear in the right pane.
6. In the holiday details section, click **Add a Holiday**. A row appears for you to specify the attributes of the new holiday.
7. Specify the name of the holiday, and the day on which the holiday occurs each year. Options for specifying holiday occurrence are described in [Table 10–1](#).

- Click **Apply**. The new holiday rule is configured according to your specifications.

To edit a holiday rule:

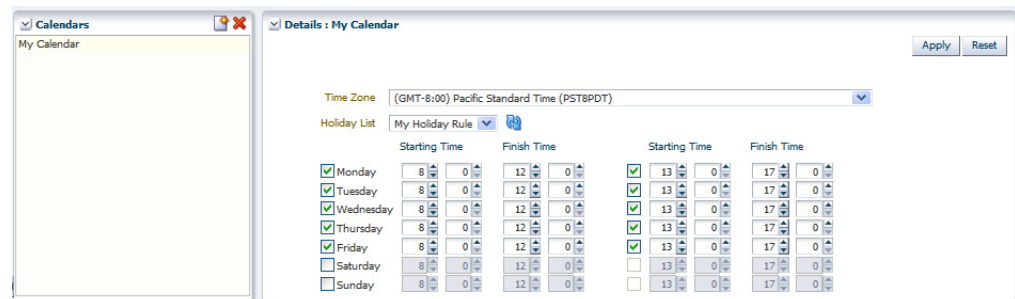
- From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
- In the Organization panel, click **Calendars**. The Calendars panel appears in the right pane.
- In the Holidays List section, select the holiday rule you want to edit. The details page for the rule appears in the right pane.
- Change the settings, and click **Apply**. The holiday rule is now modified according to your specifications.

To delete a holiday rule:

- From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
- In the Organization panel, click **Calendars**. The Calendars panel appears in the right pane.
- In the Holidays List section, select the holiday rule you want to delete. The details for the rule appears in the right pane.
- Click **Delete Holiday Rule**. The holiday rule is now deleted.

10.3 Managing Calendar Rules in Process Workspace

Figure 10–2 Calendar Rules



A business calendar defines a work pattern for each day and a work week structure for each week. In addition, a calendar also defines non-working days by using business holiday rules—that is, the business calendar and holiday rule together define the work period.

When you create a business calendar, you define the following:

- Calendar name
- Time zone
- Working days in week
- Start time and end time for each day
- Optional holiday rule

You can create as many calendars as necessary.

You can specify a business calendar for a role and organizational unit association. For example, you can specify that the InsuranceAgents role in the US-California organizational unit follows the US-California business calendar.

To create a calendar rule:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Calendars**. The Calendars page appears in the right pane.
3. In the Calendars section, click **Add a Calendar Rule**. The Add a Calendar Rule dialog prompts you for the name of the new calendar rule.
4. Enter the name of the new calendar rule, and click **OK**. The new calendar rule appears in the Calendars list.
5. Select the new calendar rule. The details for the new rule appears in the right pane.
6. Specify the following:
 - The time zone
 - The holiday rule, if any, that applies
 - The appropriate starting and finishing times
7. Click **Apply**. The new calendar rule is now configured according to your specifications.

To edit a calendar rule:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Calendars**. The Calendars page appears in the right pane.
3. Select the calendar rule you want to edit. The details page for the new rule appears in the right pane.
4. Change the settings, and click **Apply**. The calendar rule is now modified according to your specifications.

To associate a calendar rule with a role and an organization unit:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Roles**. The Roles panel displays a list of the roles you are authorized to administer.
3. In the Details panel, in the Calendars section, click **Associate a new calendar rule to an organization unit for the application role**. Calendar and Organization Unit lists appear in the Calendar section.
4. Using Calendar and Organization Unit lists, specify the calendar and organization unit to which you want to associate this role.
5. Click **Apply**.

To associate a calendar with an organization unit:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. Under Organization, click **Organizational Units**. The Organizational Units panel appears.
3. Select the organizational unit with which you want to associate a calendar rule. The details for that organizational unit appear in the right pane.
4. In the Details panel, from the Calendars list, select the calendar to associate with this organizational unit.
5. Click **Apply**.

To delete a calendar rule:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Calendars**. The Calendars panel appears in the right pane.
3. In the Calendars section, select the calendar rule you want to delete. The details for the rule appears in the right pane.
4. Click **Delete Calendar**. The calendar is now deleted.

10.4 Managing Other Users' or Groups' Rules (as an Administrator) in Process Workspace

Administrators can make changes to rules. This can be useful for correcting a problem with a rule. For example, for a user who no longer works for the company, you can set up a rule automatically assigning that user's tasks to another user or group.

To create a rule for another user or group:

1. From the Process Workspace toolbar, click **Configuration**.
From the Configuration panel, in the Rules section, click **Rules**.
2. Click the **Other Rules** tab.
3. Search for the user or group for whom rules are to be created, as shown in [Figure 10-3](#).

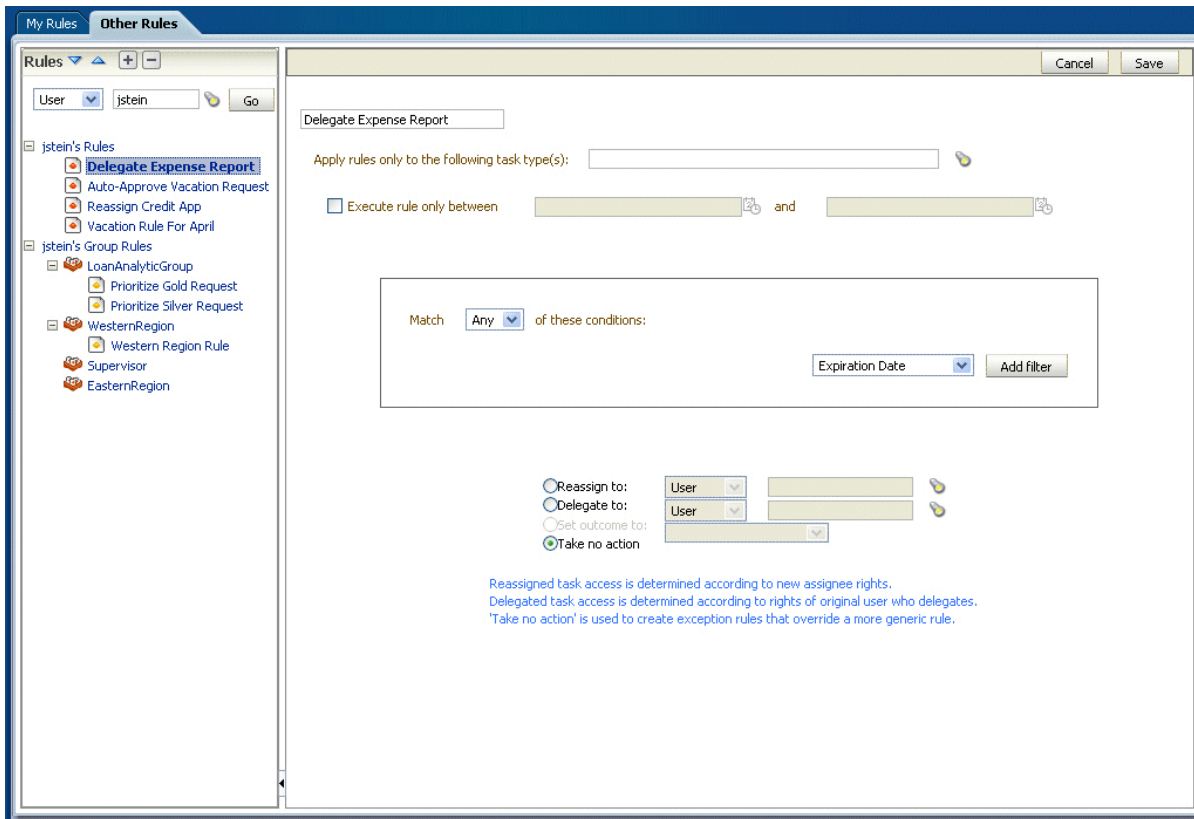
Figure 10-3 *Creating Rules for Another User or Group*



4. Click a user rules node, or click a group name (for a group rule).
5. Click the **Add** icon to create a rule.

6. Provide rule information, as shown in [Figure 10–4](#), and click **Save**.

Figure 10–4 Defining Rules for Another User or Group



10.5 Managing Roles in Process Workspace

Roles are created as application roles under the application OracleBPMProcessRolesApp. There are two types:

- Swimlane roles: Each swimlane role in a BPM process is created during design time in Oracle BPM Studio. It is then mapped to an application role that is created during deployment. This mapping cannot be changed after deployment.

Members for these application roles can be defined and updated before deployment by using Oracle BPM Studio or after deployment by using Process Workspace.

In this release, swimlanes define the default task assignee and how to initiate a process if the initiator task pattern is used. During runtime, only members of those roles can perform actions such as viewing and acting on tasks and initiating processes.

- Application roles: These represent any roles in the organization, and they can be created in addition to the swimlane roles defined during design time. An application role can be used as a task assignee or as a grantee of another application role. They can be created by using either Oracle BPM Studio or Process Workspace.

When you create a role, you define both the role name and the grantees of the role. The grantees can be users, groups, or other application roles.

10.5.1 How to Add New Application Roles

To add a new application role:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Roles**. The Roles panel displays a list of the roles you are authorized to administer.
3. In the upper-right corner of the Roles panel, click **Add a new application role**. The Add Role dialog box appears.
4. Specify a name, and, optionally, a description for the new role. Click **OK**. The new role is now listed in the Roles panel.
5. To grant this role to users, groups or application roles, follow the steps in [Section 10.5.3, "How to Grant and Revoke Roles"](#).
6. To associate a calendar and its corresponding organizational unit with this new role, in the Calendar section:
 - a. Select **Associate a new calendar rule to an organization unit for the application role**.
 - b. From the Calendar list, select the calendar you want to associate with this new role.
 - c. From the Organization Unit list, select the unit that you want to associate with the calendar you just specified.

Note: When a calendar is associated with an organization unit for a role, this calendar overrides the calendar associated with the calendar page when the particular role is used.

10.5.2 How to Specify the Escalation Path for a Role

An administrator can specify the path an escalated task is to follow.

For more information about the escalation path, see [Section 8.8, "Handling Escalations in Process Workspace"](#).

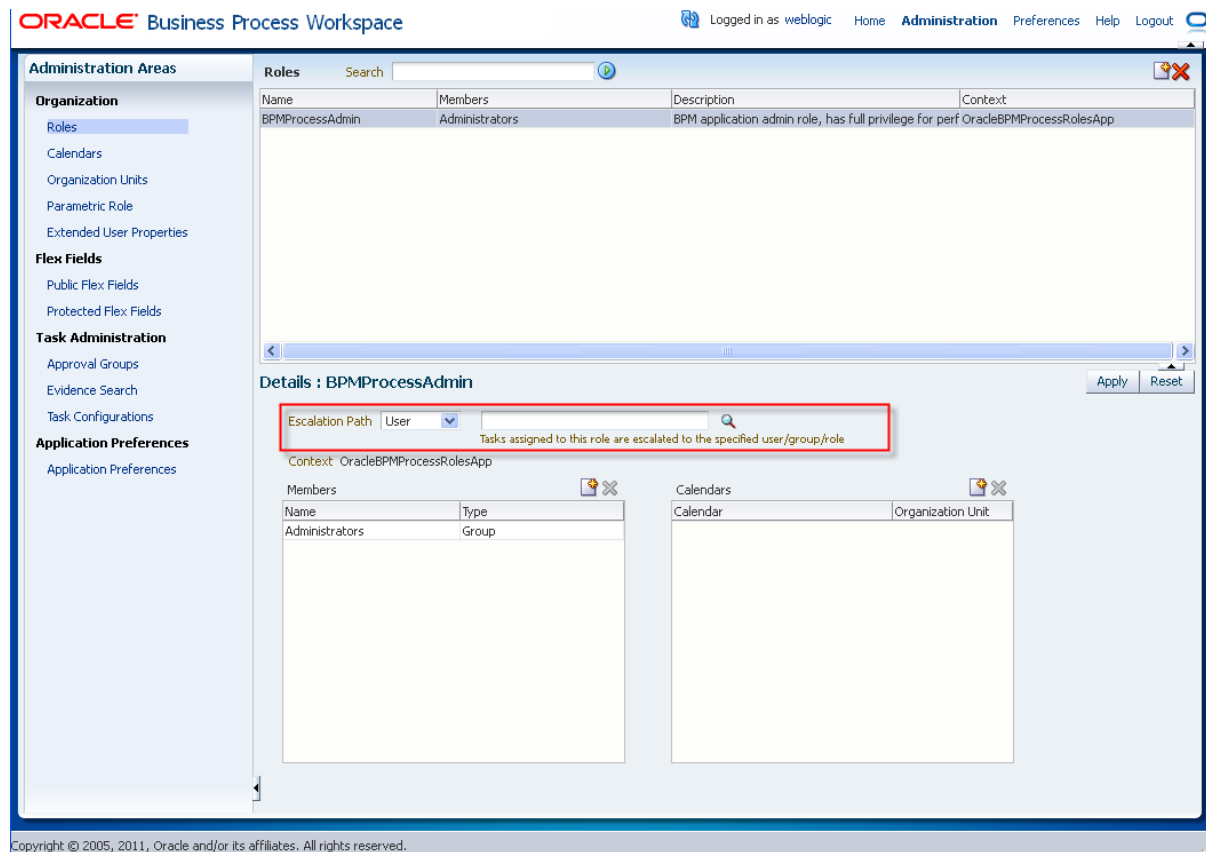
To specify an escalation path:

1. From the toolbar at the top of the Process Workspace, click **Administration**. The Administration Areas page appears. In the navigation pane, **Roles** is highlighted, and the corresponding information appears in the right pane.
2. If you want to set the escalation path for an existing role, select that role from the list. The corresponding information appears in the lower half of the right pane.

If you are creating a new role, click **Add a new role** and follow the instructions in [Section 10.5.1, "How to Add New Application Roles"](#) on page 10-7. The new role appears in the list, and its corresponding information appears in the lower half of the right pane.

[Figure 10-5](#) shows the Roles window with the **Escalation Path** fields highlighted.

Figure 10–5 Setting the Escalation Path



3. From the list, select either User, Group, or Role. You may also enter or browse for a specific name.
4. When you have specified the escalation path, click **Apply**.

10.5.3 How to Grant and Revoke Roles

You can grant roles to, and revoke them from, users, groups, or application roles

To grant a role to a user, group, or application role:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Roles**. The Roles panel displays a list of the roles you are authorized to administer.
3. Select a role. The Details panel displays the details for the selected role.
4. In the Members section, click **Grant the role to user, group, or role**.
5. Specify the parameters of your search, click **Search**, then select the user, group, or application role to whom you want to grant this role. The Details section for your selection appears.
6. Click **OK**. The user or group you specified now appears in the Members box.

To revoke a role from a user, group, or application role:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Roles**. The Roles panel displays a list of the roles you are authorized to administer.
3. Select a role. The Details panel displays the details for the selected role.
4. In the Members section, click **Revoke the role from user, group, or role**.
5. Click **OK**. The user or group you specified no longer appears in the Members box.

Note: If, during design time, you update a process by removing a member from a role and then re-deploy the process, the member you removed is still listed as a member of that role. This is because permission to remove members from roles is limited to administrators during runtime.

10.5.4 How to Create and Manage Role-Specific Views and Layouts

For information about creating a role-specific layout, see [Section 6.1, "Creating Custom Pages in Process Workspace"](#)

10.6 Managing Parametric Roles in Process Workspace

Parametric roles are logical roles created by the administrator. Members of parametric roles are dynamically evaluated at runtime by specifying them as a parametrized query.

Parametric roles can be based only on process roles that are created by process deployment or created by using the Administration panel in Process Workspace. More specifically, they can be based on any role defined in the application context OracleBPMPProcessRolesApp that is already seeded and displayed in the Roles section of the Administration panel.

Parametric roles define either members of an organizational unit or the assignees of a task.

10.6.1 Parametric Roles Used for Querying Members of an Organization Unit

These parametric roles are groups of users specified by using a query—for example, all grantees of role InsuranceAgent with expertise in HomeInsurance where expertise is an extended user property.

The query can contain one or more of the following parts:

- Group membership
- Role membership
- Extended user properties from which users select from a list of pre-defined values

For information about extended user properties, see [Section 10.7, "Managing Extended User Properties in Process Workspace"](#).

Note: Deleting an extended user property already in use by an parametric role causes an error when administering that role.

10.6.2 Parametric Roles Used in Assigning Tasks

Parametric roles have one or more defined parameters that specify the type of person to whom a task can be assigned—for example, a task can be assigned as a parallel task to all users belonging to the Western region and whose skillsets include JAVA. The assignees that are returned by the dynamic parametric role can be used for any type of list builder—for example, sequential, parallel, or management chain.

The parameter values are defined at design time either as plain values or XPath expressions.

10.6.3 How to Create a Parametric Role

To create a parametric role:

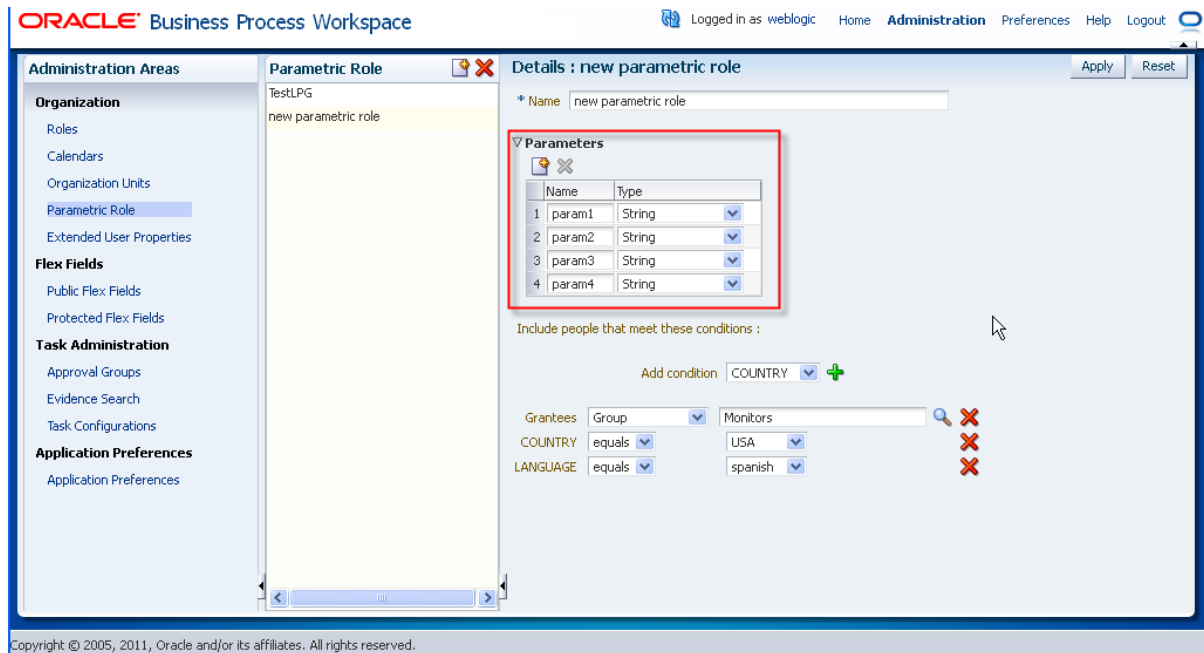
1. From the Process Workspace toolbar, click **Administration**. The Administration Areas panel appears in the left pane.
2. Select **Parametric Role**. The Parametric Role panel appears in the right pane.
3. In the Parametric Role panel, click **Create Parametric Role**. This opens an editable Details panel.
4. Enter a name for this parametric role.
5. If you do not want this parametric role to be attached to a task assignee, then skip to Step 6.

If you want this parametric role to be attached to a task assignee, then you must define the parameters to specify the assignee.

To define parameters for a parametric role used in assigning a task:

- a. Expand **Parameters** and click **Add Parameter**. A table prompts you for the name and type of the parameter as in the example in [Figure 10-6](#).

Figure 10–6 Defining Parameters



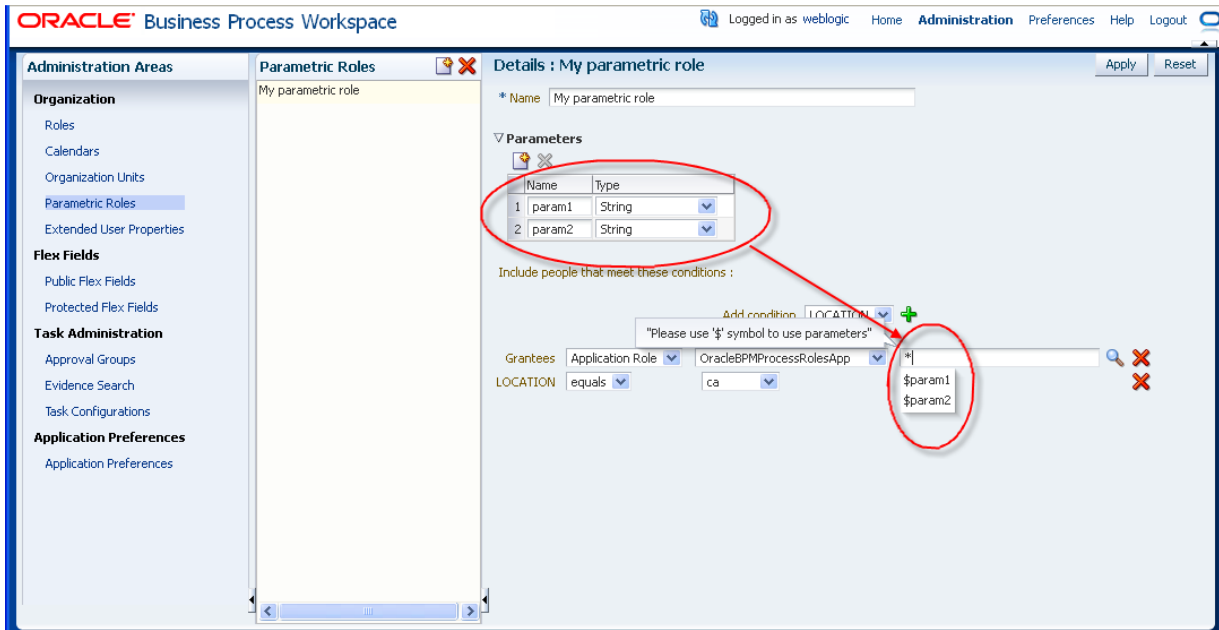
- b. Define the parameter by specifying the name and type. To add another parameter, click **Add Parameter** again and repeat.

Note: You are not required to use any or all of the parameters that you define.

Once a parameter is defined, the role is treated as a parametric role regardless of whether the defined parameters are used in a query.

6. To specify the users you want to associate with this role, you first configure the conditions for their inclusion. To do this, select a condition from the list. The listed conditions include:
- The application role or group to which the users must belong.
 - The extended user properties the users must match. You specified the extended user properties in [Section 10.7, "Managing Extended User Properties in Process Workspace"](#)
 - Any parameters you may have defined for a parametric role used in assigning a task. When you begin entering a value, the list of defined parameters appears next to the field as in the example in [Figure 10–7](#).

Figure 10–7 Selecting Defined Parameters as Conditions of Users with Parametric Roles



If you want to use a defined parameter as a condition, select from the list or enter the name of the parameter preceded by a dollar sign (\$).

Once you have selected one or more conditions, click **Add Criteria Row**. The condition you specified appears in the list of users you want to include. You can then specify the filter for that condition.

7. From the Grantees list, select either **Groups** or **Application Roles**.

If you select **Groups** specify the name of the group in either of the following ways:

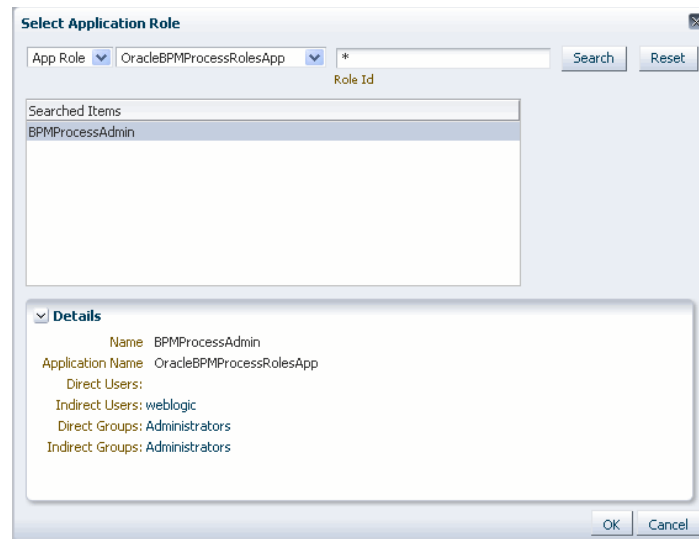
- Enter the name of the group in the text field
- Click **Select Group** to begin a search. If you do the latter, then the Select Group dialog box appears. Specify your search, or use an asterisk (*) as a wildcard, then click **OK**.

The group you specified is listed as the grantee of this parametric role.

If you select **Application Role**:

- a. From the **Application Role** list, select OracleBPMProcessRolesApp.
- b. If you know the role identifier of the grantee, then enter it in the **Role Id** field.

If you *do not* know the role identifier of the grantee, then you can click **Select Application Role** to perform a search. The Select Application dialog box appears as shown in [Figure 10–8](#).

Figure 10–8 Selecting an Application Role

In the **RoleID** field, enter an asterisk (*) and click **Search**. The search results appear in the Searched Items box.

When you select each item in the Searched Items box, more detailed information appears in the Details box.

- c. Select the application role and click **OK**. The role you specified is listed as the grantee of this parametric role.
8. Click **Apply**.

10.6.4 How to Modify a Parametric Role

To modify a parametric role:

1. From the Process Workspace toolbar, click **Administration**. The Administration Areas panel appears in the left pane.
2. Select **Parametric Role**. The Parametric Role panel appears in the right pane.
3. From the Parametric Role panel, select the role you want to modify. The Details panel for that role appears to the right.
4. Enter the new values for the role just as you did when you created the role. See "[To create a parametric role:](#)" on page 10-10.
5. Click **Apply**.

10.6.5 How to Delete a Parametric Role

To delete a parametric role:

1. From the Process Workspace toolbar, click **Administration**. The Administration Areas panel appears in the left pane.
2. Select **Parametric Role**. The Parametric Role panel appears in the right pane.
3. From the Parametric Role panel, select the role you want to delete. The Details panel for that role appears to the right.
4. Click **Delete Parametric Role** and, when prompted, confirm the deletion.

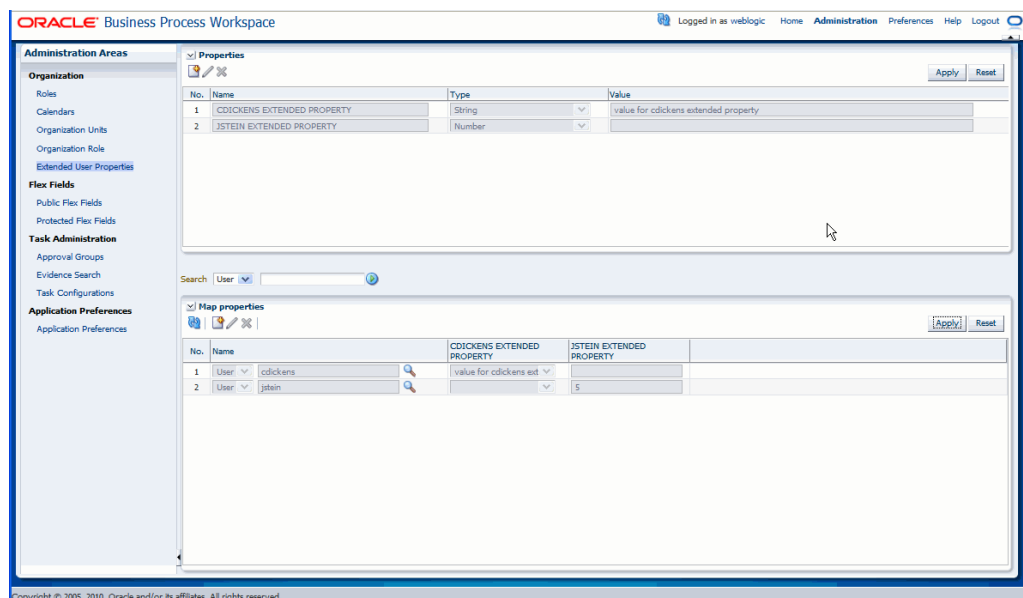
10.7 Managing Extended User Properties in Process Workspace

Extended user properties are used in defining parametric roles, which are described in [Section 10.6, "Managing Parametric Roles in Process Workspace."](#)

Typically, users have some properties specified in Oracle Internet Directory or some other LDAP directory. Often, however, additional properties specific to their organization and roles are necessary. At times, these properties are added on demand when newer business processes are created. At that time, it might not be possible to extend the company's global LDAP directory. In these cases, extended user properties are useful. For example, you can specify that a given user with the sales representative role is located in California. Although, from a functional point of view, there is only one role, the individual user is associated with a property, and that property has a value assigned for that user.

[Figure 10–9](#) shows the Extended User Properties page.

Figure 10–9 Extended User Properties



Extended user properties can be assigned to users, groups, or roles.

When you create extended user properties, you define the following:

- Property name
- Property type, which can be of the following data types: string, number, date and free form text. String data types are enumerated values. Free form strings can have any value.
- Enumeration in case of a string data type. Note that only string-typed properties can be assigned values at the time of definition and only those values can be assigned to users when the property is associated with a user.

After properties are defined, they can be associated with any user. During association, values must be assigned to the property for that user

Only users who have Administrator privileges can define new properties.

To add extended user properties:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Extended User Properties**. The Extended User Properties page appears in the right pane.
3. In the **Properties** pane, click **Add Property**. Property fields appear in the table.

An Extended User Property has the following fields:

- **Name**—The name can be any user defined string that is meaningful to the user or the company. Case does not matter. The system will convert all names to uppercase.
- **Type**—The type field is a drop-down list from which the user must select the data type of the values that the property is expected to hold when it is associated with various users in the organization.
- **Value**—The value field is meaningful only when the property is assigned the data type string because only string typed properties can be assigned enumerations of values. This value can be a comma-delimited list.

For all other data types (number, date, and freeform text) no values can be assigned to the property.

For number, date, and freeform text-typed properties, a value is assigned to the property only when the property is associated to a user and the value assigned can be different for each user.

4. After you specify the property, click **Apply**. A column for this property appears in the Map Properties pane.

To modify extended user properties:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Extended User Properties**. The Extended User Properties page appears in the right pane.
3. In the **Properties** pane, select the property you want to edit, then click **Edit Property**. The row for that property becomes editable.
4. Enter your changes, then click **Apply**.

To delete extended user properties:

Note: Deleting an extended user property already in use by an parametric role causes an error when administering that role.

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. In the Organization panel, click **Extended User Properties**. The Extended User Properties page appears in the right pane.
3. In the Properties pane, select the property you want to delete, then click **Delete Property**. A Confirm Delete dialog box advises you that deleting a property will dissociate this property from and associated user, if any. If you are sure you want to proceed, click **Yes**.

4. In the Properties pane, click **Apply**.

To associate extended user properties to users:

1. To specify the user with whom this property is to be associated, in the Map Properties pane, click **Add User**. The User field appears.
2. Specify the user. You can do this either by entering the user identifier in the field or by clicking **Select User**, and, in the Identity Browser window that appears, performing a search for the user and clicking **OK**.
3. If the property is a string type, then, in the Map Properties pane, from the column for the property, select the property to assign to this user. If the property is a number, enter the appropriate value in the text field.

Note: The **All** check box means that you wish to assign all the values defined on the string property to a particular user. It does not mean that you are assigning all the properties defined in the system to the user. The purpose of the **All** check box must be understood in the context that a user can be assigned multiple values for a string and a freeform text-typed property. For string-typed properties the values that you can assign to a user are enumerated at the time of property definition itself and the **All** checkbox enables you to assign all of them to a user at once. Freeform text-typed properties do not have any values defined on them. To assign multiple values to a freeform text-typed property at the time of associating it to a user, enter the multiple values and separate each value by a comma.

4. After you map the property to the user, in the Map Properties pane, click **Apply**.

10.8 Managing Organizational Units in Process Workspace

An organizational unit represents departments or divisions within an organization. Organizational units can contain child organizational units, creating a hierarchy that corresponds to your organization.

When you create an organizational unit, you define the following:

- Organizational unit name
- Time zone
- Members of the organizational unit, which can include users, groups, application roles, or parametric roles
- Optional parent organizational unit
- Optional business calendar

When a process is associated with an organizational unit, only members of that organizational unit and its children can see that process and the tasks initiated by it.

Note: A manager is not a member of an organizational unit by default. The manager must be added to the organizational unit in order to see the processes and the tasks within it.

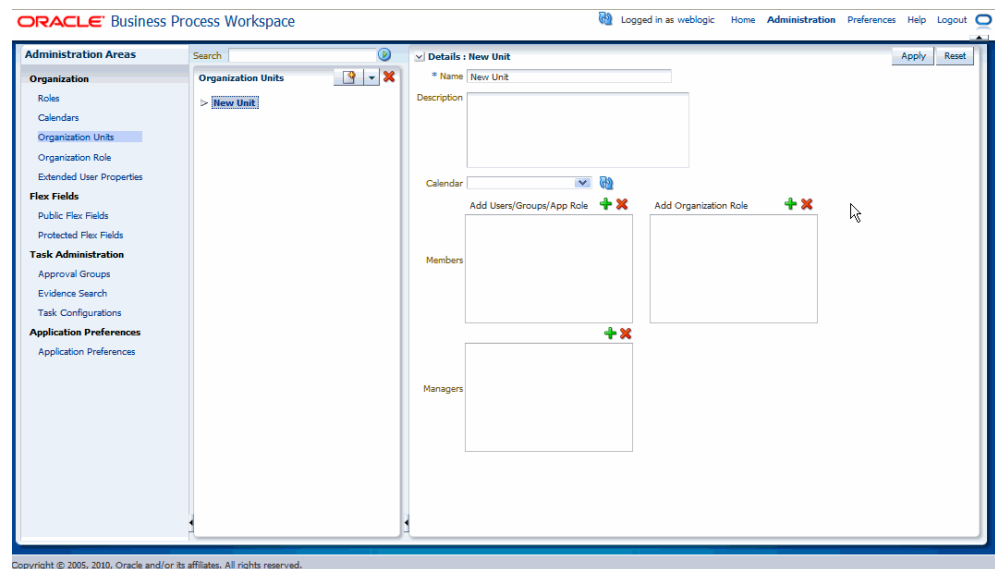
If a process is associated with an organizational unit, then the tasks initiated by the process can use the business calendar associated with the organizational unit. Please

see [Section 10.3, "Managing Calendar Rules in Process Workspace"](#) for more information.

To create an organizational unit:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. Under Organization, click **Organizational Units**. The Organizational Units panel appears.
3. From the **Add Organizational Unit** list, select either **Root Organization Unit** or **Child Organization Unit**. The Create New Org Unit dialog box prompts you for the name of the organizational unit.
4. Enter the name of the organizational unit, and click **OK**. The new organizational unit appears in the Organizational Units list as shown in [Figure 10-10](#).

Figure 10-10 Adding an Organizational Unit



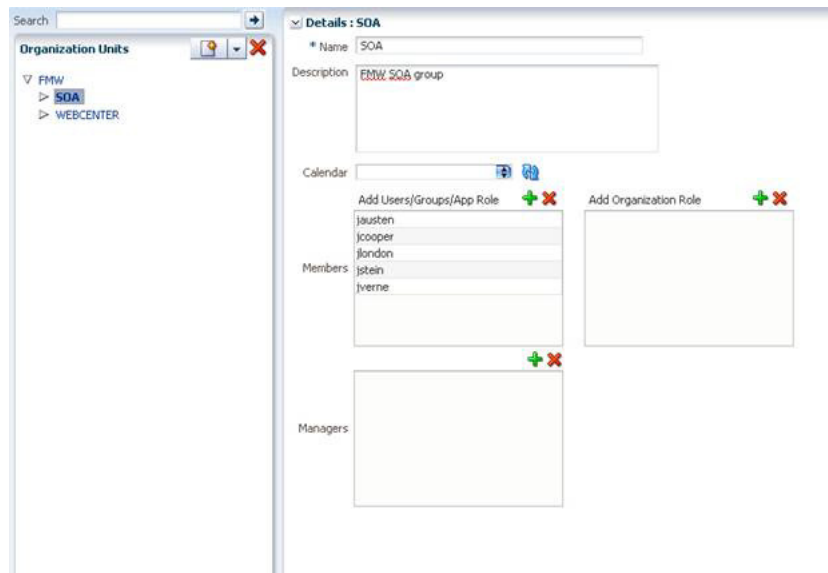
5. In the right pane, in the Details section for the new organizational unit, do the following:
 - a. Optionally provide a description of the newly created organizational unit.
 - b. From the Calendar list, select a calendar rule to associate with this organizational unit.
For information about adding a calendar rule, see [Section 10.3, "Managing Calendar Rules in Process Workspace"](#).
 - c. In the Members window, click **Add new member**. The Select Member dialog box prompts you to search for a user or group to add to this organizational unit.
 - d. Enter the name of the user or group you want to add, then click **Search**. From the Available column, select one or more members you want to add, and use the arrow button to move them to the Selected column. Click **OK**. The members you added appear in the Members window.

- e. Similarly, in the Managers window, select **Add new member**. The Select Manager dialog box prompts you to search for a user or group to add to this organizational unit.
 - f. Enter the name of the manager you want to add, then click **Search**. From the Available column, select one or more managers you want to add, and use the arrow button to move them to the Selected column. Click **OK**. The managers you added appear in the Members window.
6. Click **Apply**.

To edit an organizational unit:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. Under Organization, click **Organizational Units**. The Organizational Units panel appears.
3. In the Organization Units panel, select the organizational unit you want to edit.

Figure 10–11 Organization Units Details Panel



4. In the right pane, in the Details section for the new organizational unit, make the changes you want, then click **Apply**.

To delete an organizational unit:

1. From the Process Workspace toolbar, select **Administration**. The Administration Areas panel appears.
2. Under Organization, click **Organizational Units**. The Organizational Units panel appears.
3. In the Organization Units panel, select the organizational unit you want to delete, and click **Delete Organization Unit**.

Part II

Using Oracle Business Process Management Process Spaces

This part contains the following chapters:

- [Chapter 11, "Getting Started with Process Spaces"](#)
- [Chapter 12, "Using and Customizing a Process Workspace in Process Spaces"](#)
- [Chapter 13, "Using and Customizing a Process Modeling Space in Process Spaces"](#)
- [Chapter 14, "Using and Customizing a Process Instance Space in Process Spaces"](#)
- [Chapter 15, "Creating Custom Dashboards in Process Spaces"](#)
- [Chapter 16, "Performing Administration in Process Spaces"](#)

Getting Started with Process Spaces

This chapter describes Oracle Business Process Management Process Spaces, how to start and log in to it, and how to navigate its interface, including the modeling space and the process instance space.

To help you get started with Process Spaces, this chapter contains these topics:

- [Section 11.1, "Understanding Process Spaces"](#)
- [Section 11.2, "Starting and Logging In to Process Spaces"](#)
- [Section 11.3, "Navigating Process Spaces"](#)

11.1 Understanding Process Spaces

Process Spaces is a workspace built on top of Oracle WebCenter Portal: Spaces. It enables greater collaboration by combining the content from the panels in Process Workspace with an additional workspace in which you can collaborate in the development of process models.

WebCenter Portal provides group spaces that support discrete communities of any size that are organized around an area of interest or a common goal. WebCenter Portal also provides various collaborative services enabling document sharing, discussions, wikis, lists, links, tagging, and real-time collaboration services such as presence and instant messaging.

As a combination of WebCenter Portal and Process Workspace functionalities, Process Spaces provides WebCenter group spaces that are designed specifically for modeling and executing business processes. In addition to these, Process Spaces also uses the collaborative services of WebCenter Portal.

For information about Oracle WebCenter Portal, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

11.1.1 Oracle WebCenter Portal Group Spaces for Business Process Management

Process Spaces provides these WebCenter Portal group spaces specifically for business process management:

- A process workspace—For process participants to collaborate on relevant processes and instances based on their roles. This enables, for example, a group of sales representatives within a given region to share documents and information about various customers, the products they are buying, their requirements and history.
- A process modeling space—For domain analysts to collaborate on various aspects of modeling business processes. This enables, for example, experts from various

departments to jointly develop processes that reflect the needs of their various departments.

- A process instance space—Created on an ad hoc basis for long-running instances, it displays specific instances that require a high level of collaboration over time.

You can customize these group spaces based on functional teams, granting access only to a relevant set of users with the appropriate roles. After you specify these user sets, only the relevant processes are included in the space.

11.2 Starting and Logging In to Process Spaces

To start Process Spaces, you must have installed Oracle SOA Suite and the Service Integration server must be running. See *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite* for more information.

To start and log in to Process Spaces:

1. Go to

`http://host_name:port_number/webcenter/`

The `host_name` is the name of the host computer on which Oracle WebCenter Portal is installed.

The `port_number` is the one used at installation.

2. Enter the user name and password.

You can use the preseeded user to log in as an administrator. If you have loaded the demonstration user community in the identity store, then you can use other users such as `jstein` or `jcooper`.

The user name and password must exist in the user community provided to JAZN.

3. Click **Login**.

11.3 Navigating Process Spaces

Tabs in Process Spaces are customizable depending on your roles—for example, an administrator can add or remove panels in any given page.

This section contains these topics:

- [Section 11.3.1, "About the Process Spaces Process Workspace"](#)
- [Section 11.3.2, "The Modeling Space in Process Spaces"](#)
- [Section 11.3.3, "The Process Instance Space in Process Spaces"](#)

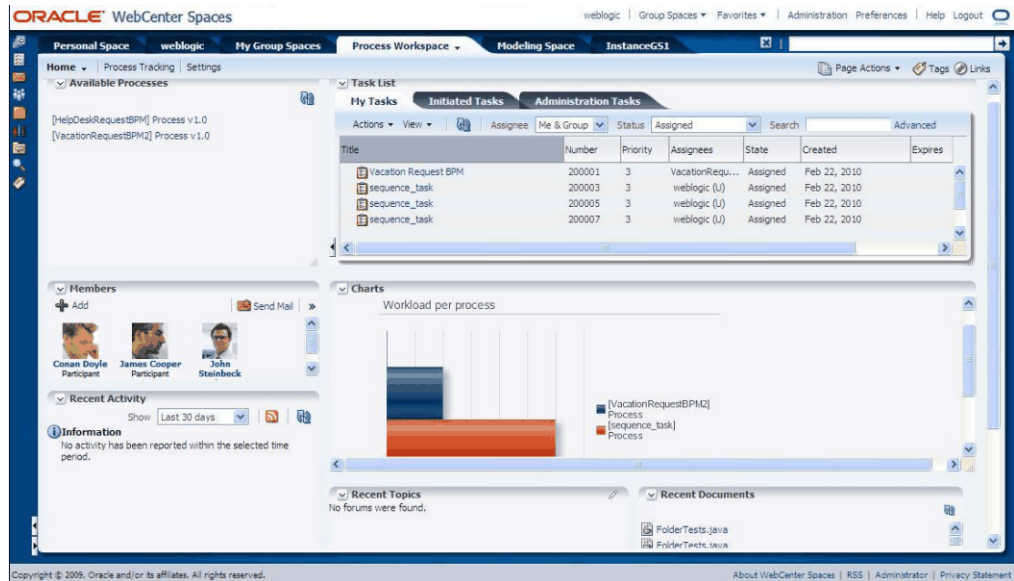
11.3.1 About the Process Spaces Process Workspace

The Process Spaces Process Workspace includes a Home page and a Process Tracking page.

11.3.1.1 The Process Workspace Home Page

After a user logs in, depending on the user's roles and privileges, the Process Spaces Home page displays the user's tasks and related panels, as shown in [Figure 11-1](#).

Figure 11–1 Process Spaces Home Page

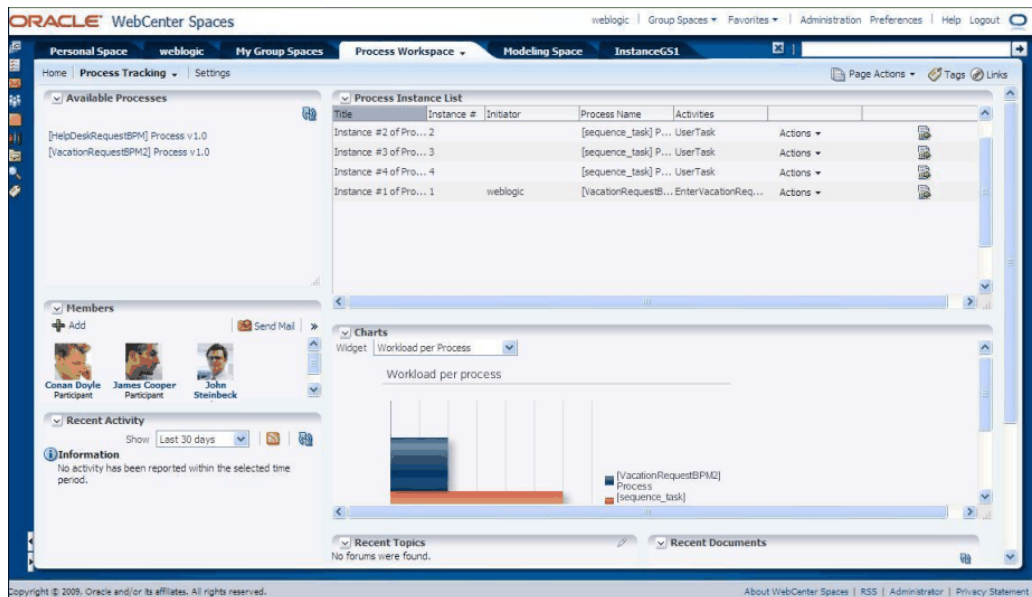


Included in the various panels of the Home page is the Available Processes panel, which displays the processes the user is authorized to execute. The Home page also displays the task inbox and dashboards (charts), and several standard panels of WebCenter Portal.

11.3.1.2 The Process Workspace Process Tracking Page

Selecting the Process Tracking page provides process-related information, as shown in Figure 11–2. Depending on the user's roles and privileges, this page displays the process instance list and various other panels including available processes and dashboards. It also includes a number of standard WebCenter Portal panels.

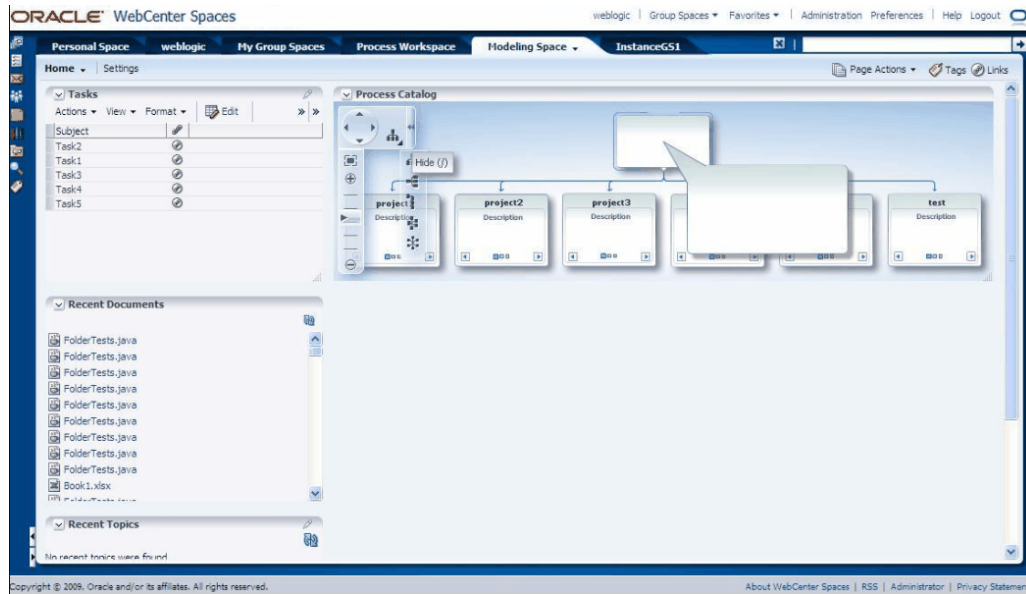
Figure 11–2 Process Spaces Process Tracking Page



11.3.2 The Modeling Space in Process Spaces

The Process Spaces Modeling Space page enables users to collaborate on process definition. In this page users can, for example, comment on potential bottlenecks of a deployed process and discuss improvements. [Figure 11–3](#) shows a Process Spaces Modeling Space page.

Figure 11–3 *Process Spaces Modeling Space Page*



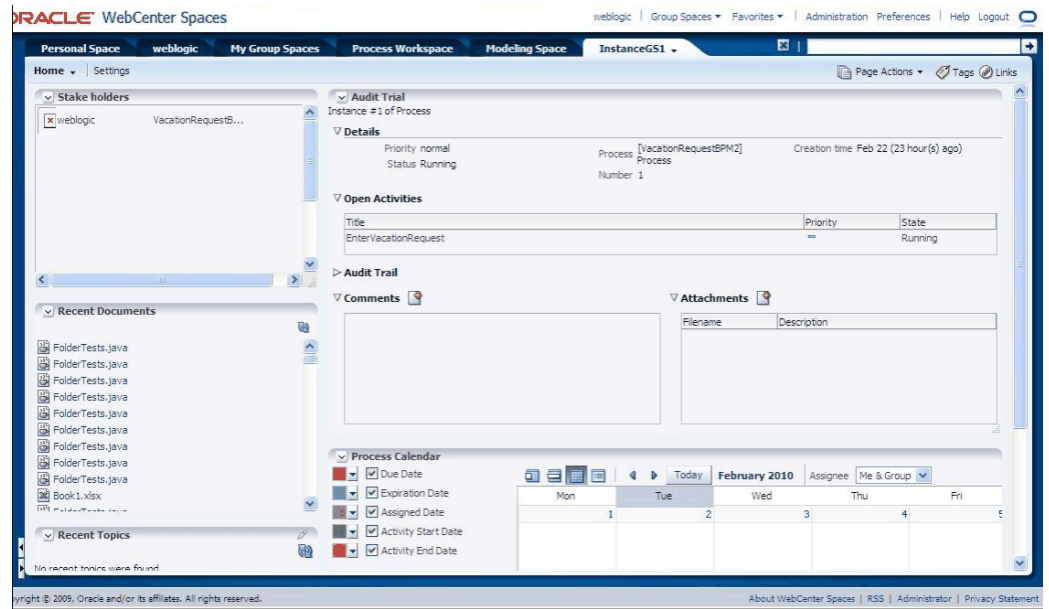
This page includes the Process Catalog, which graphically displays the various processes in the project. Each process is represented by a square. Navigation arrows within a given square enable you to find more information about the process it represents. The page also includes a number of panels that are standard to WebCenter Portal.

11.3.3 The Process Instance Space in Process Spaces

The Process Instance Space allows users to collaborate on a process instance. Usually the process instance space is used for a long-running process instance that involves many ad hoc activities and collaboration.

[Figure 11–4](#) shows a process instance page showing the stakeholders of the process instance, audit trail of the instance, and the process instance calendar.

Figure 11-4 Process Spaces Process Instance Page



Using and Customizing a Process Workspace in Process Spaces

This chapter describes the various activities end users can do with Oracle Business Process Management Process Spaces, including acting on tasks, filtering tasks, adding members, adding documents, participating in discussions, initiating and canceling a process instance, and how to customize Process Spaces.

Because Process Spaces is tightly integrated with both Process Workspace and WebCenter Portal, using and customizing a work space sometimes involves performing tasks that are unique to Process Spaces. At other times, the tasks are performed by using either Process Workspace or WebCenter Portal.

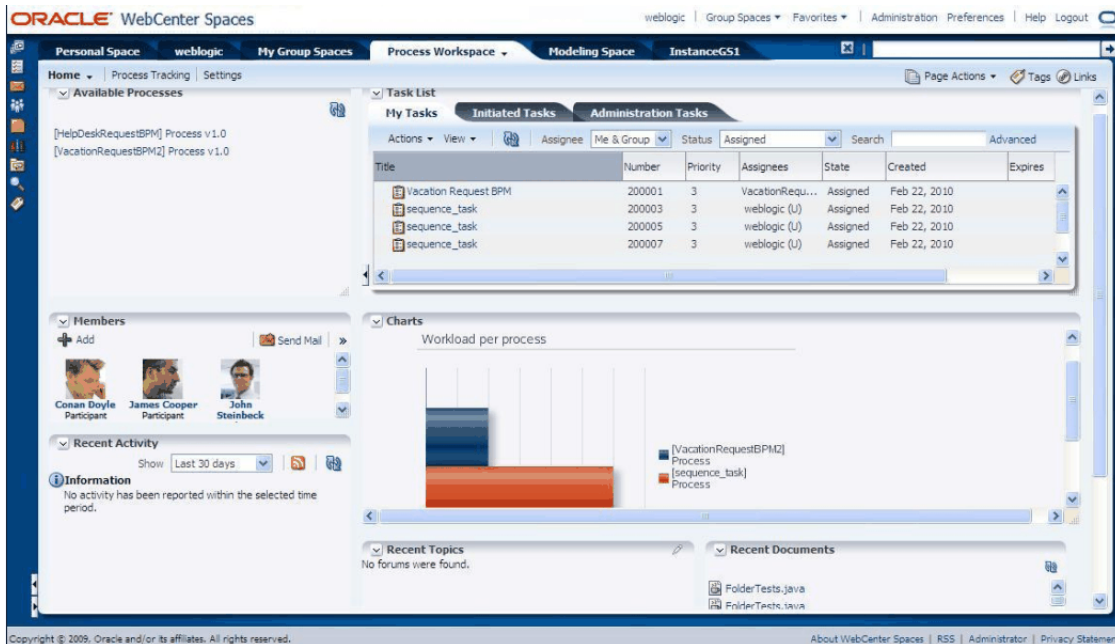
This chapter contains these topics:

- [Section 12.1, "The Process Workspace Home Page in Process Spaces"](#)
- [Section 12.2, "Acting on Tasks in Process Spaces"](#)
- [Section 12.3, "Filtering Tasks in Process Spaces"](#)
- [Section 12.4, "Adding Members to Process Spaces"](#)
- [Section 12.5, "Adding Documents to Process Spaces"](#)
- [Section 12.6, "Participating in Discussions in Process Spaces"](#)
- [Section 12.7, "Viewing Recent Activity in Process Spaces"](#)
- [Section 12.8, "Initiating a Process Instance in Process Spaces"](#)
- [Section 12.9, "Filtering Process Instances in Process Spaces"](#)
- [Section 12.10, "Canceling a Process Instance in Process Spaces"](#)
- [Section 12.11, "Adding Documents to Process Instances in Process Spaces"](#)
- [Section 12.12, "Using and Customizing Dashboards in Process Spaces"](#)
- [Section 12.13, "Creating an On-Demand Group Space for an Instance in Process Spaces"](#)
- [Section 12.14, "Customizing Process Workspace in Process Spaces"](#)
- [Section 12.15, "Subscribing to a Process Workspace Group Space in Process Spaces"](#)

12.1 The Process Workspace Home Page in Process Spaces

[Figure 12-1](#) shows an example of a Process Spaces Home page.

Figure 12–1 Process Spaces Home Page



For more information about the Process Workspace Home page in Process Spaces, see [Section 11.3.1, "About the Process Spaces Process Workspace."](#)

12.2 Acting on Tasks in Process Spaces

In Process Spaces, you act on tasks by using the Process Workspace panel on the Process Spaces Home page.

For instructions on acting on tasks, see [Chapter 3, "Working on Tasks in Process Workspace"](#).

12.3 Filtering Tasks in Process Spaces

In Process Spaces, you filter tasks by using the Process Workspace panel on the Process Spaces Home page.

For instructions about filtering tasks, see [Section 3.2.3, "Searching for Tasks in Process Workspace"](#)

12.4 Adding Members to Process Spaces

For information about how to add members to a group space, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

12.5 Adding Documents to Process Spaces

For instructions about adding documents to Process Workspace, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

12.6 Participating in Discussions in Process Spaces

For instructions about participating in a discussion, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

Note: If you have imported a group space and want to create or select a forum, you must do so manually from the services page of the imported group space.

For information about choosing or creating a forum in a group space imported into Oracle WebCenter Portal, see *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

12.7 Viewing Recent Activity in Process Spaces

For instructions about viewing recent activity, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

12.8 Initiating a Process Instance in Process Spaces

In Process Spaces, you initiate a process instance by using the Process Workspace portlet on the Process Spaces home page.

For instructions about initiating a process instance, see [Section 4.1, "Initiating Process Instances in Process Workspace"](#)

12.9 Filtering Process Instances in Process Spaces

In Process Spaces, you filter process instances by using the Process Workspace portlet on the Process Spaces Home page.

For instructions about filtering process instances, see [Section 4.2, "Searching for Process Instances in Process Workspace"](#).

12.10 Canceling a Process Instance in Process Spaces

In Process Spaces, you cancel process instances by using the Process Workspace portlet on the Process Spaces Home page.

For instructions about canceling a process instance, see [Section 4.5, "Canceling a Process Instance in Process Workspace"](#).

12.11 Adding Documents to Process Instances in Process Spaces

A process instance group space is configured with the document service that Oracle WebCenter Portal offers. The widget added to this group space enables you to add and remove documents within the group space folder.

Note: Note that these documents are different from the ones attached to the process instance itself. The documents added in Process Spaces are generally collaboration documents and have no significance after the process is completed.

For instructions about adding documents to process instances in Process Spaces, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

12.12 Using and Customizing Dashboards in Process Spaces

For instructions about using and customizing dashboards in Process Spaces, see [Chapter 7, "Using Dashboards in Process Workspace"](#).

12.13 Creating an On-Demand Group Space for an Instance in Process Spaces

Process instances that typically run for a long time may require a dedicated collaboration space. To create a dedicated collaboration space, in either the task list or the process instance list, at the end of the row for the process instance, click **Launch Process Instance Space**. A page appears with the new process instance group space. Here, you can perform activities specific to that instance.

12.14 Customizing Process Workspace in Process Spaces

To enable collaboration on a specific set of processes, you can create a new group space by using the Process Workspace template. This creates a new group space that is a replica of the default Process Workspace.

The default Process Workspace can also be customized just like any group space.

To create a customized default group space from the Process Workspace template, customize and then save the template. To customize the template, first create a group space from it, then customize, save, and publish it as Process Workspace Template.

For information about customizing group space pages, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

12.15 Subscribing to a Process Workspace Group Space in Process Spaces

When Oracle Business Process Management Process Spaces is installed, users are not granted access to Process Workspace by default. To access the Process Workspace group space, the user logs in to Process Workspace and performs a search for discoverable spaces. From the search results, the user selects a Process Workspace and is asked to choose a role. Available roles are: Viewer, Participant, and Moderator.

The Participant and Viewer roles can be self-subscribed—that is, when the user chooses the role, the user is granted that role automatically. When the user chooses the Moderator role, that request is submitted to the administrator for approval.

Using and Customizing a Process Modeling Space in Process Spaces

This chapter discusses modeling spaces, those group spaces that enable business analysts to collaborate in developing process models. It also explains how to use Process Spaces to customize your own modeling space

This chapter contains these topics:

- [Section 13.1, "About Modeling Spaces in Process Spaces"](#)
- [Section 13.2, "The Process Modeling Space Page"](#)
- [Section 13.3, "Customizing a Process Modeling Space in Process Spaces"](#)
- [Section 13.4, "Adding Members to the Modeling Space in Process Spaces"](#)
- [Section 13.5, "Adding Documents to the Modeling Space in Process Spaces"](#)
- [Section 13.6, "Participating in Modeling Space Discussions in Process Spaces"](#)
- [Section 13.7, "Subscribing to a Modeling Space in Process Spaces"](#)

13.1 About Modeling Spaces in Process Spaces

A modeling space enables business analysts to collaborate on process models. This collaboration includes these activities:

- Browsing published projects by using the Process Catalog—The Process Catalog shows all published processes. When you find and double-click a specific process, it opens in Business Process Composer. From there you can collaborate with process developers and designers to edit the processes.

Note: If you browse the Process Catalog, and Single Sign-on is not set up, then you are prompted for the necessary credentials before being taken to Composer.

- Adding tasks by using Oracle WebCenter Portal—To track the progress of projects being developed, you can add tasks.

For information about adding tasks, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*

- Add documents by using Oracle WebCenter Portal—Use this Oracle WebCenter Portal feature when collaborating on process models.

For information about adding documents, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

13.2 The Process Modeling Space Page

Figure 13–1 shows an example of a Process Spaces Modeling Space page.

Figure 13–1 Process Spaces Modeling Space Page

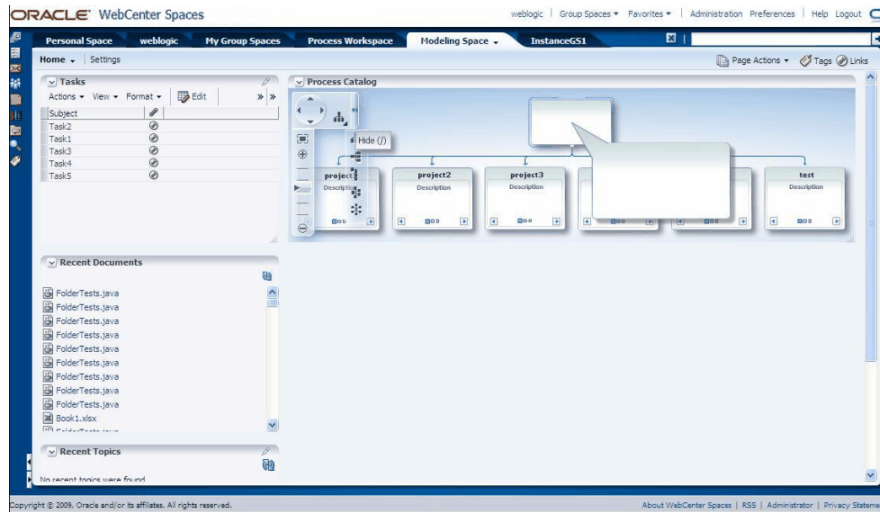


Table 13–1 Process Spaces Modeling Spaces Panels

Panel	Description
Tasks	Enables you to track the progress of projects being developed
Recent Documents	Lists the most recently created or modified files in the root folder of the active content repository connection to the page
Recent Topics	Lists recent discussion topics, popular topics, watched topics, and watched forums
Process Catalog	Enables you to browse the various projects. When you find and double-click a specific project, the selected project opens in Business Process Composer.

13.3 Customizing a Process Modeling Space in Process Spaces

To enable collaboration on a specific set of processes, you can create a new group space by using the Process Modeling template. This creates a new group space that is a replica of the default modeling space.

The default Process Modeling Space can also be customized just like any group space.

To create a customized default group space from the Process Modeling template, customize and then save the template. To customize the template, first create a group space from it, then customize, save, and publish it as Process Modeling Template.

For information about customizing group space pages, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

13.4 Adding Members to the Modeling Space in Process Spaces

For information about adding members to a modeling space, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

13.5 Adding Documents to the Modeling Space in Process Spaces

For information about adding documents to the modeling space, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

13.6 Participating in Modeling Space Discussions in Process Spaces

For information about participating in modeling space discussions, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

13.7 Subscribing to a Modeling Space in Process Spaces

For information about subscribing to a modeling space, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

Using and Customizing a Process Instance Space in Process Spaces

This chapter describes how to create, manage, and customize a process instance space. A process instance space is created for collaborating on long-running instances and displays specific instances that require a high level of collaboration over time.

Because Process Spaces is tightly integrated with both Process Workspace and WebCenter Portal, using and customizing a work space sometimes involves performing tasks that are unique to Process Spaces. At other times, the tasks are performed by using either Process Workspace or WebCenter Portal.

This chapter contains these topics:

- [Section 14.1, "The Process Instance Space in Process Spaces"](#)
- [Section 14.2, "Adding Comments and Attachments to a Process Instance in Process Spaces"](#)
- [Section 14.3, "Tracking a Process Instance in Process Spaces"](#)
- [Section 14.4, "Creating a Calendar for a Process Instance in Process Spaces"](#)
- [Section 14.5, "Adding a Document to a Process Instance Space in Process Spaces"](#)
- [Section 14.6, "Participating in a Discussion in a Process Instance Space in Process Spaces"](#)
- [Section 14.7, "Customizing a Process Instance Space in Process Spaces"](#)

14.1 The Process Instance Space in Process Spaces

[Figure 14-1](#) shows an example of a process instance space.

Figure 14–1 Process Spaces Process Instance Page

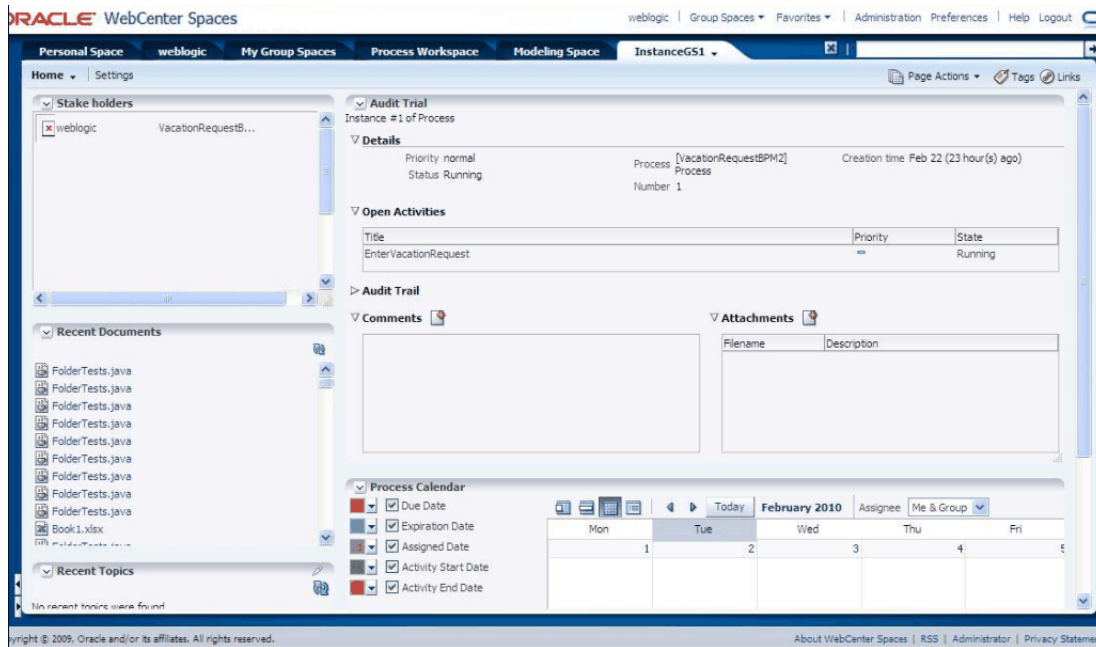


Table 14–1 describes the elements in the process instance page shown in Figure 14–1.

Table 14–1 Panels in the Process Instance Space

Panel	Description
Stakeholders	Lists any user who has acted on the process, including the initiator
Recent Documents	Lists the most recently created or modified files in the entire root folder of the active content repository connection to the page
Recent Topics	Lists recent discussion topics, popular topics, watched topics, and watched forums
Audit Trail	Shows the details for this instance including any open instances. Enables you to add comments and attachments.
Process Calendar	Shows different dates associated with a process—for example: activity start date, activity end date, and human task dates such as assigned date, expiration date, and due date.

14.2 Adding Comments and Attachments to a Process Instance in Process Spaces

In Process Spaces, you add comments and attachments to a process instance by using the Process Workspace portlet on the Process Spaces home page.

For instructions on adding comments and attachments to a process instance, see [Section 4.3.2, "Associating Comments and Attachments with a Process Instance in Process Workspace"](#).

14.3 Tracking a Process Instance in Process Spaces

In Process Spaces, you track a process instance by using the Process Workspace portlet on the Process Spaces Home page.

For instructions about tracking a process instance, see [Section 4.3, "Viewing the Details of a Process Instance in Process Workspace"](#).

14.4 Creating a Calendar for a Process Instance in Process Spaces

If you are an administrator or a user with permissions to edit the group space, you can add a calendar taskflow. This taskflow shows different activities—for example, assigned date, expiration date, due date for a task, activity start date, and activity end date for the process instance.

Note: Do not confuse this calendar with the one in Process Workspace. At the moment, you cannot create a calendar for an organization unit in Process Spaces.

14.5 Adding a Document to a Process Instance Space in Process Spaces

For instructions about adding documents to a process instance space, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

14.6 Participating in a Discussion in a Process Instance Space in Process Spaces

For instructions about participating in discussion, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

Note: If you have imported a group space and want to create or select a forum, you must do so manually from the services page of the imported group space.

For information about choosing or creating a forum in a group space imported into Oracle WebCenter Portal, see *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

14.7 Customizing a Process Instance Space in Process Spaces

Like other templates, the process instance template can be customized. Unlike other templates, the process instance template cannot be used to create other group spaces manually. It is used by the system to create a group space that is connected to a specific process instance.

The created group space can be customized just like any other Oracle WebCenter Portal group space. However, because there is instance-specific data—namely, a process instance identifier link—you should not modify the group space attribute that is added as part of its creation.

Creating Custom Dashboards in Process Spaces

This chapter describes how to create and edit custom dashboards from within Oracle Business Process Management Process Spaces.

This chapter contains these topics:

- [Section 15.1, "Understanding Custom Dashboards in Process Spaces"](#)
- [Section 15.2, "Creating a Custom Dashboard in Process Spaces"](#)

15.1 Understanding Custom Dashboards in Process Spaces

Dashboards provide analytical information to monitor process execution as well as user workloads. They provide summary information.

From within Process Spaces, you can create and edit custom dashboards.

For information about custom dashboards and how they are created in Process Workspace, see [Section 7.2, "Creating Custom Dashboards."](#)

15.2 Creating a Custom Dashboard in Process Spaces

To develop a custom dashboard in Process Spaces, you use the Process Dashboard taskflow found in the WebCenter Portal Resource Catalog.

15.2.1 How to Create a Custom Dashboard in Process Spaces

You can create one or more custom dashboards in either a new or an existing custom page.

To create a custom dashboard in Process Spaces

1. In the Process Workspace home page of Process Spaces, from the **Actions** list, select either **Edit page** or **Create a new page**.
2. Click **Add Content**. The Add Content dialog appears.
3. Open the Process Workspace Resources folder and add Process Dashboard. The Process Dashboard region now appears in Process Workspace.
4. In the Process Dashboard region, click **Edit**. The Component Properties dialog box appears.
5. In the Component Properties dialog box, next to the **Widget ID** field, select the spyglass icon. The Pick a Value dialog box appears.

6. From the Pick a Value dialog box, you can either create a new data source or select an existing data source.
 - To create a new data source, in the Widget ID panel, select the **Add** icon. A Widget ID page appears in the right pane.
 - To select an existing data source, select from the list in the Widget ID panel. The corresponding page appears in the right pane.

For information about specifying the data source, see [Section 7.2.1, "Specifying Graph Content."](#)

Once you have selected and specified the data source, click **Save and Close**. This returns you to the Component Properties dialog box. The **Widget Id** field is now filled in with the value for the data source you just selected.

7. Click **OK**. This returns you to the Process Dashboard region, which now contains the data source you just specified.

Note: If the space containing the custom dashboard is shared between different users, then the custom dashboard is visible only to users with permission to see the data corresponding to that dashboard. You grant permissions for the data source from Process Workspace.

Performing Administration in Process Spaces

This chapter discusses what you need to know as an administrator of Oracle Business Process Management Process Spaces, including roles and permissions, task flows, how to edit pages, and how to configure groups.

This chapter contains these topics:

- [Section 16.1, "Understanding Roles and Permissions in Process Spaces"](#)
- [Section 16.2, "Understanding Task Flows in Process Spaces"](#)
- [Section 16.3, "Editing Pages in Process Spaces"](#)
- [Section 16.4, "Configuring a Group Space in Process Spaces"](#)

16.1 Understanding Roles and Permissions in Process Spaces

Both Oracle WebCenter Portal and Oracle Business Process Management Process Spaces use an identity store, each with a different set of application roles. Process Spaces group spaces come with default WebCenter Portal roles—for example: moderator, participant viewer, and public user. However, an administrator can create more roles and provide appropriate permissions to them.

For more information about creating roles and providing permissions, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

16.2 Understanding Task Flows in Process Spaces

Task flows in Process Spaces display the same information available in Process Workspace. These are reusable components that have been consumed in Oracle WebCenter Portal so they can be used in Process Spaces.

For more information about the various task flows and their parameters, see [Appendix A, "Creating Custom ADF Applications with Oracle Business Process Management Workspace Task Flows."](#)

16.3 Editing Pages in Process Spaces

To use Process Spaces specific group spaces and templates, use the BPM Process Spaces Catalog. The BPM Process Spaces Catalog includes all the resources from the default group space catalog.

If you have upgraded from an earlier release and you want to edit the existing Process Spaces group space, you can either change the settings to use BPM Process Spaces

Catalog for the particular group space or change the settings globally so that all group spaces in the application use the BPM Process Spaces Catalog.

For information about how to use a resource catalog, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

BPM Process Spaces Catalog includes the following folders:

- Process Work Space Resources
 - Available processes: All available processes that a logged-in user can instantiate
 - Charts: Charts that show various statistics
 - Process instance list: All process instances a user can access
 - Task list: List of tasks that user has to act upon
- Process Instance Space Resources
 - Audit trail: Audit trail of a given instance in tabular and graphical forms
 - Process calendar: Calendar that shows various important dates for a given process instance. Also capable of showing dates for all process instances of a user in context.
 - Stake holders: List of stake holders for a given instance.
- Process Modeling Space Resources
 - Process catalog: Process catalog viewer that shows all published processes.

While there are no restrictions about using these task flows, they are grouped based on the group spaces to which they belong. However when a custom group space is created, you can mix and match the task flow.

For task flows to function correctly, you must pass the appropriate parameters to them. For configuring task flow parameters, see the Oracle WebCenter Portal documentation

For information about each task flow, see [Appendix A, "Creating Custom ADF Applications with Oracle Business Process Management Workspace Task Flows."](#)

You edit a page just as you would any other group space page. For more information, see *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*.

Each group space has a settings page for administering the group space. Process Workspace settings are configured to enable self-subscription for users. You can change these settings as needed. The rest of the default group space settings are similar to any other group space.

16.4 Configuring a Group Space in Process Spaces

For information about configuring a group space, see [Section 16.3, "Editing Pages in Process Spaces"](#).

Part III

Appendices

This part contains the following appendices:

- [Appendix A, "Creating Custom ADF Applications with Oracle Business Process Management Workspace Task Flows"](#)
- [Appendix B, "Customizing a Resource Bundle"](#)
- [Appendix C, "Customizing Applications in Process Workspace and the Worklist Application"](#)
- [Appendix D, "Deploying Images and JAR files as Part of a Shared Library JAR file"](#)

Creating Custom ADF Applications with Oracle Business Process Management Workspace Task Flows

Different features available in Process Workspace are exposed as standalone reusable components, called task flows. This appendix provides basic information about the features in each task flow.

You can embed task flows in any Oracle Application Development Framework (ADF) application. These standalone task flows provide many parameters that enable you to build customized applications.

All the task flows are bundled in an ADF library that you can include in the application in which you are embedding.

Later, in [Section A.5, "Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows,"](#) a sample task flow using `TaskListTaskFlow` shows detailed steps for embedding the task flow in the application as well as customizing, deploying, and running it.

For descriptions of the various task flows, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

This appendix covers the following topics:

- [Section A.1, "User-Related Task Flows"](#)
- [Section A.2, "Process Task Flows"](#)
- [Section A.3, "Process Analytics Task Flows"](#)
- [Section A.4, ".JAR files for the Task Flows"](#)
- [Section A.5, "Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows"](#)
- [Section A.6, "Sample: Wf_client_config.xml File"](#)
- [Section A.7, "Sample: Bean with the Method Returning the WorkflowServicesClientConfigurationType Object"](#)

Note: This appendix assumes that you are familiar with both Oracle Application Development Framework and security.

A.1 User-Related Task Flows

This section contains these topics:

- Section A.1.1, "Task List Task Flow"
- Section A.1.2, "Certificates Task Flow"
- Section A.1.3, "Reports Task Flow"
- Section A.1.4, "Application Preferences Task Flow"
- Section A.1.5, "Flex Fields Task Flow"
- Section A.1.6, "Rules Task Flow"

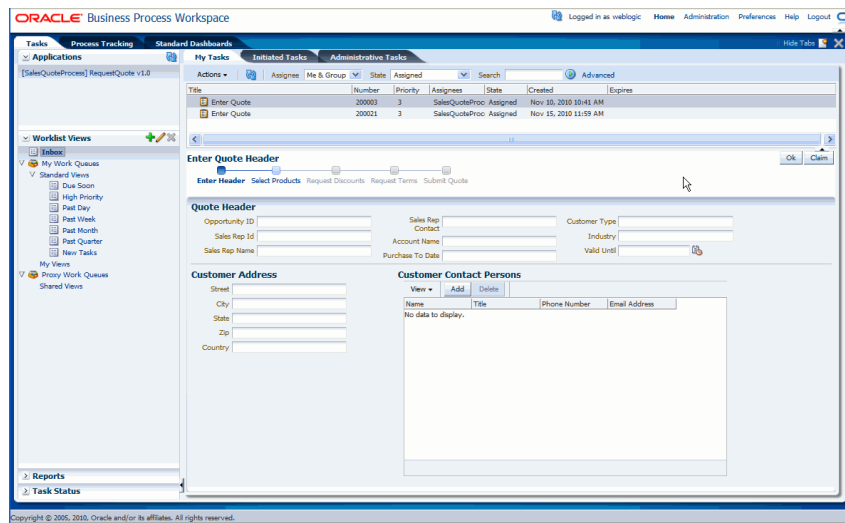
A.1.1 Task List Task Flow

The task flow takes in the parameters to control how the embedded region displays. This section discusses the following parameters:

- Section A.1.1.1, "federatedMode"
- Section A.1.1.2, "federatedServers"
- Section A.1.1.3, "showServerColumn"
- Section A.1.1.4, "wfCtxID"

For the full list of parameters, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

Figure A–1 Process Workspace Tasks Page



A.1.1.1 federatedMode

If you set this parameter to true, then the task list is shown in the federated mode. For the task flow to run in federated mode, you must pass the list of federated servers to the task flow. For instructions about how to pass a list of federated servers to the task flow, see [Section A.1.1.2, "federatedServers"](#).

A.1.1.2 federatedServers

To pass the federated servers list to the task flow, do one of the following:

- Provide the client configuration file, `wf_client_config.xml`, in the class path. The class path is either `APP-INF\classes\wf_client_config.xml` at the ear

level or the `WEB-INF\classes` of the web application. The client configuration file contains all federated server details.

For a sample `.wf_client_config.xml` file, see [Section A.6, "Sample: Wf_client_config.xml File"](#).

- Construct a JAXB object that contains the federated servers list. This JAXB object can be passed to the task flow through the `federatedServers` parameter. The object should be returned by a backing bean method.

For a sample bean with the method returning the `WorkflowServicesClientConfigurationType` object, see [Section A.7, "Sample: Bean with the Method Returning the WorkflowServicesClientConfigurationType Object"](#)

If you provide both the client configuration file `wf_client_config.xml` and the JAXB object to the task flow, the JAXB object takes precedence.

A.1.1.3 showServerColumn

If the task flow is run in federated mode, the server column in the task list is not shown by default. To show the server column in the task list, this parameter must be passed as "true".

A.1.1.4 wfCtxID

This is a workflow context token string. It is used to create workflow context inside the task flow.

Note: If the application is SSO-enabled or is secured using ADF security, this parameter is not required. Otherwise, this parameter is required.

To get the workflow context identifier:

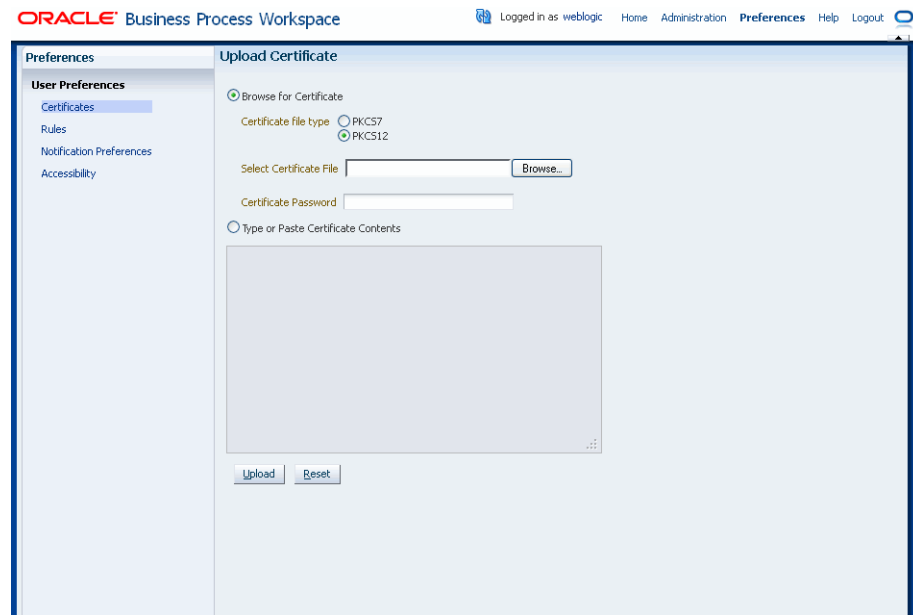
Run the following:

```
IWorkflowContext wfCtx =
wfSvcClient.getTaskQueryService().authenticate(username,
password,
realm,
null);
wfCtxID = wfCtx.getToken();
```

A.1.2 Certificates Task Flow

A digital certificate contains the digital signature of the certificate authority so that anyone can verify that the certificate is real. A digital certificate establishes the participant's credentials. It is issued by a certification authority. It contains your name, a serial number, expiration dates, a copy of the certificate holder's public key (used for encrypting messages and digital signatures), and the digital signature of the certificate-issuing authority so that a recipient can verify that the certificate is real.

As [Figure A-2](#) shows, when you want to sign a decision, you can upload your digital certificate. When signing a task outcome by using your certificate, you must upload not only the one certificate issued to you by the certification authority but the entire chain of certificates. Upload the chain as a `.P7B` (PKCS7 format) file.

Figure A-2 Uploading a Certificate

To create an application and embed the Certificates task flow in the application, follow all the steps of [Section A.5, "Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows"](#) except Step 9. This is because certificates have no parameters.

A.1.3 Reports Task Flow

For information about the Reports task flow, see [Section 8.6, "Using Reports to Manage Workflows in Process Workspace."](#)

To create an application and embed the Reports task flow in the application, follow all the steps of [Section A.5, "Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows"](#) except Step 9. This is because Reports have no parameters.

A.1.4 Application Preferences Task Flow

For information about the Application Preferences task flow, see [Section 9.1, "Setting the Display of the Work Items Panel in Process Workspace"](#).

To create an application and embed the Application Preferences task flow in it, follow all the steps of [Section A.5, "Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows"](#) except Step 9. This is because application preferences have no parameters.

A.1.5 Flex Fields Task Flow

For information about the Flex Fields task flow, see [Section 9.2.1, "Managing Mapped Attributes \(Flex Fields\) in Process Workspace"](#).

To create an application and embed the Flex Fields task flow in it, follow all the steps of [Section A.5, "Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows"](#) except Step 9. This is because flex fields have no parameters.

A.1.6 Rules Task Flow

For information about the Rules task flow, see [Section 3.9.1, "How to Create User Rules in Process Workspace"](#).

The `showOtherUsersRules` parameter takes a Boolean value. When it is passed as True, other users rules are displayed; when it is passed as False, other user rules are not shown. In addition, this user must have the required permission to view other user rules.

To create an application and embed the Rules task flow in it, follow all the steps of [Section A.5, "Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows"](#) except Step 9. This is because rules fields have no parameters.

A.2 Process Task Flows

This section contains these topics:

- [Section A.2.1, "Process Application Task Flow"](#)
- [Section A.2.2, "Process Instances Task Flow"](#)
- [Section A.2.3, "Process Instance Details Task Flow"](#)

A.2.1 Process Application Task Flow

The applications available in Process Workspace depend on the process design and the roles assigned to the user currently logged in. The list of applications available also depends on the BPM processes that are deployed and running. The applications panel will be empty if no processes are running, or if the user is not able to execute an application in any of the processes currently running. [Figure A-3](#) shows the location of the Applications panel in Process Workspace.

Figure A-3 Applications Panel

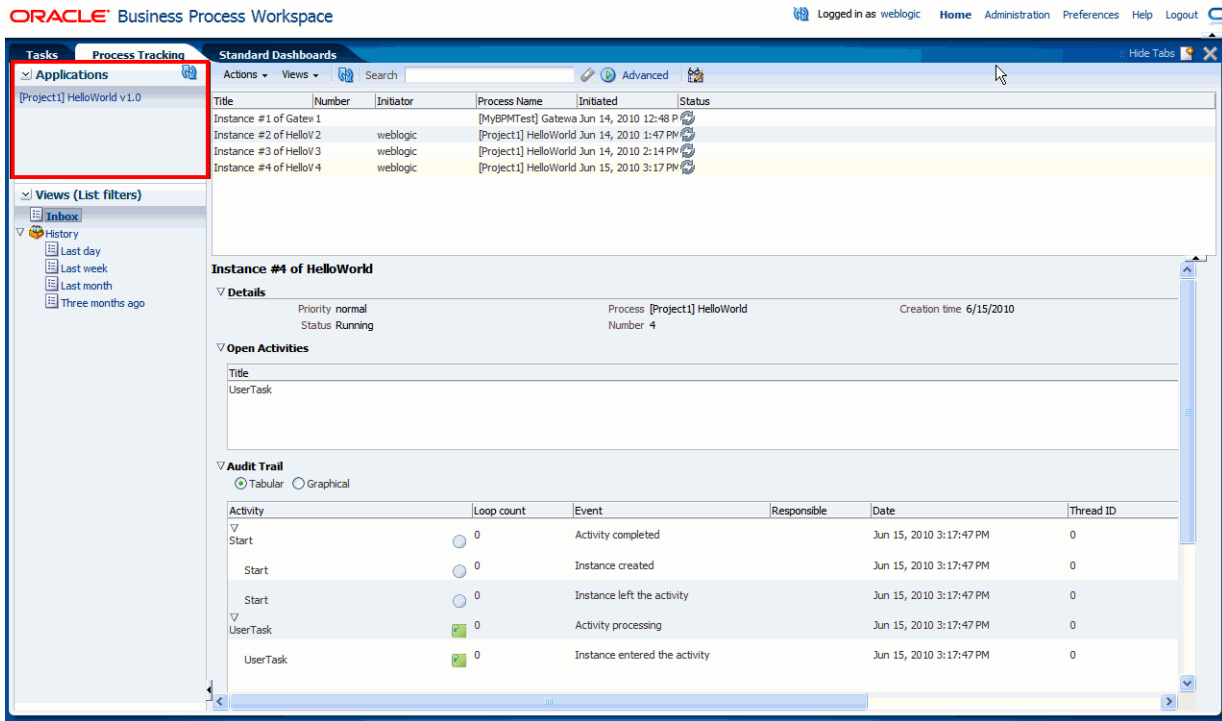


Table A-1 Process Applications Task Flow

Task Flow definition file: processApplicationsTaskflow.xml

Description: Renders the list of applications available to the user, that is, the list of tasks that, when executed, will create instances in the different deployed processes.

Arguments: None

A.2.2 Process Instances Task Flow

Table A-2 Process Instances Task Flow

Task Flow definition file: processInstancesTaskflow.xml

Description: Renders the list of instances corresponding to a certain view (by default, Inbox view) in a table format. The columns that this table will show are defined by the presentation associated to the selected view, which can be edited from here. It also provides search capabilities.

Arguments: viewId: specifies the view that will be rendered initially. By default, Inbox is assumed.

A.2.3 Process Instance Details Task Flow

Table A-3 Process Instances Task Flow

Task Flow definition file: processInstanceDetailTaskflow.xml

Description: Renders the instance details, including open activities, audit trail (both tabular and graphical), comments and attachments.

Arguments: instanceId: Task Flow will render the details associated to this instance ID.

Figure A–4 Work Items Details Panel

The screenshot displays the 'Work Items Details Panel' for a 'HelpDeskRequest' work item. The panel is divided into several sections:

- Details:** Shows 'Priority normal', 'Status Running', 'Process [HelpDeskRequestBPM] Process Number 1', and 'Creation time 4/19/2010'.
- Open Activities:** A table with columns 'Title', 'Priority', 'State', and 'Actions'. It lists 'HelpDeskRequest' with a priority of 'normal', state of 'Running', and an action of 'Run'.
- Audit Trail:** Includes radio buttons for 'Tabular' and 'Graphical'. The 'Graphical' view shows a flowchart with nodes: 'Start', 'EnterHelpDeskRequest', 'HelpDeskRequest', and 'End'. A 'Supervisor' role is indicated on the left. A 'Start1' node is also present, connected to the main flow.
- Comments:** A text area for adding comments.
- Attachments:** A table with columns 'Filename' and 'Description'.

A.3 Process Analytics Task Flows

This section contains these topics:

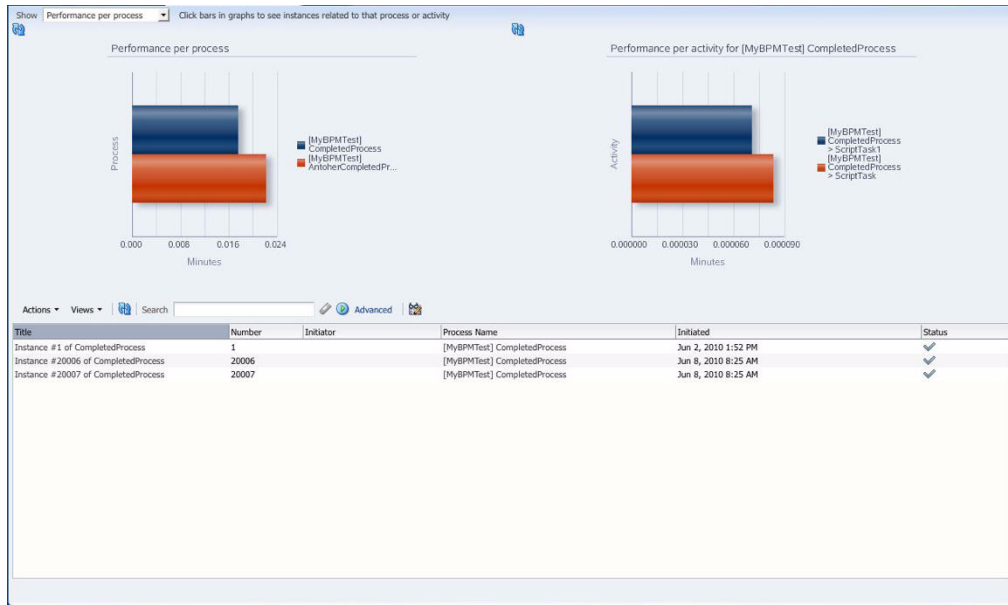
- [Section A.3.1, "Dashboard Widget Task Flow"](#)
- [Section A.3.2, "Application Roles Task Flow"](#)
- [Section A.3.3, "Organization Units Task Flow"](#)
- [Section A.3.4, "Parametric Roles Task Flow"](#)
- [Section A.3.5, "Business Calendar and Holiday Lists Task Flow"](#)
- [Section A.3.6, "Extended User Properties Task Flow"](#)

A.3.1 Dashboard Widget Task Flow

Table A–4 Dashboard Widget Task Flow

Task Flow definition file:	widgetTaskflow.xml
Description:	Renders a widget, that is, a graph displaying information stored in Cubes. This widget could be one of the out of the box ones (like Workload per Participant, Performance per Process, etc.) or a custom one.
Arguments:	<p>widgetId: The ID of the widget that will be rendered.</p> <p>showSelector: A Boolean value (true/false) stating whether the task flow will render a drop down listing all available widgets, so that the user can select and change from one widget to other.</p>

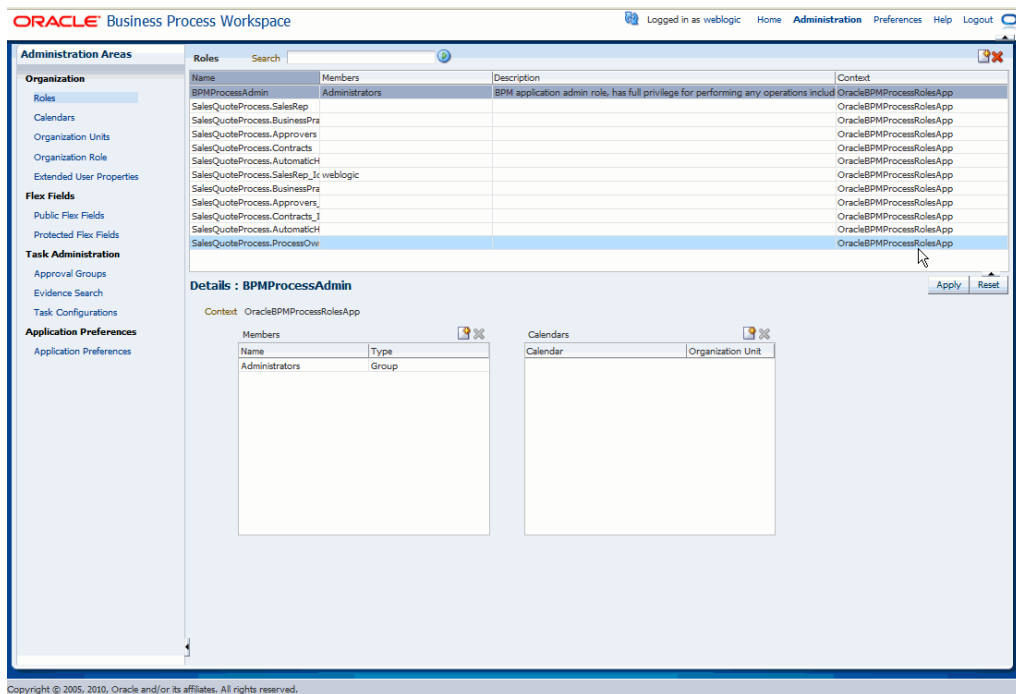
Figure A-5 Process Performance Dashboard



A.3.2 Application Roles Task Flow

Application Roles task flow displays the list of application roles defined in the system for application context OracleBPMProcessRolesApp. The user can search for application roles, select a role and add members (users, groups or other roles) to it or even define business calendar-organization unit mappings for the role.

Figure A-6 Role Details Panel



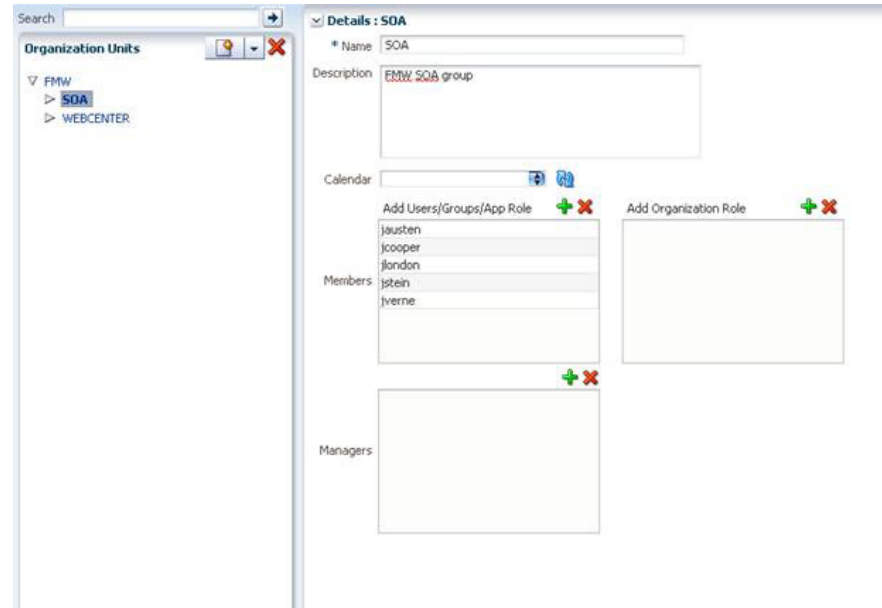
A.3.3 Organization Units Task Flow

This task flow enables users to create new organization units or edit existing ones.

For information about the Organization Units task flow, see [Chapter 10, "Managing Your Organization in Process Workspace \(for Administrators\)"](#).

[Figure A-7](#) shows an Organization Units details panel.

Figure A-7 Organization Units Details Panel



A.3.4 Parametric Roles Task Flow

For information about the Parametric Roles task flow, see [Section 10.6, "Managing Parametric Roles in Process Workspace"](#).

A.3.5 Business Calendar and Holiday Lists Task Flow

For information about the Business Calendar and Holiday List task flow, see [Section 10.3, "Managing Calendar Rules in Process Workspace"](#) and [Section 10.2, "Managing Holiday Rules in Process Workspace"](#).

A.3.6 Extended User Properties Task Flow

For information about the Extended User Properties task flow, see [Section 10.7, "Managing Extended User Properties in Process Workspace"](#).

A.4 .JAR files for the Task Flows

Table A-5 JAR Files for Task Flows

JAR File	Location
adflibTaskListTaskFlow.jar	\$FMW_HOME/AS11gR1SOA/soa/modules/oracle.soa.worklist_11.1.1
oracle.bpm.workspace-adflib.jar	This jar is packaged only with a process portal installation
adflibWorkspaceTaskFlows.jar	\$FMW_HOME/AS11gR1SOA/soa/modules/oracle.soa.worklist_11.1.1

A.5 Samples: Customizing ADF Applications with Oracle Business Process Management Workspace Task Flows

This section contains these topics:

- [Section A.5.1, "Sample 1: Creating an Application with an Embedded Tasklist Task Flow"](#)
- [Section A.5.2, "Sample 2: Creating an ADF Page with Task Flows"](#)

A.5.1 Sample 1: Creating an Application with an Embedded Tasklist Task Flow

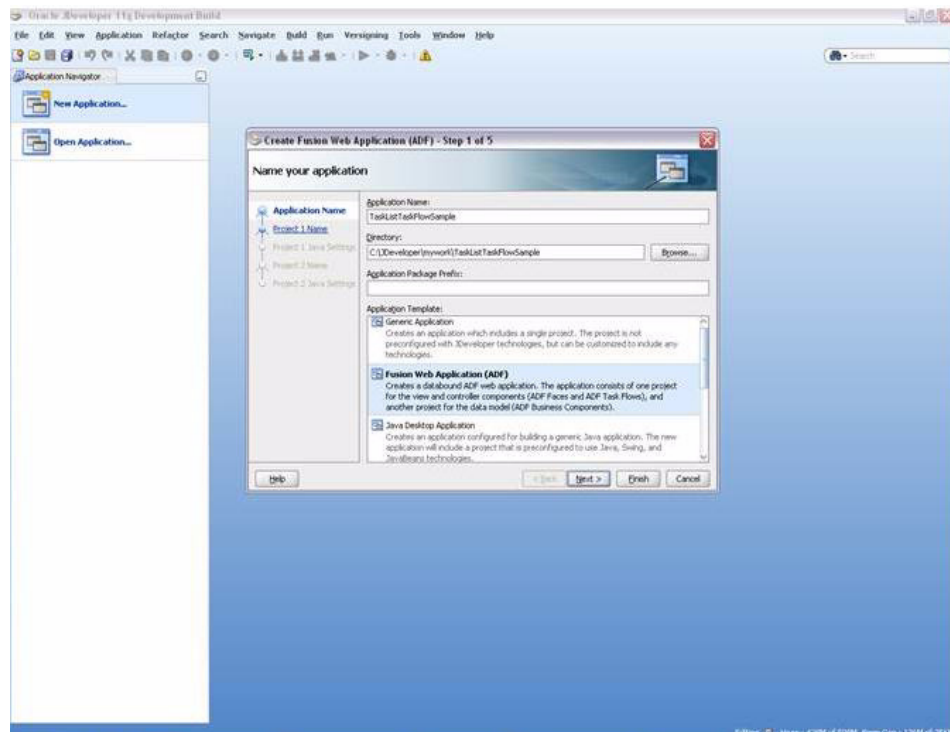
The sample explains how to create an application and embed the TaskList task flow in it.

The Tasklist ADF library jar file `adflibTaskListTaskFlow.jar` needs to be in the class path. This jar is available in Oracle JDeveloper in the BPM Worklist Components library.

What follows are the steps to embed the task flow in your application. You can use these same steps to create a new sample.

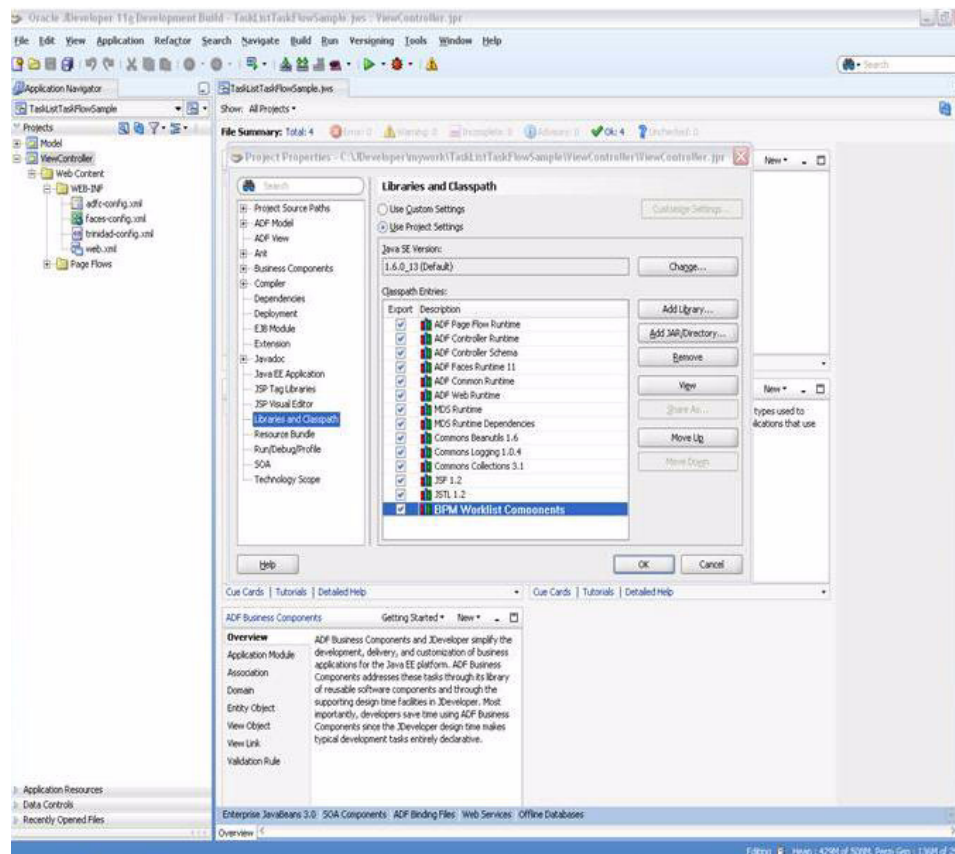
To embed the Tasklist task flow in your application:

1. Create a new Fusion Web Application in Oracle JDeveloper and name it `TaskListTaskFlowSample`.

Figure A-8 Creating New Oracle Fusion Middleware Application

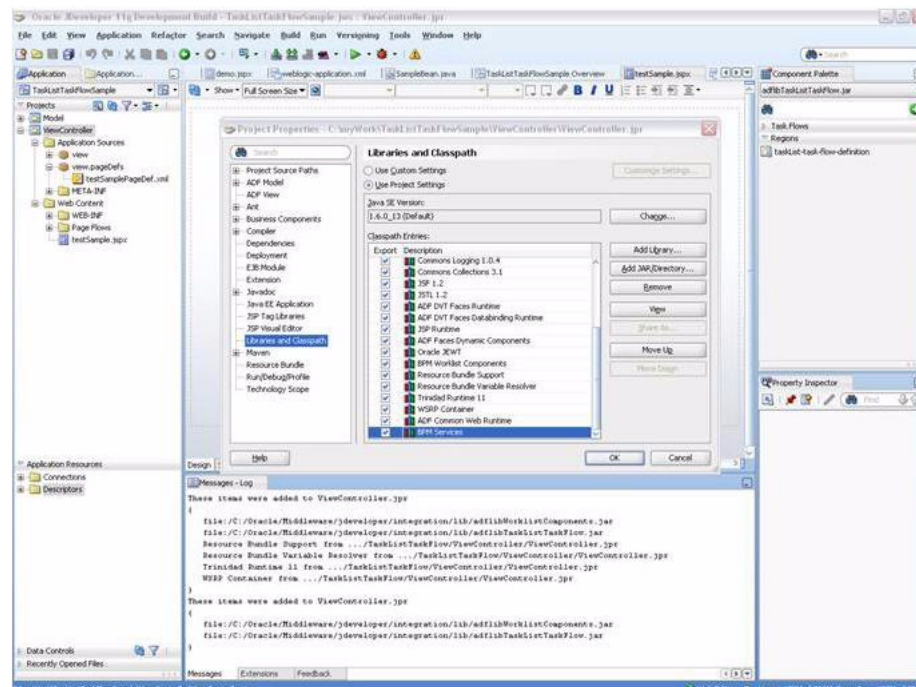
2. Add the task flow jar `adflibTaskListTaskFlow.jar` in the project's class path. Include the BPM Worklist Components library from the Libraries and Classpath section of the JDeveloper and add the library. This library also contains the `adflibWorklistComponents.jar` that must also be in the classpath.

Figure A-9 Adding BPM Worklist Component Library



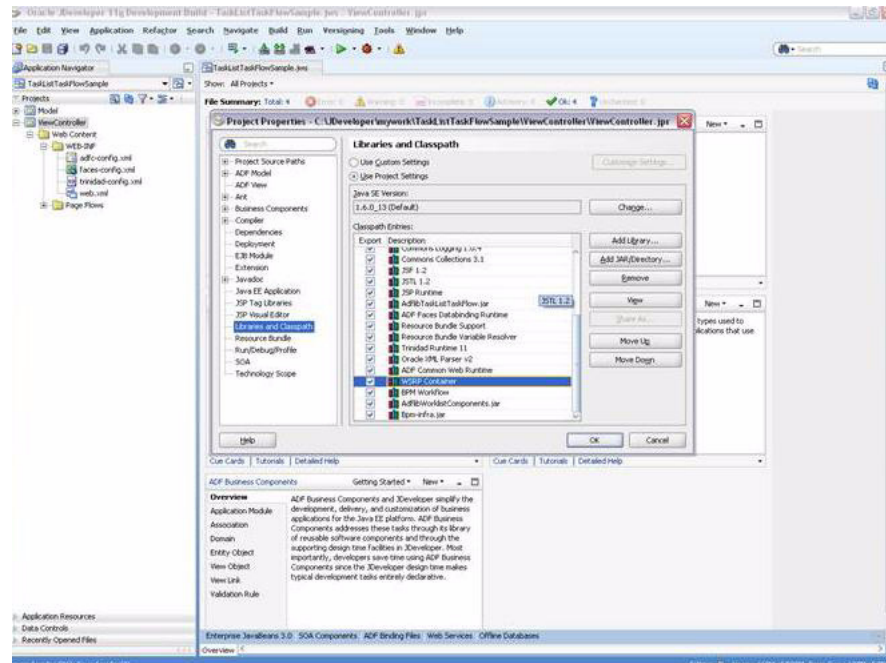
3. Add the BPM Services library in the class path.

Figure A-10 Adding BPM Services Library



4. Add the WSRP Container library in the classpath.

Figure A–11 Adding the WSRP Container Library



5. In case you are running your application on non-soa server, you need to perform two additional steps that are documented in the *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

- a. Install the `oracle.soa.workflow` shared library. If your server already has `oracle.soa.workflow.wc` installed, then you do not need to install `oracle.soa.workflow`.

For information about installing the `oracle.soa.workflow` shared library, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

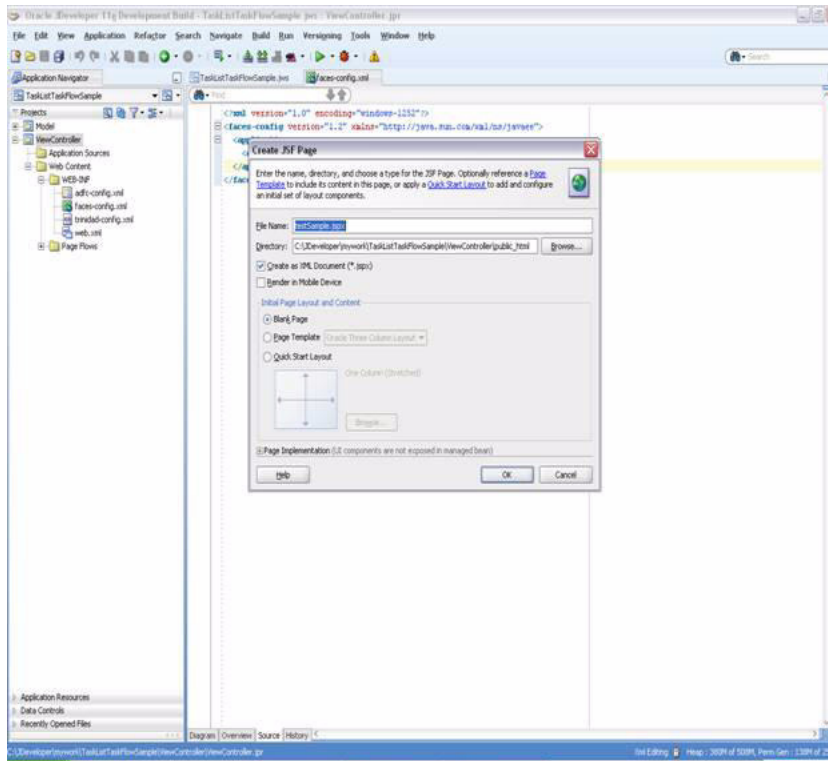
- b. Configure foreign JNDI on the non-SOA server.

For information about configuring a foreign JNDI on the non-soa server, see *Oracle Fusion Middleware Programming JNDI for Oracle WebLogic Server*.

Note: If you are running the Task List task flow in federated mode, then you do not need to do this step. See the parameter "federatedMode" on how to use task flow in federated mode.

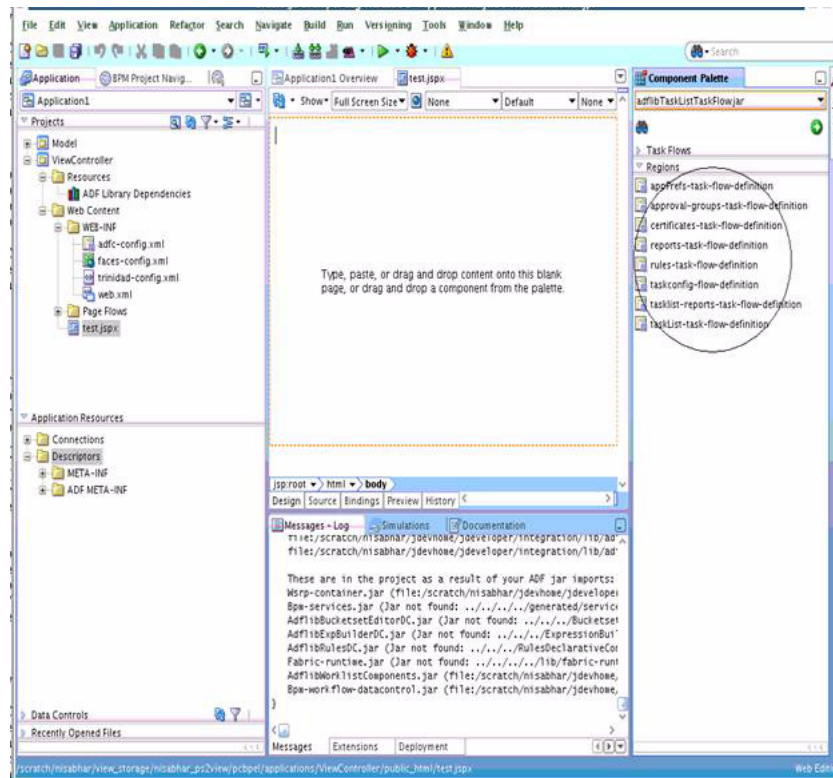
6. Create a JSPX file `testSample.jspx`.

Figure A-12 Creating a JSPX File



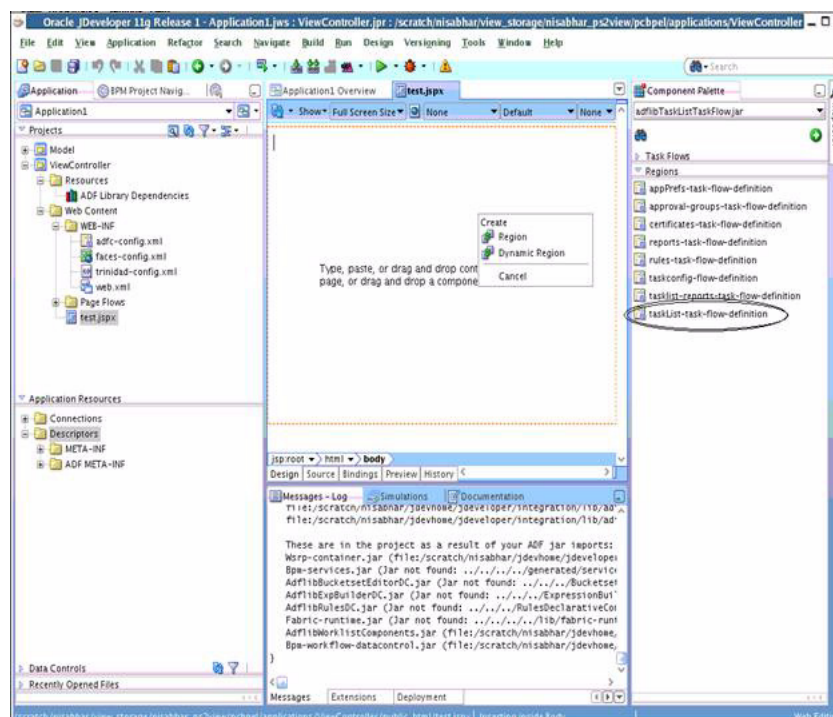
7. Choose `adflibTaskListTaskFlow.jar` from the component palette. It contains the list of all the Task Flows.

Figure A-13 Choosing *adflibTaskListTaskFlow.jar*



8. Drag and drop one of the Task Flow onto the JSPX page as a region. [Figure A-14](#) shows, by way of example, the TaskListTaskFlow being dropped onto the JSPX page as a region.

Figure A-14 Oracle JDeveloper with TaskList Task Flow on the JSPX Test Page

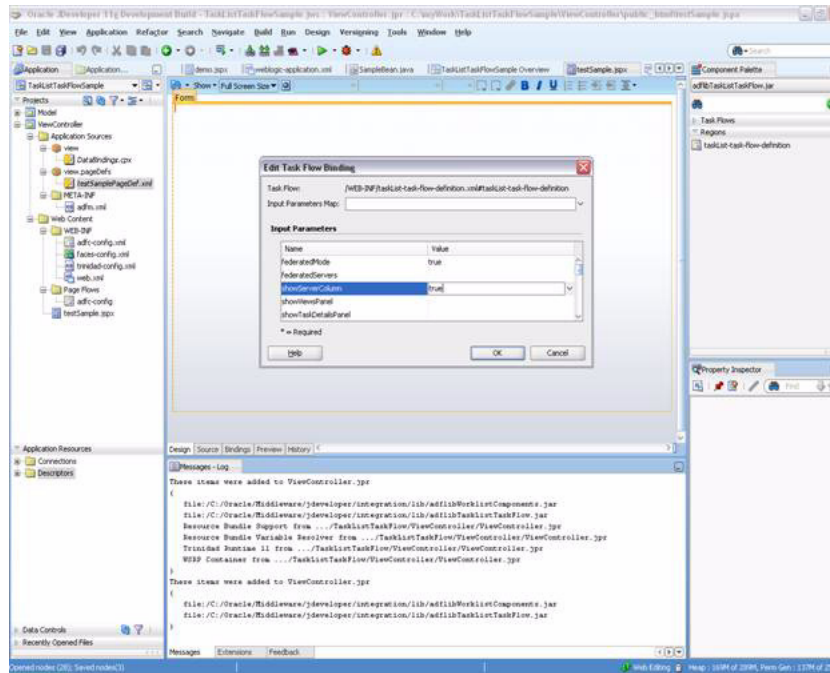


When you drag a task flow onto a JSPX page, a popup shows a list of the available parameters. For a description of these parameters, see *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

The Edit Task Flow Binding dialog box appears.

9. In the Edit Task Flow Binding dialog box, pass the task flow parameters.

Figure A-15 Passing Task Flow Parameters



The following entry is created in the `testSamplePagedef.xml`.

```
<taskFlow id="taskListtaskflowdefinition1"
taskFlowId="/WEB-INF/taskList-task-flow-definition.xml#taskList-task-flow-defini
tion"
xmlns="http://xmlns.oracle.com/adf/controller/binding">
<parameters>
<parameter id="federatedMode" value="true"
xmlns="http://xmlns.oracle.com
/adfm/uiodel"/>
<parameter id="showServerColumn" value="true"
xmlns="http://xmlns.oracle.com/adfm/uiodel"/>
</parameters>
</taskFlow>
```

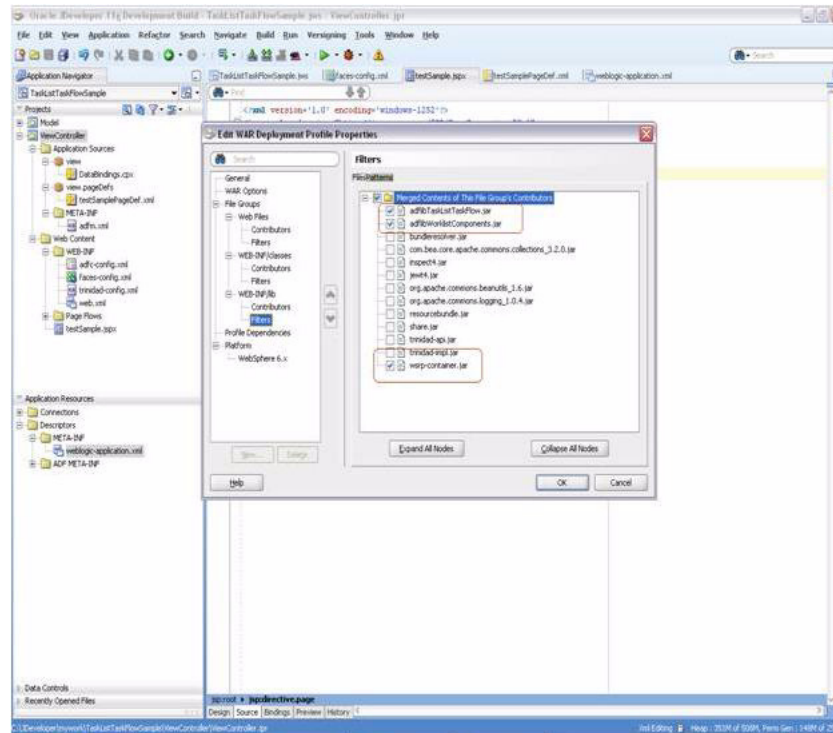
10. Add the following shared libraries in `weblogic-application.xml`. If you have `oracle.soa.workflow.wc` installed on your server, add that library by specifying the following.

```
<library-ref>
<library-name>oracle.soa.workflow</library-name>
</library-ref>
```

11. Open and edit the WAR deployment profile for editing. To do this:
 - a. Right Click ViewController.
 - b. Select Deployment.

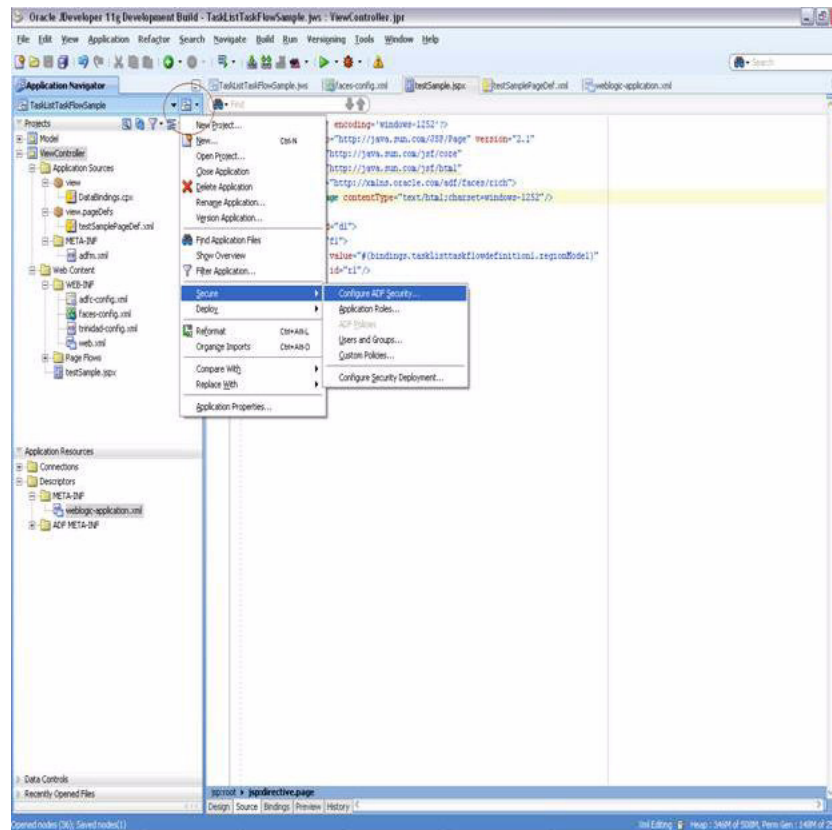
- c. Select WAR File.
- d. Click **Edit**.
- e. Check `adflibTaskListTaskFlow.jar`,
`adflibWorklistComponents.jar` and `wsrp-container.jar`.

Figure A-16 *Editing the WAR Deployment Profile*



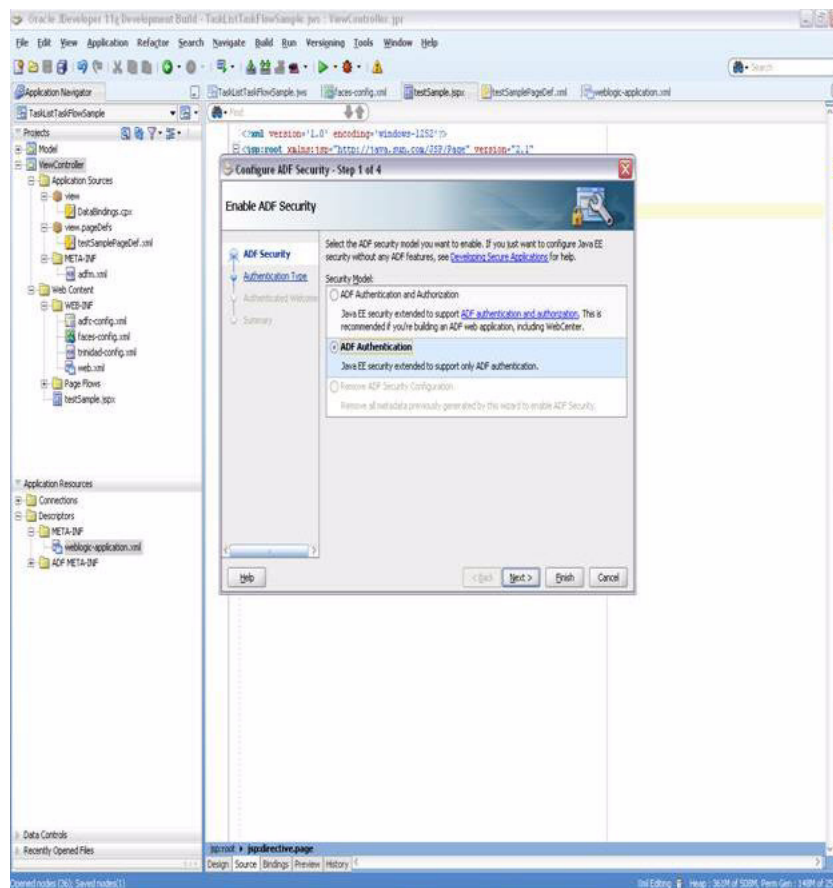
12. Secure the application using ADF Security by navigating **Secure** then **Configure ADF Security...** from the application-level menu as [Figure A-17](#) shows.

Figure A-17 Navigating to Secure the Application



The Enable ADF Security dialog box appears.

13. Select ADF Authentication as shown in [Figure A-18](#).

Figure A-18 Selecting ADF Authentication

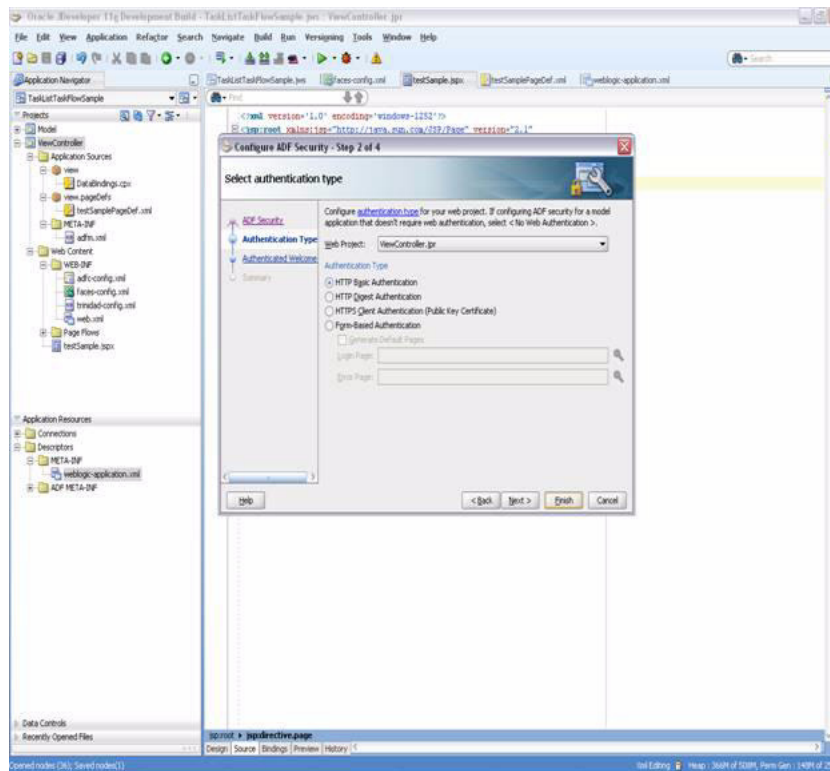
Click **Next**. The Select Authentication Type dialog box appears.

Note: If you choose ADF Authentication and Authorization, do the following:

1. In the Application Resources - Descriptors - META-INFO folder, open `jazn-data.xml`.
 2. Select Resource Grants.
 3. Select Task Flow type.
 4. Select **Show task flows imported from ADF libraries**.
The taskflows are listed in the Resources listing.
 5. Select the appropriate taskflow that you have consumed in the application—for example, `taskList-task-flow-definition`.
 6. Add **Granted to selected role** for the "view" permission.
-

14. Select HTTP Basic Authentication as shown in [Figure A-19](#).

Figure A-19 *Selecting HTTP Basic Authentication*



For information about enabling ADF security in a Fusion web application see *Oracle Fusion Middleware Fusion Developer's Guide for Oracle Application Development Framework*.

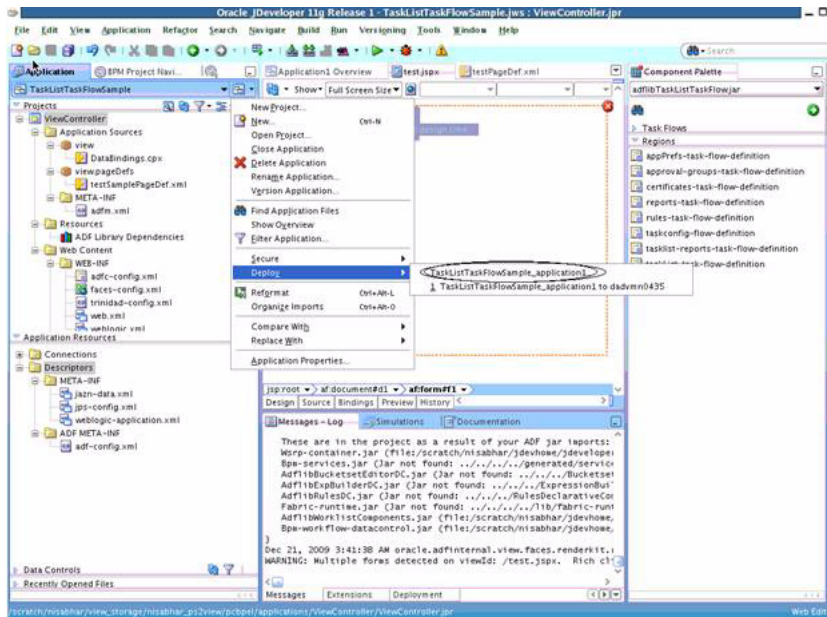
Click **Finish**.

Note: If you are using the task flow in federated mode, do the following:

- Pass the list of federated servers to the task flow. For more information, see [Section A.1.1.2, "federatedServers."](#)
 - Enable global trust between the federated servers. This is done so that the already ted user token is passed to all the federated servers. Do the following:
 1. Login to the Oracle WebLogic Server console.
 2. Under Domain Structures, select the domain name `base_domain`. The domain name may be different if a non-soa server is used. You can rename the domain name during configuration.
 3. Select the Security tab.
 4. Click the Advanced link (near the bottom **Save** button.)
 5. Give some password in the "Credential:" field. **(The same password needs to be given for all the federated servers).**
 6. Click **Save**.
 7. Restart the server.
-
-

15. Create an EAR deployment profile, build the EAR, and deploy it. To deploy the EAR, do the following:
 - a. From the application-level menu, navigate to **Deploy** then **TaskListTaskFlowSample_Appl....**

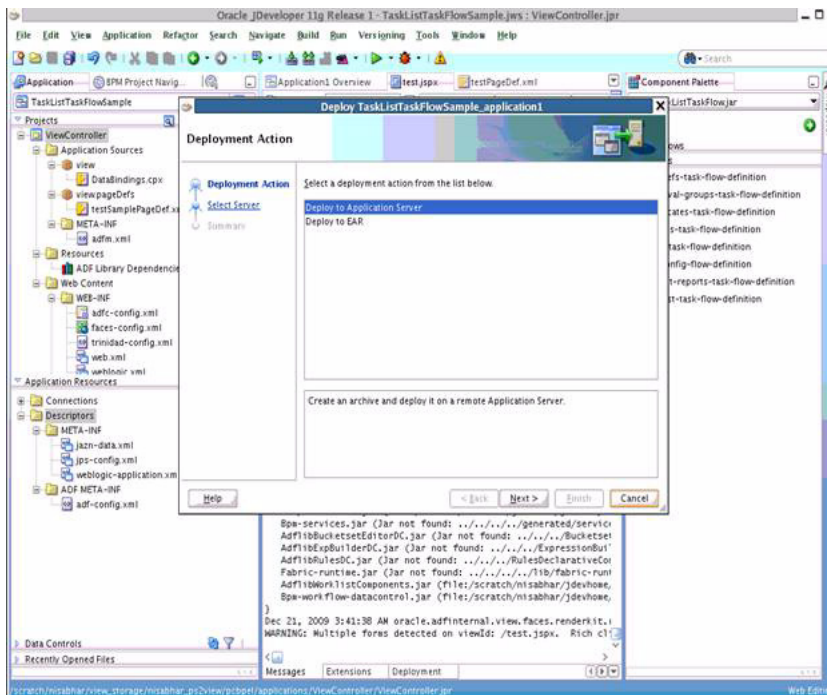
Figure A-20 Deploying the Application



The Deployment Action dialog box appears.

- b. Select **Deploy to Application Server** as shown in [Figure A-21](#).

Figure A-21 Deploying to Application Server



Click **Next**. The **Select Server** dialog box appears.

16. Select the server. Deselect **Deploy to all Server instances in the domain**. Click **Next**.

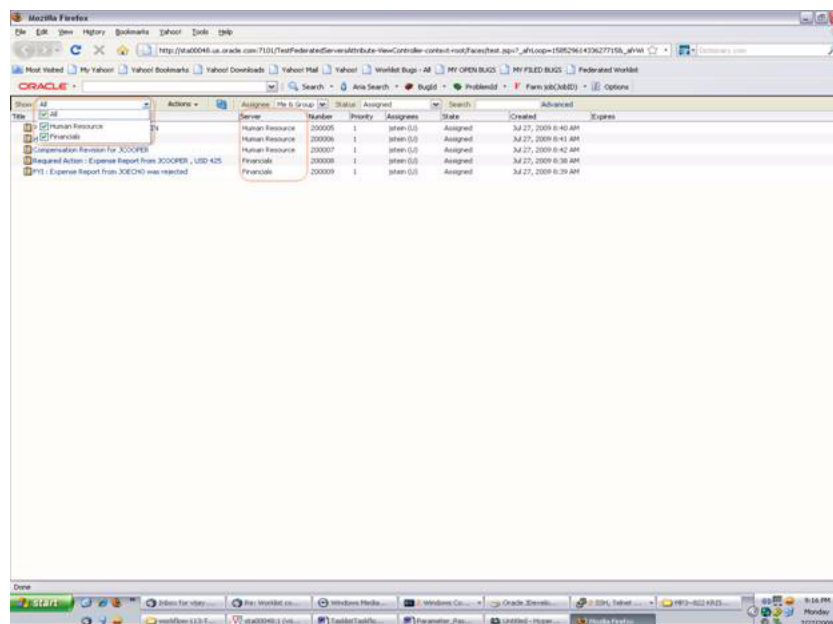
The **Server Instances** dialog box appears.

17. Select the server instance and click **Finish**.
18. Access the following link, specifying the proper values for server and port.
<http://server:port/TaskListTaskFlowSample-ViewController-content-root/faces/testSample.jspx>.

A login popup appears. Log in as any user. The task list appears for the logged-in user as shown in [Figure A-22](#).

If the task flow is used in federated mode, then the list of servers appear in the Show list. Selecting any combination of servers from the list refreshes the task list to show all the tasks belonging to the selected servers. If you passed the parameter `showServerColumn` as true, then the server column appears in the task list and indicates the server to which the task belongs.

Figure A-22 Process Workspace Task List



Click on any of the tasks title links to see the task details in a new browser window.

A.5.2 Sample 2: Creating an ADF Page with Task Flows

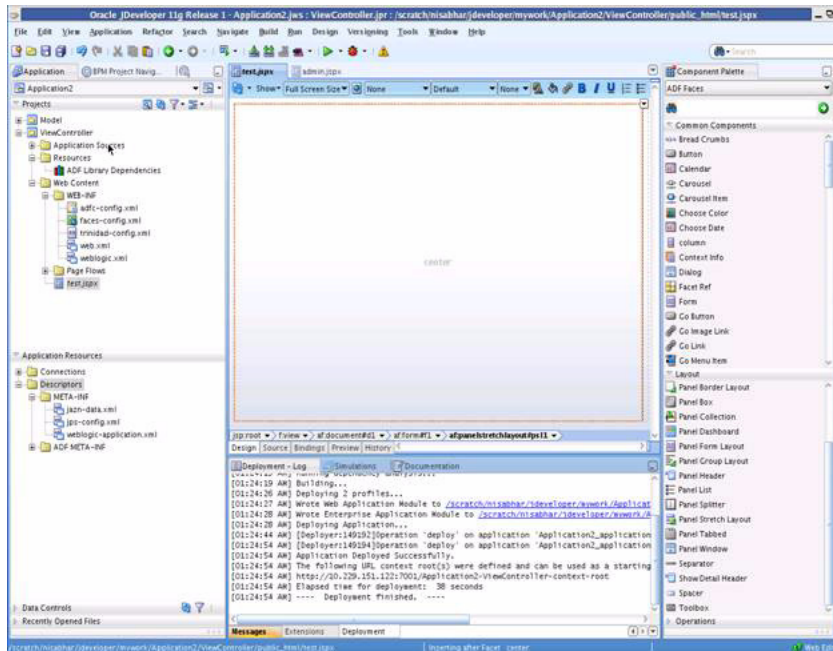
This sample shows how to create an ADF page and add three task flows to the page.

The page will be divided into two parts. If the user selects TaskFlow from left side, the corresponding task flow appears on the right side.

To create the ADF page with task flows:

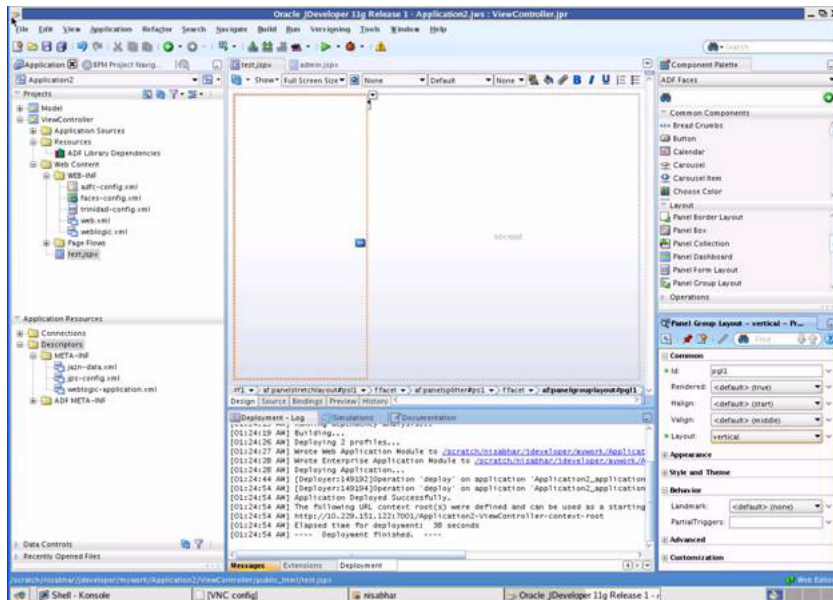
1. Follow Steps 1 to 6 of [Section A.5.1, "Sample 1: Creating an Application with an Embedded Tasklist Task Flow."](#)
2. Configure the JSPX page as follows:
 - a. In Component Palette, select ADF Faces.
 - b. Drag and drop the Panel Stretch Layout on to the JSPX page.
 - c. Delete Top, Start, Bottom, and End from the JSPX page. The JSPX page will look like [Figure A-23](#).

Figure A-23 *Configuring the JSPX Page*



3. Drag and drop the Panel Splitter from the Component Palette into the JSPX page. The JSPX page now appears as shown in [Figure A-24](#).

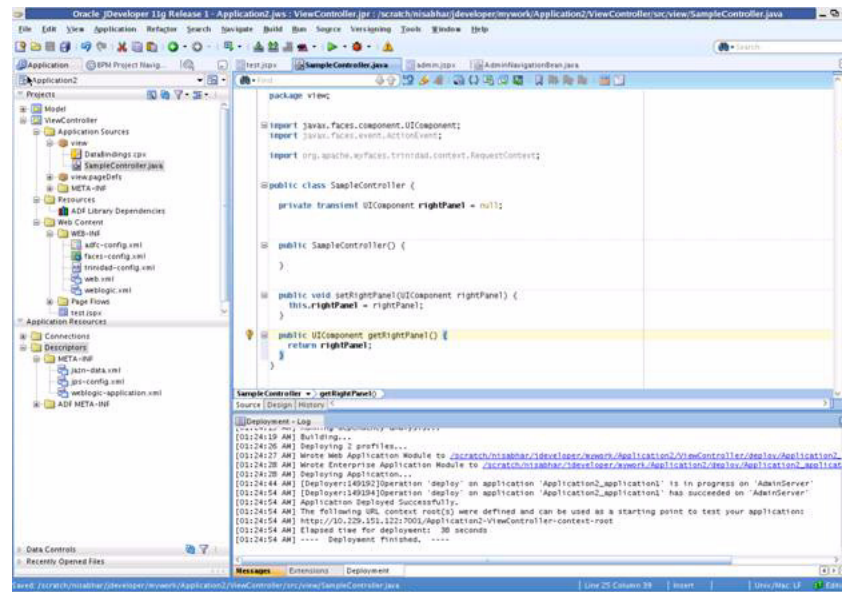
Figure A-24 *Split Panel in the JSPX Page*



4. In the navigator, right-click the View Controller and create a new Java Class. Name it `SampleController.java`.

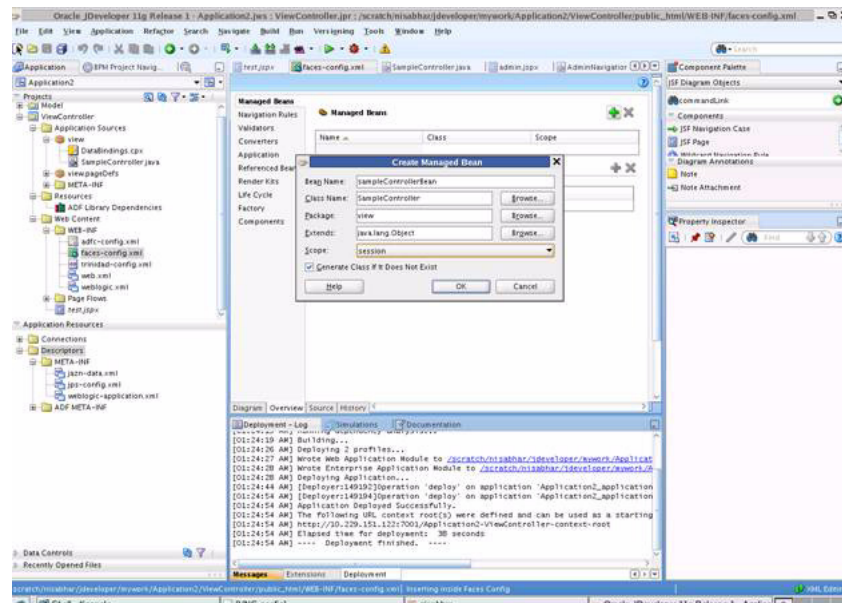
Add private transient `UIComponent rightPanel = null;` with getters and setters as shown in [Figure A-25](#).

Figure A–25 Creating SampleController.java



5. In the navigator, select the Faces-config.xml file. Specify the Managed Bean, naming it as sampleControllerBean as shown in Figure A–26.

Figure A–26 Specifying the Managed Bean



6. Drag and Drop Panel Stretch Layout on to the Second Facet. Delete Top, Start, Bottom, End from it. And Specify a binding for PanelStretchLayout from the Property Inspector as #{sampleControllerBean.rightPanel}.
7. Drag and drop a link from the Component Palette into the JSPX page. In the Property Inspector specify the text as Rules. In SampleController Java file, add the following code:

```
private String selectedLink = "RULES"; with getter and setters
```

```
public void displayRules(ActionEvent event){
    setSelectedLink("RULES");
    if(getRightPanel() != null){
        RequestContext.getCurrentInstance().addPartialTarget(getRightPanel());
    }
}
```

Add the Action Listener property for the rules as follows:

```
#{sampleControllerBean.displayRules}
```

8. Drag and drop a link from the Component Palette into the JSPX page. In the Property Inspector, specify the text as Certificates. In the SampleController Java file, add following code:

```
public void displayCertificates(ActionEvent event){
    setSelectedLink("CERTIFICATES");
    if(getRightPanel() != null){
        RequestContext.getCurrentInstance().addPartialTarget(getRightPanel());
    }
}
```

Add the Action Listener property for the certificates as follows:

```
#{sampleControllerBean.displayCertificates}
```

9. Drag and drop a link from the Component Palette into the JSPX page. In the Property Inspector, specify the text as Reports. In the SampleController Java file, add following code:

```
public void displayReports(ActionEvent event){
    setSelectedLink("REPORTS");
    if(getRightPanel() != null){
        RequestContext.getCurrentInstance().addPartialTarget(getRightPanel());
    }
}
```

Add the Action Listener property for the reports as follows:

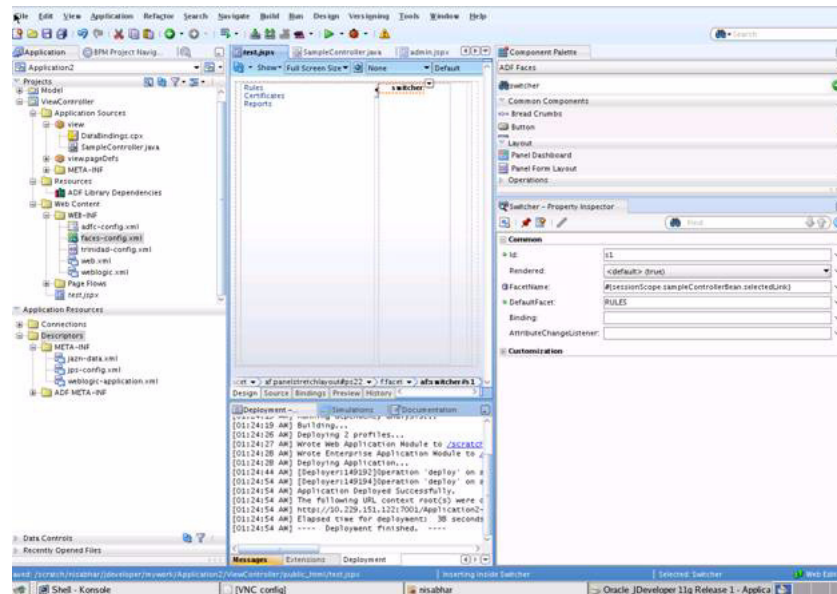
```
#{sampleControllerBean.displayReports}
```

10. Drag and drop a switcher from the Component Palette into the center facet of the second facet.

In the Property Inspector, specify:

- the facet name as
`#{sessionScope.sampleControllerBean.selectedLink}`
- the default faces as RULES

Figure A-27 Adding and Specifying a Switcher



11. Inside `af:switcher` define a facet and name it `f:facet name="RULES"`. Inside this facet, drag and drop Rules-Task-Flow-Definition from the Component Palette (inside `adflibTaskListTaskFlow.jar`).
12. Inside `af:switcher` define another facet and name it `f:facet name="CERTIFICATES"`. Inside this facet, drag and drop Certificates-Task-Flow-Definition from the Component Palette (inside `adflibTaskListTaskFlow.jar`).
13. Inside `af:switcher` define another facet and name it `f:facet name="REPORTS"`. Inside this facet drag and drop Reports-Task-Flow-Definition from the Component Palette (inside `adflibTaskListTaskFlow.jar`).
14. Save your work.
15. Follow Steps 10 to 18 of Section A.5.1, "Sample 1: Creating an Application with an Embedded Tasklist Task Flow."

A.6 Sample: Wf_client_config.xml File

This section provides a sample of the client configuration file, `Wf_client_config.xml`.

If you don't want to include the server in the federated servers list, put `excludeFromFederatedList="true"` in the `<server>` element.

The client type needs to be specified explicitly on the `<server>` element in the XML.

- If you are using a remote client, enter `clientType="REMOTE"`.
- If you are using a SOAP client, enter `clientType="SOAP"`.

In Example A-1, REMOTE client type is used.

Example A-1 Wf_client_config.xml

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<workflowServicesClientConfiguration
xmlns="http://xmlns.oracle.com/bpel/services/client">
```

```
<server name="default" default="true" excludeFromFederatedList="true"
clientType="REMOTE">
  <localClient>
<participateInClientTransaction>>false</participateInClientTransaction>
  </localClient>
  <remoteClient>
    <serverURL>t3://sta00048.us.oracle.com:7001</serverURL>
<initialContextFactory>weblogic.jndi.WLInitialContextFactory</initialContextFactor
y>
<participateInClientTransaction>>false</participateInClientTransaction>
  </remoteClient>
  <soapClient>
    <rootEndPointURL>http://sta00048.us.oracle.com:7001</rootEndPointURL>
    <identityPropagation mode="dynamic" type="saml">
      <policy-references>
        <policy-reference enabled="true" category="security"
          uri="oracle/wss10_saml_token_client_policy"/>
      </policy-references>
    </identityPropagation>
  </soapClient>
</server>
<server name="ERP" clientType="REMOTE">
  <soapClient>
    <rootEndPointURL>http://sta00147.us.oracle.com:7001</rootEndPointURL>
    <identityPropagation mode="dynamic" type="saml">
      <policy-references>
        <policy-reference enabled="true" category="security"
          uri="oracle/wss10_saml_token_client_policy"/>
      </policy-references>
    </identityPropagation>
  </soapClient>
  <remoteClient>
    <serverURL>t3://sta00147.us.oracle.com:7001</serverURL>
<initialContextFactory>weblogic.jndi.WLInitialContextFactory</initialContextFactor
y>
  <participateInClientTransaction>>false</participateInClientTransaction>
  </remoteClient>
</server>
<server name="CRM" clientType="REMOTE">
  <soapClient>
    <rootEndPointURL>http://sta00048.us.oracle.com:7001</rootEndPointURL>
    <identityPropagation mode="dynamic" type="saml">
      <policy-references>
        <policy-reference enabled="true" category="security"
          uri="oracle/wss10_saml_token_client_policy"/>
      </policy-references>
    </identityPropagation>
  </soapClient>
  <remoteClient>
    <serverURL>t3://sta00048.us.oracle.com:7001</serverURL>
<initialContextFactory>weblogic.jndi.WLInitialContextFactory</initialContextFactor
y>
  <participateInClientTransaction>>false</participateInClientTransaction>
  </remoteClient>
</server>
</workflowServicesClientConfiguration>
```

A.7 Sample: Bean with the Method Returning the WorkflowServicesClientConfigurationType Object

This section provides a sample: bean with the method returning the WorkflowServicesClientConfigurationType object.

Note: You must set the client type explicitly while building the JAXB object. For example:

```
ServerType server1 = new ServerType();
server1.setClientType("REMOTE"); // If REMOTE client
is to be used.
```

Or:

```
server1.setClientType("SOAP"); // If SOAP client is
to be used.
```

If you do not specify anything for the client type, the default is SOAP.

```
package view;

import java.util.List;

import oracle.bpel.services.workflow.client.config.IdentityPropagationType;
import oracle.bpel.services.workflow.client.config.PolicyReferenceType;
import oracle.bpel.services.workflow.client.config.PolicyReferencesType;
import oracle.bpel.services.workflow.client.config.RemoteClientType;
import oracle.bpel.services.workflow.client.config.ServerType;
import oracle.bpel.services.workflow.client.config.SoapClientType;
import
oracle.bpel.services.workflow.client.config.WorkflowServicesClientConfigurationType;
import weblogic.nodemanager.common.ServerType;

public class WorklistBackingBean {
    WorkflowServicesClientConfigurationType wscct = null;

    public WorklistBackingBean() {
        super();
    }

    public WorkflowServicesClientConfigurationType getWSCC() {
        if (wscct == null) {
            wscct = new WorkflowServicesClientConfigurationType();
            List<ServerType> servers = wscct.getServer();
            /***/ Setting default server in the list ***/
            ServerType defaultServer = new ServerType();
            defaultServer.setClientType("SOAP");
            servers.add(defaultServer);
            defaultServer.setDefault(true);
            //If this is true, the server is excluded from federated server list
            //By default it is false
            //defaultServer.setExcludeFromFederatedList(true);
            defaultServer.setName("default");
            RemoteClientType rct = new RemoteClientType();
            rct.setServerURL("t3://defaultHost:port");
            rct.setInitialContextFactory("weblogic.jndi.WLInitialContextFactory");
            rct.setParticipateInClientTransaction(false);
```

```
defaultServer.setRemoteClient(rct);
SoapClientType sct = new SoapClientType();
PolicyReferencesType prts = new PolicyReferencesType();
PolicyReferenceType prt = new PolicyReferenceType();
prt.setEnabled(true);
prt.setCategory("security");
prt.setUri("oracle/wss10_saml_token_client_policy");
prts.getPolicyReference().add(prt);
IdentityPropagationType ipt = new IdentityPropagationType();
ipt.setMode("dynamic");
ipt.setType("saml");
ipt.setPolicyReferences(prts);
sct.setRootEndPointURL("http://defaultHost:port");
sct.setIdentityPropagation(ipt);
defaultServer.setSoapClient(sct);
/***** Setting Federated Server 1 to the list *****/
ServerType server1 = new ServerType();
server1.setClientType("SOAP");
servers.add(server1);
server1.setName("Human Resource");
RemoteClientType rct1 = new RemoteClientType();
rct1.setServerURL("t3://HumanResourcesHost:port");
rct1.setInitialContextFactory("weblogic.jndi.WLInitialContextFactory");
rct1.setParticipateInClientTransaction(false);
server1.setRemoteClient(rct1);
SoapClientType sct1 = new SoapClientType();
PolicyReferencesType prts1 = new PolicyReferencesType();
PolicyReferenceType prt1 = new PolicyReferenceType();
prt1.setEnabled(true);
prt1.setCategory("security");
prt1.setUri("oracle/wss10_saml_token_client_policy");
prts1.getPolicyReference().add(prt1);
IdentityPropagationType ipt1 = new IdentityPropagationType();
ipt1.setMode("dynamic");
ipt1.setType("saml");
ipt1.setPolicyReferences(prts1);
sct1.setRootEndPointURL("http://HumanResourcesHost:port");
sct1.setIdentityPropagation(ipt1);
server1.setSoapClient(sct1);

}
return wscc;
}
}
```

Customizing a Resource Bundle

This appendix explains how an administrator of either Oracle Business Process Management Workspace or Oracle BPM Worklist can add or modify strings shown in the application by creating a custom resource bundle.

Note: Create a temporary directory at any location, for example, /scratch/jstein/sharedLib. This will contain all the individual JAR files as well as the shared library JAR file, custom.client.applib.jar. Do this step before doing any of the following steps.

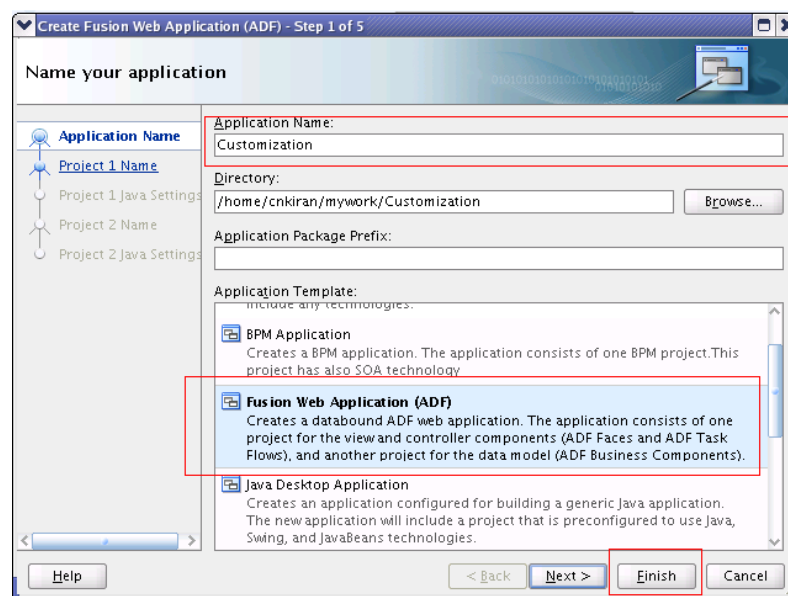
B.1 How to Customize a Resource Bundle

This section tells you how to customize a resource bundle.

To customize a resource bundle:

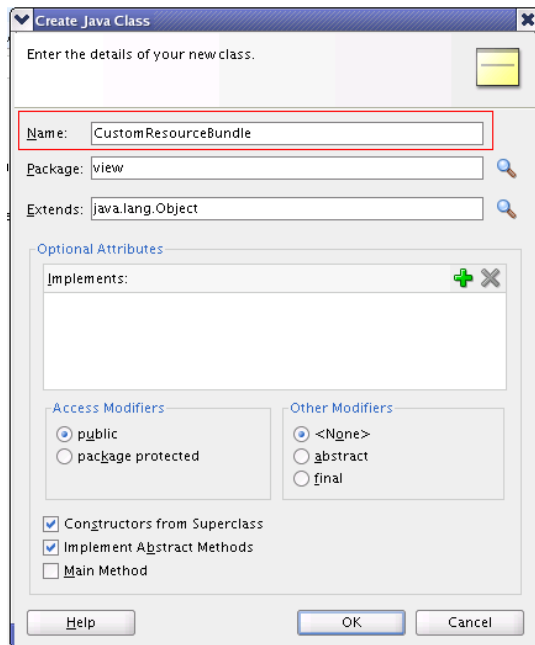
1. Create an Oracle Application Development Framework Project in Oracle JDeveloper. [Figure B-1](#) shows the Create Fusion Web Application (ADF) dialog box.

Figure B-1 Creating an ADF Project in JDeveloper



2. Create a Java class and name it CustomResourceBundle. [Figure B-2](#) shows the Create Java Class dialog box.

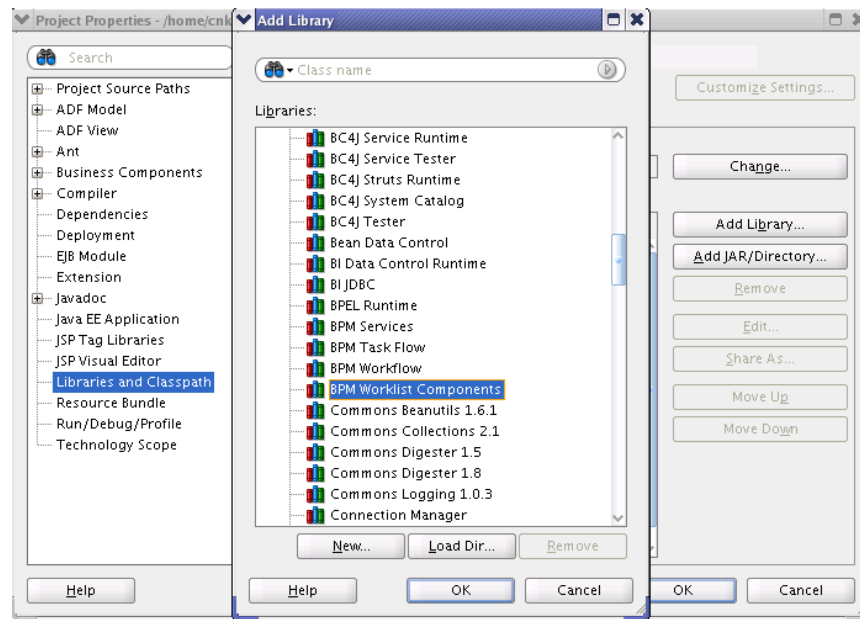
Figure B-2 Creating a Java Class



3. Include Worklist Application JAR files. [Figure B-3](#) shows the BPM Worklist Components library being added.

To include the Worklist Application JAR files:

- a. From the Project Properties panel, select **Libraries and Classpath**.
- b. Select **Add Library**.
- c. From the Libraries list, select BPM Worklist Components.
- d. Click **OK**.

Figure B-3 Including Worklist Application in the Library

4. Modify the CustomResourceBundle class. The class should look as in [Figure B-4](#):

Figure B-4 Modifying the CustomResourceBundle Class

```

CustomResourceBundle_en.java x WorkflowResourceBundle_ar.java x WorkflowResourceBundle.java x AppPreference:
Find
6 public CustomResourceBundle_en() {
7     super();
8 }
9
10 /**
11  * Since this method is being overwritten, it will make the super.getContents() invisible
12  * to the caller. Hence we need to copy all the resources (contents) here and concatenate
13  * with the newly added resources and return the resultant Object array.
14  *
15  * @return
16  */
17 public Object[] getContents() {
18
19     Object[] parentKeys = super.getContents();
20     int superLength = parentKeys.length;
21     int length = contents.length;
22     Object[] result = new Object[superLength + length] [2];
23     int i = 0;
24
25     for (i = 0; i < superLength; i++) {
26         result[i] = parentKeys[i];
27     }
28
29     for (int j = 0; j < superLength + length; j++) {
30         result[j] = contents[j];
31     }
32
33     return result;
34 }
35
36 static final Object[] contents =
37 { { "LABEL_WORKLIST_CUSTOM_TITLE", "EN_Customized Worklist Title" },
38   { "LABEL_WORKSPACE_CUSTOM_TITLE", "EN_Customized Workspace Title" }, };
39 }

```

Make sure that this class extends the correct WorklistResourceBundle and that the `getContents()` method is implemented the same way in all the supported language bundles.

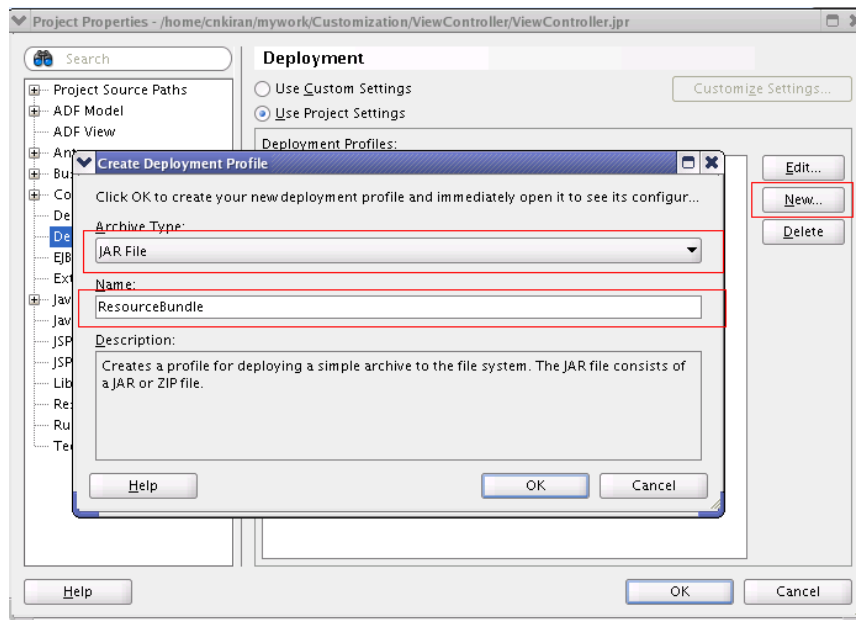
5. Create Various Custom Resource Bundles for Other Language Support

You can create various custom resource bundles with different names under the same package. When you do so, you must append the locale to the file name. For example, for English US, your Custom Resource Bundle name will be `CustomResourceBundle_en.java`. Make sure you implement the `getContents()` method the same way as described in Step 4.

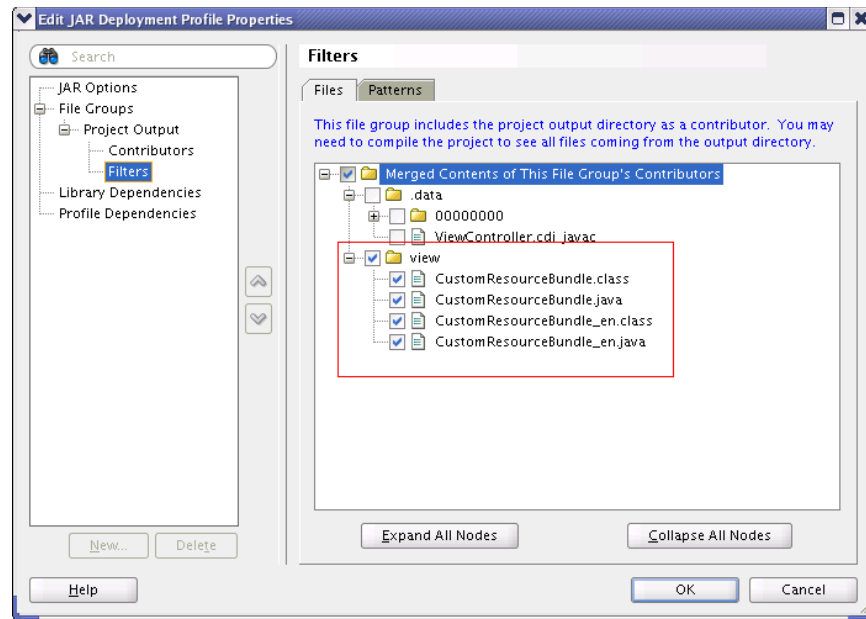
Note: By default, you need to create both the file `CustomResourceBundle.java` and the file `CustomResourceBundle_en.java`. This is because we use the English (`_en`) resource bundle by default during the application login. Otherwise, login would fail.

6. Create a new JAR deployment profile as shown in [Figure B-5](#).

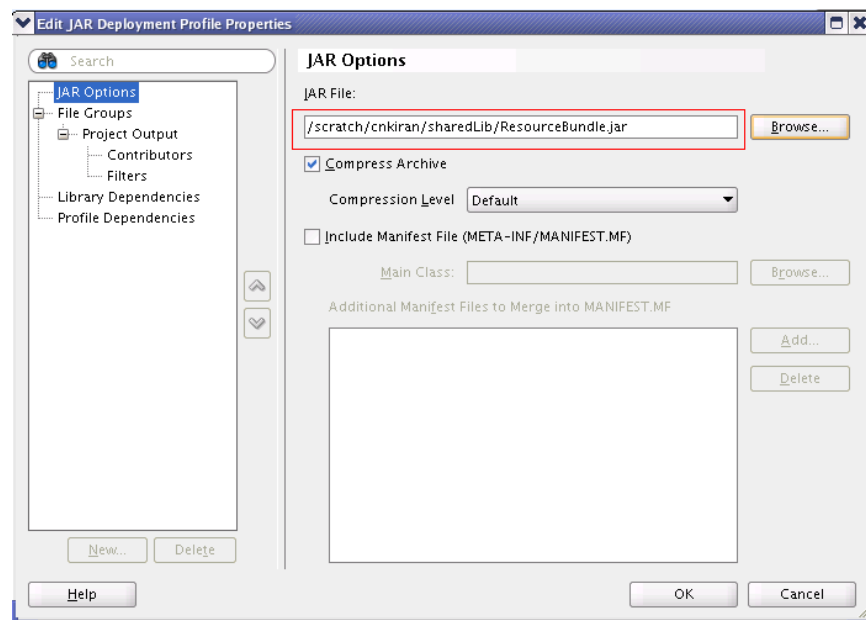
Figure B-5 *Creating a Deployment Profile for a JAR File*



7. Make sure your JAR deployment profile looks like what is shown in [Figure B-6](#).

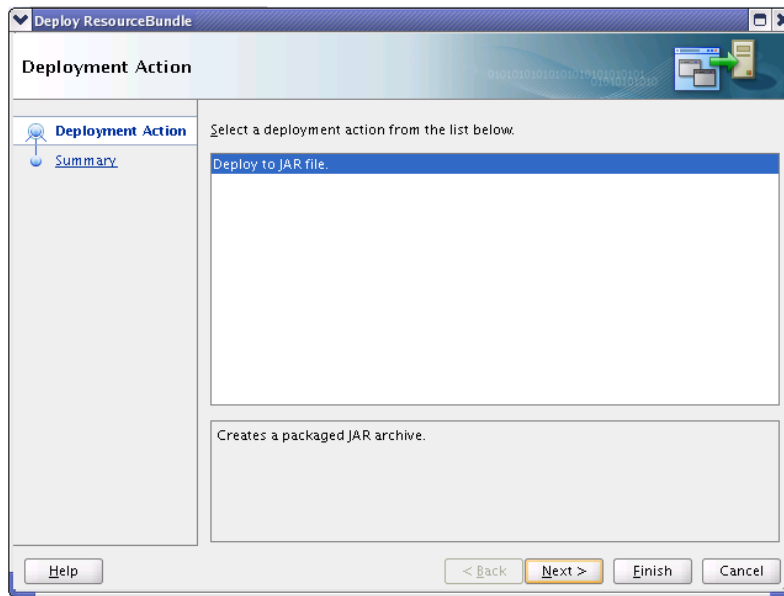
Figure B-6 Verifying JAR Deployment Profile

8. Edit the JAR file location to point to the newly created directory as shown in [Figure B-7](#).

Figure B-7 Editing the JAR Deployment Profile

9. Deploy the resource bundle as a JAR file as shown in [Figure B-8](#).

Figure B-8 *Deploying the Resource Bundle*



The file is then deployed to the pre-defined location, namely, the shared library directory.

For more information about resources bundles and how to customize them, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

Customizing Applications in Process Workspace and the Worklist Application

This appendix explains how, for Process Workspace, you can create customized external applications and links that become available in the External Applications panel. It also explains how, for both Process Workspace and the Worklist Application, you can specify the columns that appear in the Task Details pane.

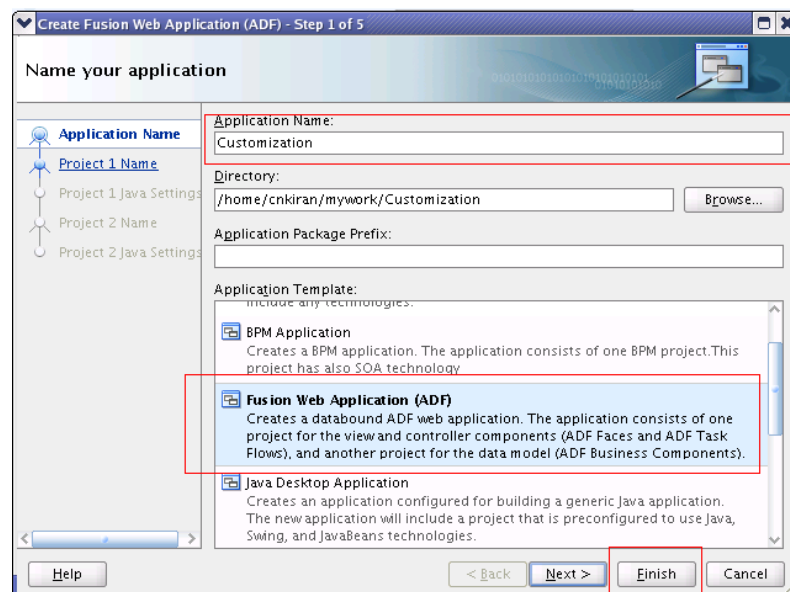
Note: Create a temporary directory at any location, for example, /scratch/jstein/sharedLib. This will contain all the individual JAR files as well as the shared library JAR file, custom.client.applib.jar. Do this step before doing any of the following steps.

C.1 How to Customize an Application

Text.

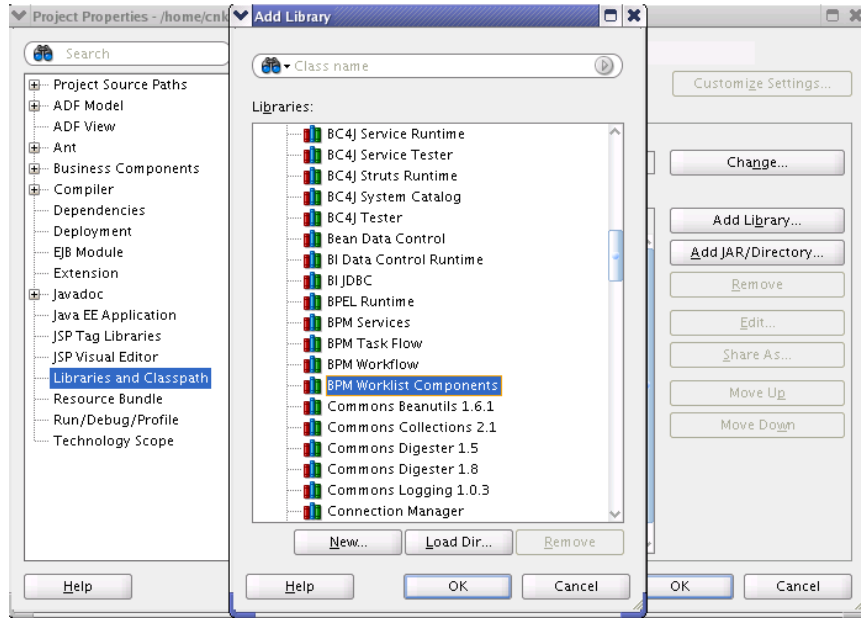
1. Create an Oracle Application Development Framework Project in Oracle JDeveloper. [Figure C-1](#) shows the Create Fusion Web Application (ADF) dialog box.

Figure C-1 Creating an ADF Project in JDeveloper



2. Create a Java class and name it `WorkspaceCustomisationImpl`.
3. Include Worklist Application JAR files. [Figure C-2](#) shows the BPM Worklist Components library being added.

Figure C-2 Including Worklist Application in the Library



4. Create a customization class. This sample class modifies the inbox columns and customize external application and links. For example: `WorkspaceCustomisationImpl` and its contents as follows:

```
package view.customisationimpl;

import java.util.ArrayList;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import oracle.bpel.services.workflow.client.IWorkflowServiceClient;
import oracle.bpel.services.workflow.runtimeconfig.IRuntimeConfigService;
import
oracle.bpel.services.workflow.runtimeconfig.model.AttributeLabelTypeimport
oracle.bpel.services.workflow.runtimeconfig.model.AttributeLabelUsageList;
e;
import oracle.bpel.services.workflow.runtimeconfig.model.AttributeLabelUsages;
import oracle.bpel.services.workflow.verification.IWorkflowContext;
import oracle.bpm.ui.customization.CustomLink;
import oracle.bpm.ui.customization.IBPMUICustomizations;

public class WorkspaceCustomisationImpl implements IBPMUICustomizations {
    private static Map displayNameMap = new HashMap();
    public WorkspaceCustomisationImpl() {
        displayNameMap.put("instanceId", "Instance Id");
        displayNameMap.put("protectedTextAttribute1", "Business Status");
    }
    public List<CustomLink> getCustomGlobalLinks() {
        CustomLink globalLink1 =
            new CustomLink("Oracle Home Page", "www.oracle.com", null);
        CustomLink globalLink2 =
```

```

        new CustomLink("Self Services Application",
"http://global-ebusiness.oraclecorp.com/",
        null);
    CustomLink globalLink3 =
        new CustomLink("BUG DB", "https://bug.oraclecorp.com/", null);
    List<CustomLink> globalLinks = new ArrayList<CustomLink>();
    globalLinks.add(globalLink1);
    globalLinks.add(globalLink2);
    globalLinks.add(globalLink3);
    return globalLinks;
}

public String getColumnNames() {
    return "title,taskNumber,instanceId,creator,protectedTextAttribute1";
}

private static void initDisplayMap(IWorkflowServiceClient client,
    IWorkflowContext context) {
    // u can use service to load all label name for text attributes
    if (displayNameMap == null) {
        synchronized (String.class) {
            if (displayNameMap == null) {
                displayNameMap = new HashMap();
                try {
                    IRuntimeConfigService service =
                        client.getRuntimeConfigService();
                    AttributeLabelUsageList list =
                        service.getAttributeLabelUsages(context, "Text");
                    List<AttributeLabelUsages> list1 =
                        list.getAttributeLabelUsages();
                    for (AttributeLabelUsages usage : list1) {
                        AttributeLabelType type = usage.getLabel();
                        displayNameMap.put(type.getTaskAttribute(),
                            type.getLabelName());
                    }
                } catch (Exception exc) {
                }
            }
        }
    }
}

public String getColumnDisplayName(IWorkflowServiceClient client,
}

}

}

public String getColumnDisplayName(IWorkflowServiceClient client,
    IWorkflowContext context,
    java.lang.String colName) {
public String getColumnDisplayName(IWorkflowServiceClient client,
    IWorkflowContext context,
    java.lang.String colName) {
    initDisplayMap(client, context);
    return (String)displayNameMap.get(colName);
}

}

    initDisplayMap(client, context);

```

5. Create a JAR deployment profile. Create a JAR file and name it customer-impl.jar.

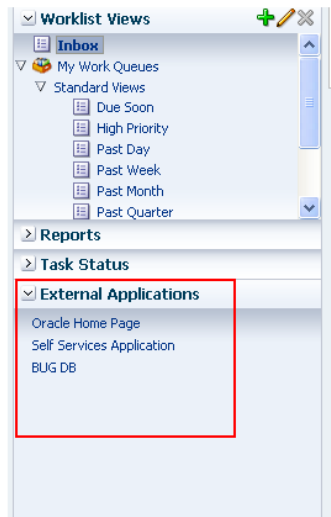
- 6. Deploy it as a part of the shared library, `custom.client.applib.jar`. To do this, update the `MANIFEST.MF` file and update the shared library as explained in [Appendix D, "Deploying Images and JAR files as Part of a Shared Library JAR file"](#).

Depending on your customization, you can now see its effects.

If your customization is for Process Workspace and involves either creating an external application or specifying inbox columns in the Task Details pane or both, you will see the following:

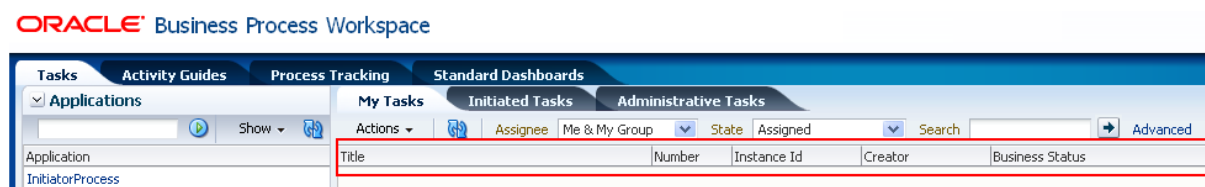
- Your custom application listed in the External Applications panel of the Process Workspace Home page as shown in [Figure C-3](#).

Figure C-3 External Applications Panel in Process Workspace



- The columns of the Task Details inbox adjusted according to your specifications as shown in [Figure C-4](#).

Figure C-4 Customized Columns in Task Details Pane



Deploying Images and JAR files as Part of a Shared Library JAR file

If you have customized an application, a skin, or a resource bundle, you need to deploy it as a JAR file within a shared library JAR file. This appendix explains how to do this.

D.1 How to Deploy Images and JAR Files as Part of a Shared Library JAR File

In this section, we use an example in which you include in a shared library JAR file the files you previously created:

- `customSkin.jar` as described in [Section 9.1.6, "How to Choose a Skin in Process Workspace"](#)
- `customer-impl.jar` as described in [Appendix C, "Customizing Applications in Process Workspace and the Worklist Application"](#)
- `ResourceBundle.jar` as described in [Appendix B, "Customizing a Resource Bundle"](#).

To deploy images and JAR files as part of a shared library JAR file:

1. Create a temp directory, `mkdir temp`.
2. Unzip all the jar files into the temp folder.

```
unzip customSkin.jar -d temp/  
unzip customer-impl.jar -d temp/  
unzip ResourceBundle.jar -d temp/
```

Once you do this, you can see a `META-INF` folder included in the temp folder.

Note: You can create an `images` directory inside the `temp` directory and copy your customized logo file into it. Then from the application preferences, you can refer to it as `/images/customizedLogo.jpg`.

3. Create a `MANIFEST.MF` file under `META-INF` directory. This file should contain the following:

```
Manifest-Version: 1.0  
Ant-Version: Apache Ant 1.7.1  
Created-By: 19.1-b02 (Sun Microsystems Inc.)
```

```
Implementation-Vendor: Oracle
Implementation-Title: Custom Client Applib
Implementation-Version: 1.0
Product-Name: Custom Client Applib
Specification-Version: 1.0
Extension-Name: custom.client.applib
```

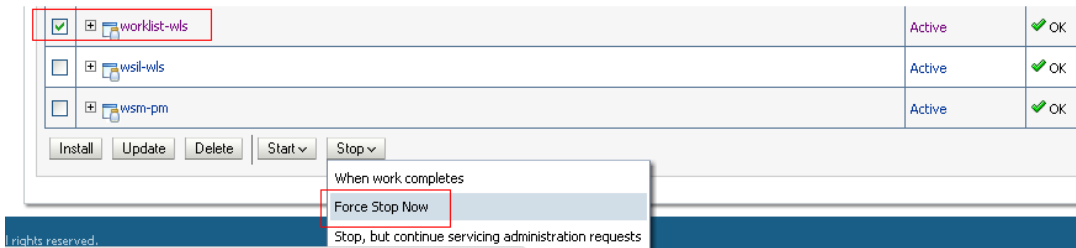
4. To ensure that all required class files and other skin files are available in the shared library, package everything into the file `custom.client.applib.jar`. To do this, navigate to the `temp` directory and run the following command:

```
jar -cvfm custom.client.applib.jar META-INF/MANIFEST.MF *
```

You have now created the shared library under the `temp` directory. It looks like this: `temp/custom.client.applib.jar`.

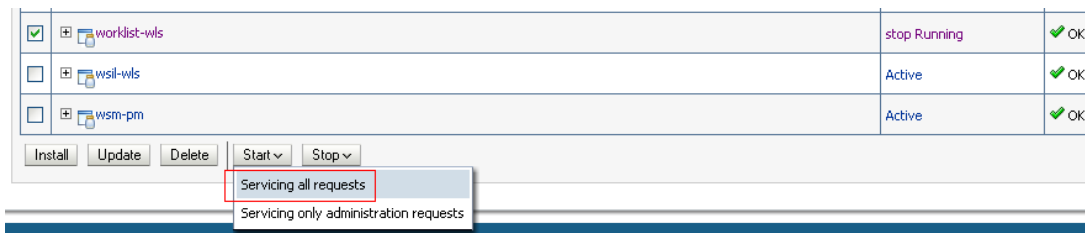
5. Deploy `custom.client.applib.jar` on the Oracle WebLogic Server as a shared library. To do this: From the Oracle WebLogic Server Console, click **Deployments and Install**, navigate to the JAR file location, and deploy.
6. Restart the Worklist Application or Process Workspace from the Oracle WebLogic Server. [Figure D-1](#) shows the interface for restarting the Worklist Application.

Figure D-1 Stopping Worklist Application



[Figure D-2](#) shows the Oracle WebLogic Server interface for restarting the Worklist Application.

Figure D-2 Restarting Worklist Application



7. Log in to either Worklist Application or Process Workspace, navigate to the Application Preferences page, and specify your customized items. [Figure D-3](#) highlights the fields to specify.

Figure D–3 Setting Application Preferences

Login page realm label LABEL_LOGIN_REALM

Resource bundle view.CustomResourceBundle

Use language settings of Browser Identity Provider

Branding And Skinning

* Branding Logo /faces/logo.png

* Branding Title LABEL_WORKLIST_CUSTOM_TITLE

Choose a Skin sparty

Application customization class name

- simple
- minimal
- blafplus-medium
- blafplus-rich
- blafplus
- fusion-base
- fusion
- fusion-11.1.1.3-0
- sparty
- fusionFx
- workspace

Note: To be sure that your branding logo is retrieved, in the **Branding Logo** field, be sure to precede the file name of your logo with the path name /faces/.

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