PRIMAVERA

P6 Oracle BPM 11g Integration Administrator's Guide
Release 8.0

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To view the P6 Commercial Notices and Disclosures for Documentation, go to the \Documentation\<language>\Notices and Disclosures folder of the P6 physical media or download.

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Preface

In This Chapter

P6 EPPM Documentation

You can access reference manuals and administrator's guides from the P6 EPPM Documentation Center, located in the \Documentation\<language> folder of the P6 EPPM physical media or download. Most documentation assumes a standard setup of the product, with full access rights to all features and functions.

Media packs include all files necessary to install P6 EPPM applications, all manuals and technical documents related to the installation, administration, and use of P6 EPPM components, and the Quick Install Guide. For information on the contents of the P6 EPPM Media Pack, see the *P6 EPPM Quick Install Guide*.

The following table describes documentation publications and lists the recommended readers by role. P6 EPPM roles are described in Installation Process Overview in the *P6 EPPM Administrator's Guide*.

Title	Description
P6 EPPM Administrator's Guide	Explains how to set up the P6 EPPM database, servers, and components; it also provides an overview of all the components in the P6 EPPM solution. The guide describes the procedures required to administer P6 EPPM, including setting up security and configuring global preferences. The P6 EPPM network administrator/database administrator and P6 administrator should read this guide.
P6 EPPM User's Guide	This guide explains how to plan, set up, and manage projects in a multiuser environment. If you are new to P6 EPPM, start with this guide to learn how to use the software effectively to plan and manage projects. When you need more detail, refer to the P6 Help. The program manager, project manager, resource/cost manager, and team leader should read this guide.
P6 Professional Help	Explains how to use P6 Professional to plan, set up, and

Title	Description
	manage projects in a multiuser environment. If you are new to P6 Professional, use this Help to learn how to use the software effectively to plan and manage projects. The P6 Professional administrator, program manager, project manager, resource/cost manager, and team leader should read this Help.
P6 Help	Describes how to create, manage, plan, and schedule projects, group projects into portfolios, administer all enterprise data, application settings, user accounts, and security profiles, maintain both the organizational breakdown structure (OBS) and enterprise project structure (EPS), manage resources and roles, track risks, issues, and notebooks, create and reuse templates, evaluate budgets, analyze performance and ROI for project portfolios, participate in workflows and document reviews, approve timesheets, and generate reports. The operations executive, P6 EPPM and P6 administrator, program manager, project manager, resource/cost manager, and team leader should read this Help.
P6 Progress Reporter Administrator Help	Describes how to enter database connection information for the P6 Progress Reporter server and modify P6 Progress Reporter server and application settings. The P6 EPPM network administrator/database administrator should read this Help.
P6 Progress Reporter Help	Describes how to use P6 Progress Reporter to enter and update time spent on assignments. Team members should read this Help.
Primavera Timescaled Logic Diagram Help	Describes how to create, modify, and manage Timescaled Logic Diagrams. Timescaled Logic Diagrams condense the project schedule displayed in the Gantt Chart into a more readable, easier to understand format that provides a snapshot of the entire project plan and the chains of activities that drive the project schedule.
P6 Integration API Administrator's Guide	Explains how to install and configure the P6 Integration API, which allows direct access to P6 EPPM via Java. Those creating client code in Java and needing direct access to the P6 EPPM database should read this guide.
P6 Web Services Administrator's Guide,	Explains how to install and configure P6 Web Services, which enables organizations to seamlessly integrate P6

Title	Description
P6 Web Services Programmer's Guide, and *P6 Web Services Reference Manual*	EPPM functionality into other applications using web services standards. The *P6 Web Services Programmer's Guide*, available as an HTML help system, describes how to invoke, use, and troubleshoot the available services/operations within supported environments. The *P6 Web Services Reference Manual*, also available as an HTML help system, describes all services and operations available in P6 Web Services in a comprehensive manner.
P6 SDK *Web-based documentation*	Describes how to use the P6 SDK to connect to the P6 EPPM database. The tables, fields, and stored procedures that you can access through the P6 SDK are described. Examples are also provided to show how you can use the P6 SDK to perform several basic tasks, such as creating a new project or assigning a resource to a project activity. The P6 EPPM network administrator/database administrator and P6 administrator should read this documentation, which is available in *local drive*\Program Files\Oracle\Primavera P6 Professional\PMSDK\Doc\ by default. Double-click the INDEX.HTML file to open the Table of Contents.
P3 to P6 EPPM Migration Guide	This guide provides best practices for migrating your P3 data to P6 EPPM, and details how P3 functionality maps to P6 EPPM functionality.
P6 Reporting Database Administrator's Guide	This document explains how to install and configure the P6 Reporting Database application, and generate the ODS database. It describes how to install and configure the Oracle Gateway if the P6 Reporting Database is installed on a Microsoft SQL Server. It also provides information about how to run the Configuration Utility.
P6 Reporting Database User's Guide	Provides information about using ODS and Star (if you purchased P6 Analytics) with the P6 EPPM database to extract data that you can use to create reports.
P6 Analytics *Administrator's Guide*	This guide explains how to install and configure P6 Analytics, and how to generate Operational Data Store (ODS) and Star Schema Database (Star) databases.

Title	Description
P6 Analytics User's Guide	This guide explains how to use Operational Data Store (ODS) and Star Schema Database (Star) to extract data for use in creating reports through the Oracle Business Intelligence Suite.

Distributing Information to the Team

You can copy the online documentation to a network drive for access by project participants. Each team member can then view or print those portions that specifically relate to his or her role in the organization.

For the latest updates to the P6 EPPM 8.0 Documentation library, go to ***http://download.oracle.com/docs/cd/E17266_01/index.htm***.

Where to Get Support

If you have a question about using Oracle Primavera products that you or your network administrator cannot resolve with information in the documentation or help, go to:

http://www.oracle.com/us/support/index.html

This page provides the latest information on contacting Oracle Global Customer Support and the support renewals process.

Overview

The Oracle Business Process Management (BPM) Suite provides an integrated environment for developing, administering, and using business applications centered around business processes. BPM supports BPMN and BPEL standards from modeling and implementation to run time and monitoring.

P6 directly integrates with BPM 10g and 11g allowing you to initiate and manage workflows. Take advantage of the ready-to-run project initiation workflow sample included with P6 EPPM or design your own workflows.

Looking toward the future, you can optionally expand your investment in BPM to include workflows representing more stages of your application, program, project, or product development life cycle from design-time and implementation to run-time and application management.

The Oracle BPM Suite enables you to:

- Create and customize business processes, models, and standards using pre-defined components for web-based applications.
- Collaborate between process developers and process analysts.
- Expand business process management to include flexible, unstructured processes.
- Add dynamic tasks and support approval routing using declarative patterns and rules-driven flow determination.
- Unify different stages of your development life cycle by addressing end-to-end requirements for developing process-based applications. Oracle BPM 11g unifies the design, implementation, run time, and monitoring stages based on a Service Component Architecture (SCA) infrastructure. This allows different personas to participate through all stages of the workflow life-cycle.

To use Oracle BPM with P6, first determine whether you will be using BPM version 10g or 11g. Then, follow the instructions in the 10g or 11g edition of this guide.

> **Note**: Separate guides are available based on your version of BPM (10g or 11g). Make sure you are using the guide for your version of BPM.

BPM 11g and P6 Integration

In This Chapter

Pre-Integration Requirements: Start Here

Before continuing, make sure the following required conditions have been addressed:

1) You should already have installed and configured P6 EPPM. This includes already having completed any licensing requirements and downloading any documentation for P6 EPPM, including P6 and P6 Web Services.
   a. Make sure you have a working configuration of P6. The term *P6* refers to the web application user interface for the main component in the P6 EPPM suite.
   b. Make sure you have installed P6 Web Services and configured its authentication mode to match the same mode you intend to implement with BPM. For example, *Username Token Profile*, *SAML*, or *Cookies*.
   c. In order to verify the sample workflow, use the P6 Administrator application to make the following Web Services\Security settings:
      1. Set **Authentication mode** to *Username Token Profile*.
      2. Set **Username Token Profile/Nonce** to *Require Nonce: false*.
      3. Set **Username Token Profile/Created** to *Require Created: false*.
      4. Set **Message Protection** to *Require Timestamp: false*.
2) Download the Oracle BPM 11g Suite documentation from http://download.oracle.com/docs/cd/E14571_01/soa.htm.
3) Visit www.oracle.com/technetwork/middleware/bpm/downloads/index-100737.html to accept a license agreement and download a BPM package.
4) Install Oracle BPM 11g (11.1.1). Refer to the BPM documentation to guide you (http://st-curriculum.oracle.com/obe/fmw/obpm/11g/r1/install/installing_obpm11g.htm). If you will be designing and developing your own workflows in 11g, you will need JDeveloper with BPM extensions or Oracle Business Process Composer for 11g.
5) Read the *P6 Read Me* file to familiarize yourself with a few known issues relating to P6 and BPM.
6) Configure both BPM and P6 to work together by performing the steps in ***Integrating Oracle BPM 11g with P6*** (on page 14) in this guide.

Integrating Oracle BPM 11g with P6

Modifying the P6 Environment

Use the following connector file to configure BPM 11g with P6 Release 8:

1) Locate the `prm-bpm-connector-11g-v1.0.jar` file in the P6 media pack `\BPM Connector\11g` subfolder.
2) Copy the connector file listed above to the local drive of the P6 web application server. Determine the location of the BPM installation that you are using to integrate with P6. If you have multiple SOA Suite installations, ensure that you determine the location of the specific installation that you are integrating with P6.
3) Copy all the supporting jars from the BPM installation that you are using to integrate with P6 to a separate directory on the host where P6 is running. There are 34 supporting jar files:
   - `bpm-services.jar`
   - `com.bea.core.apache.xercesImpl_2.8.1.jar`
   - `com.bea.core.utils.classloaders_1.7.0.0.jar`
   - `com.oracle.jps-api_1.0.0.0.jar`
   - `com.oracle.ws.http_client_1.2.0.0.jar`
   - `com.oracle.ws.orawsdl_1.2.0.0.jar`
   - `dms.jar`
   - `fabric-common.jar`
   - `fabric-runtime.jar`
   - `javax.management.j2ee_1.0.jar`
   - `javax.xml.bind_2.1.1.jar`
   - `javax.xml.rpc_1.2.1.jar`
   - `jmxframework.jar`
   - `jmxspi.jar`
   - `jrf-api.jar`
   - `ojdl.jar`
   - `orabpel-exts.jar`
   - `orabpel.jar`
   - `oracle-soa-client-api.jar`
   - `oracle.bpm.bpmn-em-tools.jar`
   - `oracle.webservices.standalone.client.jar`
   - `orasaaj.jar`
   - `orawsrm.jar`
   - `soa-infra-mgmt.jar`
   - `weblogic.jar`
   - `wls-jse-client-wsm-dependencies.jar`
   - `ws.api_1.0.0.0.jar`

- wsclient.jar
- wsm-agent.jar
- wsm-policy-core.jar
- xml.jar
- xmlparserv2.jar
- com.bea.core.repackaged.asm_1.0.0.0_3-2-0.jar
- com.bea.core.utils.full_1.8.0.0.jar

Notes:

- The jars must be from the same BPM installation that will be integrated with P6.
- Copy the P6 BPM connector file into one folder and the jars from the BPM installation into a separate sibling folder. Do not use the same folder. This makes it easier to identify which DLLs came from where, without having to refer back to documentation. For example, when an administrator later needs to update just the connector files or jars for any reason, it would be less confusing for them if they were in separate directories.

Configuring P6 to Connect to Oracle BPM

1) In the P6 Administrator application, click the **Configurations** tab and expand **Custom/<your configuration>/Database/Instance/BPM Settings**.
2) For the **Connector file location** setting, enter the full path to the location where you copied the connector file. For example:

   ```
   C:\bpm-connector\11g\prm-bpm-connector-11g-v1.0.jar
   ```

3) Set the **BPM library path** setting with the directory where you copied all the 11g jars.

   Notes:

   - This admin setting can contain multiple path elements separated by a semicolon. For example, `C:\bpm11g-client-jars;C:\bpm-11g-connector-jars`
   - If the above settings are incorrect or the BPM jar files are incomplete, you will be prompted with an error message when you try to try to configure the BPM. Verify that your settings and jar files are correct.

4) Right-click **BPM Configuration**, then select **Configure** to set options from the dialog box. If you receive an error message, check your values from the previous steps in this section.
5) To configure P6 to use BPM 11g, add the following settings:

> **Caution**: Do not put a forward slash / at the end of the URL. For example, it should read only `http://host:port`, and not `http://host:port/`.

a. **bpm.workspace.url**: Enter an address in the form of `http://host:port` that indicates where the BPM Workspace application is hosted.

> **Note**: The host can be an IP address or a host name such as a machine name. The default BPM port is 7001 for WebLogic. For WebSphere, see ***http://publib.boulder.ibm.com/infocenter/wsdoc400/v6r0/index.jsp***.

b. **bpm.user**: Enter the BPM 11g user with administrative access to BPM.

c. **bpm.password**: Enter the password for the user.

d. **bpm.t3.url**: Enter the T3 URL for your configuration. For example:
`t3://host:port/soa-infra`

e. **bpm.security.realm**: Enter the name of the security realm used by BPM. This is `jazn.com` by default.

f. **bpm.soap.url**: Enter the URL for the SOAP services. Usually this URL takes the form of `http://host:port`.

g. **bpm.partition**: Enter the name of the SOA partition containing the BPM composite applications you would like to use in P6. The default partition name is `default`.

6) Click **OK** and save changes. When the configuration is complete, you will see a **BPM properties have been configured** message.

7) Restart the P6 application server.

Post-Integration: Verifying the Sample Workflow

After performing the integration procedures in this guide, run the following post-integration steps to verify you can process the sample workflow.

Extracting the ProjectInitiation Archive

1) On the Oracle Primavera P6 EPPM Media Pack, extract the `ProjectInitiation_BPM11g.7z` archive to a local directory accessible by JDeveloper Studio. For example, `C:\project_initiation` or `<unix_user_home>/project_initiation`.

2) Note the location of the `ProjectInitiation.jws` file. This file, extracted from the archive, represents a sample workflow. You will need to open it in a later section.

Configuring JDeveloper Studio

A composite configuration plan enables you to define the URL and property values to use in different environments. Use JDeveloper Studio to generate a SOA configuration plan XML file with your own modifications. For example, you might specify in the configuration plan the hostname and port for references to Web Services.

> **Note**: If you do not generate a configuration plan customized to your local environment, the sample will not work.

The following example represents a configuration plan:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAConfigPlan xmlns:jca="http://platform.integration.oracle/blocks/adapter/fw/metadata"
xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
xmlns:orawsp="http://schemas.oracle.com/ws/2006/01/policy"
xmlns:edl="http://schemas.oracle.com/events/edl"
xmlns="http://schemas.oracle.com/soa/configplan">
        <composite name="TestConfigPlan">
                <import>
                        <searchReplace>
                                <search>ttaod630:8090</search>
                                <replace>10.140.183.9:8080</replace>
                        </searchReplace>
                </import>
                <reference name="EPSService">
                        <!--Add search and replace rules for the binding properties-->
                        <binding type="ws">
                                <attribute name="port">
                        <replace>http://xmlns.oracle.com/Prima
                                vera/P6/WS/EPS/V1#wsdl.endpoint(EPSService/EPSPort)</replace>
                                </attribute>
                                <attribute name="location">

        <replace>http://10.140.183.9:8080/p6ws/services/EPSService?wsdl</replace>
                                </attribute>
                                <property name="weblogic.wsee.wsat.transaction.flowOption">
                                        <replace>WSDLDriven</replace>
                                </property>
                        </binding>
                </reference>
        </composite>
        <wsdlAndSchema
name="businessCatalog/WS/EPSService.wsdl|businessCatalog/WS/EPSService.xsd">
                <searchReplace>
                        <search>ttaod630:8090</search>
                        <replace>10.140.183.9:8080</replace>
                </searchReplace>
        </wsdlAndSchema>
</SOAConfigPlan>
```

Follow the steps below to generate and deploy the composite configuration plan:

1) Create a web services reference in your Composite Designer.
2) Right-click `composite.xml`, and select **Generate Config Plan** from the menu.
3) In the **Composite Configuration Plan Generator** dialog box:
   a. Specify the file name of the configuration plan.
   b. Click **OK**.
4) Verify that JDeveloper generates your new configuration plan file and opens it in the editor.
5) In the editor, modify that configuration plan file according to your requirements. Refer to the example shown above. Click Save.

Publishing a Sample Workflow

Simulate creation of your own new workflow by deploying the sample workflow on the BPM server.

1) Log into JDeveloper Studio.
2) In the Application Navigator pane, click **Open Application...**.
3) In the **Open Application** dialog box, browse to the `ProjectInitiation.jws` file provided by the P6 EPPM Media Pack BPM Workflow `ProjectInitiation` archive you extracted in an earlier section.
4) In the Application Navigator pane, right-click the sample workflow SOA project called `ProjectRequestWorkflow`, select **Deploy**, and choose a deployment profile from the menu.
5) In the **Deploy** dialog box, **Deployment Action** step:
   a. At the **Select a deployment action from the list below** prompt, select *Deploy to Application Server*.
   b. Click **Next**.
6) In the **Deploy** dialog box, **Deploy Configuration** step:
   a. In the **SOA Configuration Plan** section, select **Select a configuration plan from the list** and then choose your custom configuration plan from the previous section on *Configuring JDeveloper Studio*.
   b. Select the **Overwrite any existing composites with the same revision ID** option.
   c. Click **Next**.
7) In the **Deploy** dialog box, **Task Flow Deployment** step:
   a. Select the **Overwrite EAR** check box.
   b. Click **Next**.
8) In the **Deploy** dialog box, **Select Server** step:
   a. Select an application server.
   b. Select the **Overwrite modules of the same name** check box.
   c. Click **Finish**.

> **Note**: It is also possible to deploy the workflow project using an ant deploy script. In the **Deploy** dialog box, **Deployment Action** step, select **Deploy to SAR** and then select your configuration plan XML file. The ant scripts are available in the `Middleware_Home\SOA_Suite_Home\bin` directory.

Configuring User Accounts in P6 and BPM

In order to use the new workflow from within P6, a username logging into P6 must match a username in BPM and must be assigned the appropriate roles based on how the workflow was set up. Perform the following steps to set up a user in P6 and an equivalent user in BPM. For demo purposes, all roles can be assigned to one user, so a single user will own all the action required phases of the workflow.

1) Log into P6 as an administrator.
2) Click the **Administer** menu and select **User Access**.
3) In the **User Access** pane, click **Users**.
4) On the **Users** page:
   a. Click **Add** to add a new user account. The screen elements vary depending on your authentication mode. See *Creating User Accounts for P6 EPPM* in the P6 Help.
   b. Click **Select Columns** and select **Module Access** and **Global Security Profile** to include them in the Users table.
   c. Select the new table row representing the new user.
   d. Click the **Module Access** column and then click to open the **Module Access** detail window.
   e. On the **Module Access** detail window, select at least one of the following modules to permit the new user to view the **Workflows** portlet on a dashboard: *Team Member*, *Enterprise Reports, Portfolios, Projects*, or *Resources*.
   f. In the **Global Security Profile** column, select a profile with administrative privileges. Do not unnecessarily limit privileges at this time; the goal here is to verify that the workflow configuration is valid. However, for security reasons, remember to set a more appropriate profile or even to delete this temporary user account after verifying the configuration.
   g. Click **Save** and exit P6 by clicking the **Logout** link.
5) Log into the BPM application server console. For example, at `http://hostname:7001/console`.
6) On the home page, in the **Your Application's Security Settings** section, select the **Security Realms** link .
7) On the list of security realms, click on the name of the security realm your BPM 11g applications are using.
8) On the **Settings** page for your security realm click the **Users and Groups** tab.

9) On the **Users and Groups** tab, click the **New** button, and specify the following new user information:
   a. Name
   b. Password

> **Note**: The BPM user name you enter must match the P6 login name; however, the passwords can be different.

   c. Confirm Password
   d. Any other required information.
   e. Click **OK**. The user now exists in the security realm and has access to BPM Workspace.
   f. Log out of the BPM application server console.
10) To assign BPM roles to this new user, log into BPM Workspace as an administrator, and click the **Administration** link.
11) On the **Roles** page, select a role.
12) On the **Members** list, click the **Add** button.
13) In the **User Search** dialog box:
   a. Enter the name of the user
   b. Click **Search**.
   c. Select the user's name and click the **>** button to add them to the **Selected** list.
   d. Click **OK**. The member's name should now appear in the list of users assigned to this role.
14) Click the **Apply** button. This user will be able to perform their new role the next time they log into the application.
15) To assign more roles, repeat the steps that begin on the **Roles** page.

> **Note**: Assign all available roles to the same user. All roles would typically not be assigned to a single user; however, in order to verify the configurations in P6 and BPM under one user login, you should assign all roles to the same test user account. All tasks in the workflow will be assigned to the test user and will appear in the user's **Action Required** tab in their P6 **Workflows** portlet.

16) When finished assigning all the roles you want to test, log out of BPM Workspace.

Verifying the Workflow in the P6 Workflows Portlet

1) Log into P6 with the new user account you set up in P6 with a matching user account in BPM.
2) Click **Dashboards**.
3) On the Dashboards page, select a dashboard.
4) On the dashboard, click **Customize**.

5) On the **Customize** page, click the **Content** tab.
6) On the **Content** tab:
   a. Expand the **Workflow** section.
   b. Select the **Workflows** check box.
   c. Specify the number of days to filter the **MyWorkflows** tab. Only workflows initiated in the time period you specify will appear.
   d. Click **Save and Close**.
7) On the dashboard, expand the **Workflows** portlet.
8) In the **Workflows** portlet, select the **My Workflows** tab.
9) On the **My Workflows** tab, click **Initiate a Workflow**.
10) In the **Select Workflow** dialog box:
   a. Select a predefined workflow template.
   b. Click **OK**.
   c. P6 will alert you with a message confirming the success of the new workflow initiation. Click **OK**.
11) On the **My Workflows** tab:
   a. Verify your new workflow has been initiated and appears in the list.
   b. You can also verify the new status and fresh history of the new tasks by clicking **View Status** and **History**.
12) In the **Workflows** portlet, select the **Action Required** tab.
13) On the **Action Required** tab:
   a. Select the required task to simulate the successful response from participants of your new workflow. If the task is assigned to another user or role, log out of P6 and log back in as that user to see their assigned tasks.
   b. Click **View Form**.
14) This step only applies to BPM configurations not using SSO, and only when your BPM session from P6 has expired. In the **BPM Workflow Form** dialog box:
   a. In the BPM Workspace window, click **OK** at the session prompt.
   b. Log in with the user created in BPM which matches the P6 user.
   c. Close the BPM window.
   d. On the **Action Required** tab in the P6 **Workflows** portlet, click **View Form** again.
15) On the **BPM Workflow Form** dialog box:
   a. Review the resulting form or message and, if applicable, select an action to perform. The title and available screen elements of this form vary depending on the selected workflow, stage, task, and steps.
   b. Click **Submit**, **Save**, or a similar command to complete the action required for this particular workflow task.
16) Continue performing the action required steps until you complete the "test" provided by this sample workflow.

Troubleshooting

Use the BPM and P6 Web Services log viewers to troubleshoot problems if they arise.

> **Note**: As a general rule when troubleshooting workflow failures, first check the BPM diagnostics to determine at what point in the process the workflow failed. If the failure is related to retrieving data from P6, then you should check the P6 Web Services logs. Also be sure to check the P6 Help and other documentation for both P6 and BPM.

Checking the P6 Web Services Logs

P6 Web Services use the Java Logging API to handle log messages. Message levels that P6 Web Services log range from FINEST to SEVERE, in which FINEST logs the most messages and SEVERE logs the least messages. Additionally, there is a level ALL, which logs all messages; however, this setting could potentially impact performance.

You configure the logging level by specifying and then editing your own declared logging configuration file (see http://download.oracle.com/javase/) by adding or modifying the following lines:

```
com.primavera.integration.level = <level>
com.primavera.ws.level = <level>
```

Where <level> is one of the following values: FINEST, FINER, FINE, CONFIG, INFO, WARNING, SEVERE, ALL, OFF. For example, to set the logging level to ALL, use the following:

```
com.primavera.integration.level = ALL
com.primavera.ws.level = ALL
```

Setting P6 Web Services Logging On and Off

By default P6 Web Services logging is turned off. You can turn P6 Web Services logging on by uncommenting the following line in the cxf.xml that is supplied in the default P6 Web Services server deployment:

```
<!-- <cxf:logging /> -->
```

After removing the comment markers, the line would appear as follows:

```
<cxf:logging />
```

Oracle BPM 11g Logging

Refer to the following file to access BPM messages:

```
<WebLogic domain of Fusion
middleware>/servers/AdminServer/logs/AdminServer.log
```

In a typical BPM 11g installation on Linux, the WebLogic domain for Fusion middleware is:

```
<WebLogic domain>/user_projects/domains/domain1
```

Troubleshooting Scenarios

Outside of the scope of general issues with BPM or P6 EPPM, the P6-BPM Integration can potentially yield two types of issues:

1) connector configuration issues
2) data implementation issues rooted in either P6 or the BPM server

Troubleshooting connector failures to load due to configuration issues:

1) In P6 Administrator application, set the **Log/Console Logger/Severity Level** to *debug* or *info*.
2) Check the P6 log for BPM related messages. The log file is `P6WebAccess.html` and its location is specified in `BREBootStrap.xml`. These messages should indicate the cause of the connector failing to load.

Troubleshooting P6 Workflows portlet failures to load data, show forms, status images, or initiate a process:

These type of errors could have their root cause in either the P6 web application or the BPM server.

1) In P6 Administrator application, set the **Log/Console Logger/Severity Level** to *debug* or *info*.
2) Check the P6 log for BPM related messages. The log file is `P6WebAccess.html` and its location is specified in `BREBootStrap.xml`. These messages should indicate why the BPM code failed to process normally.
3) Check the BPM logs in these cases to make sure that the cause of the failure is not due to the BPM server.

Appendix A: BPM Workflows in P6

In This Chapter

What is a Workflow?

A workflow is an automated business process that routes information and tasks between participants according to a defined set of procedures or rules designed to coordinate a specific business goal. Workflows are primarily characterized by their level of procedural automation involving one or more dynamic related series of processes, and their combination of human and machine-based tasks involving interaction with software and systems.

The following industry segments, marked by relatively high office labor costs and transaction volume, have demonstrated successful workflow implementations:

- Insurance
- Banking
- Legal
- General & Administrative
- Design
- Engineering
- Manufacturing

Business process modeling and workflow automation allow transactions to be conducted electronically without the need for manual intervention such as conducting certain validations or re-keying data. When workflow IT systems are processing repetitive, mundane, and often error-prone work, talented staff resources become available to handle activities that add real value to the enterprise.

P6 includes a sample *Project Initiation and Review* workflow used to evaluate proposed work. It automates the process of reviewing and approving new project requests. You can also create your own workflows implemented through the use of templates created using BPM. Each workflow template defines the data, business processes, review phases, and approval requirements for the varying types of workflows specific to your organization. The necessary security privileges must be in place for you to create, initiate, or participate in workflows.

Working with Workflows in P6

Use workflows to route business processes such as project initiation requests through your organization to gather information and visibility before a go/no go decision is made. Template data, routing designators, and approval rules can be set for each stage of a workflow. To illustrate these options, pretend we have a workflow involving five key approval managers. You can define the workflow such that all five must approve and even specify a particular sequence, if any. A much more relaxed approval rule would require only one out of the five to approve.

Workflows begin in BPM where your administrator defines the actual workflow tasks involved and assigns them to specific users, roles, or groups. Then, in P6, an actual business need kicks off a separate instance of the workflow and its required tasks are automatically routed to their users, roles, or groups.

When a specific user or any user assigned to a role or group logs into P6, the **Workflows** portlet on their dashboard will display their relevant tasks at this stage of the workflow, as authenticated by BPM. As a workflow participant, you can select a task in the workflow instance and claim ownership for it. This means you will be responsible for performing the task. The application refreshes itself to show only the actions permitted for this particular stage of the workflow for you (the currently logged in user).

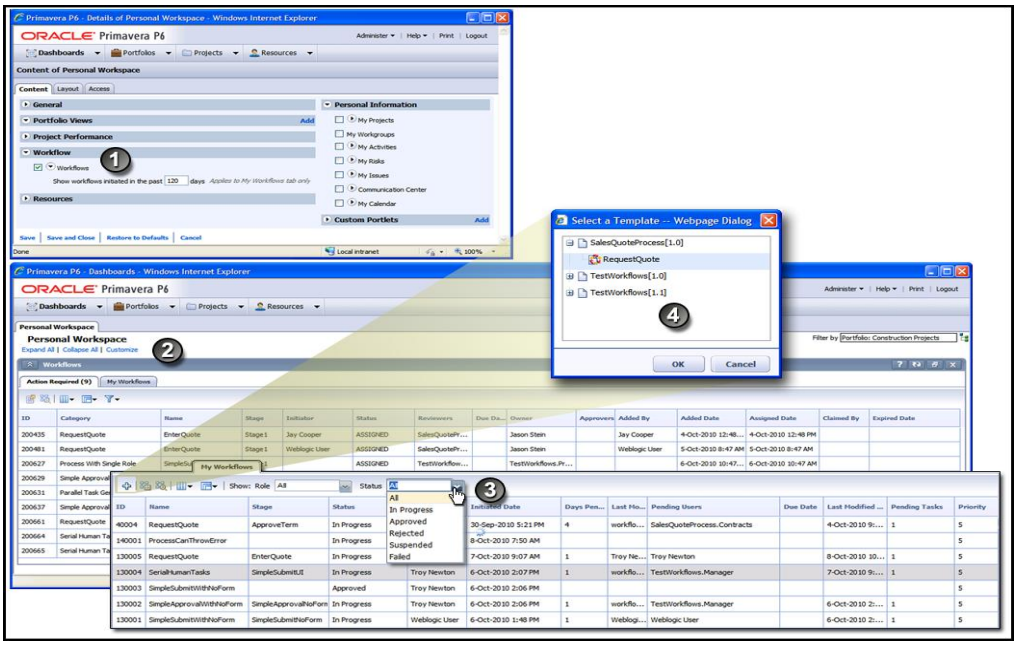

Table 1 of 2: Key Workflow Screen Elements

Item	Description
1	**Setup and Configuration:** After your administrator sets up BPM, configure a dashboard to display the **Workflows** portlet.
2	**Action Required Tab**: This tab shows the tasks that are important to you (the currently logged in user).
3	**My Workflows Tab**: This tab enables you to view all workflows according to role and status filters you can set.
4	**Initiate a Workflow**: Click **Initiate a Workflow** to start a new instance of a workflow based on a predesigned template.

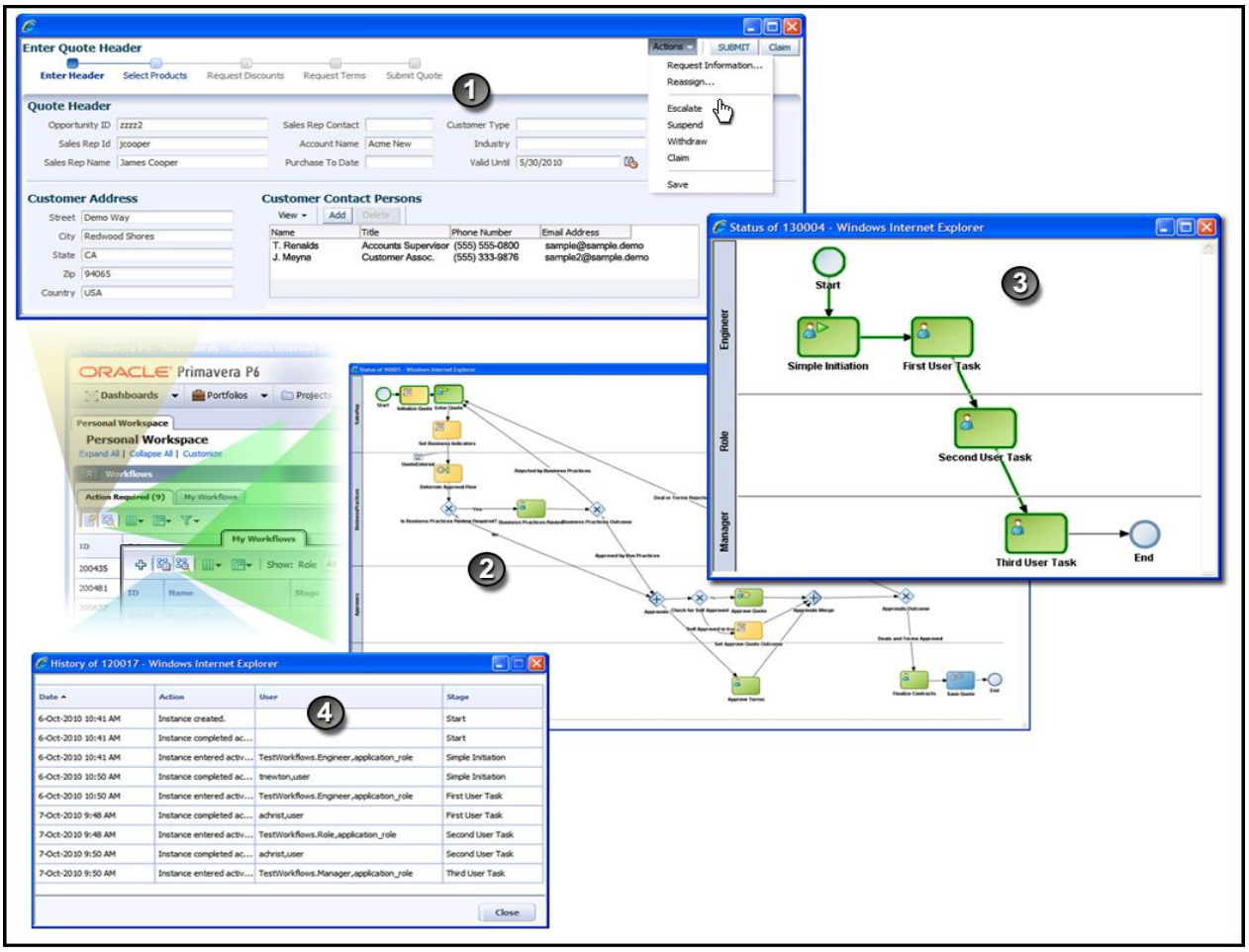

Table 2 of 2: Key Workflow Screen Elements

Item	Description
1	**Workflow Form**: Most workflows include forms which enable you to update the progress of each task. In general, possible actions you can perform on a task during the routing of a workflow include: escalate, suspend, purge, delete, withdraw, submit, reassign, claim, approve, and reject. For workflow tasks with no associated form, this icon is disabled. To perform an action on a workflow task with no associated form, log into BPM and use the available menus, buttons, and other options on the form. It is also possible to design a solution using the P6 Integration API. **Note**: If using BPM 11g (which always uses secure sign-on or SSO authentication) or if using BPM 10g with SSO configured, you will see the form in a new window. If SSO authentication is not configured with BPM 10g, you must log into BPM in the resulting window, close that window, and then return to P6 and click **View Form** again. This procedure is required whenever your BPM session expires.

Item	Description
❷	**Workflow Status**: The **Workflow Status** image is accessible from either tab in the **Workflows** portlet. It shows the sequence of events in the workflow. Items shown with a colorized border indicate the furthest level of progress within the workflow. The current status of the workflow corresponds with the last item to receive the special coloring. BPM 10g integrations show status using red, while BPM 11g integrations show status using green.
❸	**Sample Workflow**: A basic workflow image with tasks for an engineer, a second task for an assigned role, and a third task for a manager to complete the workflow. The current workflow task is Third User Task because it is the last item in the sequence that has a green outline.
❹	**Workflow History**: View a chronological sequence of all the previous activities, users, and stages in the current workflow.