



**EMC[®] IT Process Centre
BPM Portal**

Manager's Guide

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Table of Contents

Preface

Audience.....	7
Information on ITPC Documentation	8
Conventions Used in this Manual	9
Product Support Contact Information	9
Where to Get Help.....	9
Your Comments.....	10

Chapter 1—An Overview of ITPC

ITPC Components.....	12
How ITPC Works.....	13
ITPC User Types.....	15

Chapter 2—Getting Started

Logging In.....	17
Using Themes	19
Exploring BPM Portal	21
Page Layout.....	21
Keyboard Shortcuts.....	22
Using Filter Bars.....	23
Global Filters.....	23
Sorting a Column.....	23
Navigating Through the List	24
Drilling Down	24
Selecting Rows.....	25
Printing.....	25
Finding ITPC Details.....	25
Getting Support	25
Accessing Help.....	25
Logging Out.....	25

Chapter 3—Basic Operations

Specifying a Date	26
Searching Users	27
Working with Attachments	29
Using the Java Applet Interface	29
Attaching a Document	29
Updating Documents	31
Removing Attached Documents	32
Updating Documents Accessed by Multiple Users	32
Using the JavaScript Interface	33
Attaching a Document	33
Updating Documents	35
Removing Attached Documents	35
Updating Documents Accessed by Multiple Users	35

Chapter 4—Introducing the Management Module

What's New	36
Adjusting Your Browser Cache Setting	37
Customizing the Date Format for Display	37
Logging into the Management Module	39
Using the BizManage API	40
Accessing the BizManage API	41
Reviewing User Access/Permissions	41
Process-Level Permissions	41
Report Permissions	42
Permissions for Other Management Features	42
Logging Out	43

Chapter 5—Using Management Overview Features

Instances Overview Page	45
Checking the Status of an Instance	46
Viewing Process Status	47
Editing Process Instances Using the Flow View	51
Updating Worksteps and Workitems	53
Printing the Flow View in the Process Status Viewer	55
Checking the Status of an Application	56
Using the Heatmap	58
Modifying Global Dataslots	59
Sending Information to Application Users	60

Chapter 6—Using the Management Dashboard

Management Dashboard	62
Customizing the Management Dashboard	63
Accessing the Management Dashboard	63
Viewing the Details of a Widget	65

Chapter 7—Executing and Creating Reports

Creating and Deploying Reports Using JasperReport.....	66
Deploying as a Common Report	66
Deploying as an Application Report	66
Using a Database other than ITPC Connection Pool	67
Adding JAR files to Jasper Compiler Class Path	67
Setting Up Jasper Assistant Plugin in BPM Studio.....	68
Managing Reports Created Using JasperAssistant	78
Creating and Executing Reports in BPM Portal.....	79
About Multiapplication Reports.....	81
About External Reports	81
Running an Existing Report.....	81
Creating Application (Query) Reports.....	83
Creating Multiapplication Reports.....	87
Defining Parameters for Application and Multiapplications Reports.....	88
Report Versioning	89
Creating External Reports	90
Modifying an Existing Report.....	94
Removing an Existing Report.....	95
Using Task Filtering for Reports	95
Updating Previously Created Reports with Task Filtering	97
Defining Infopad Reports.....	97

Chapter 8—Using the Instance Manager

Launching the Instance Manager	101
Updating Process Instances.....	102
Updating Instances Using Reports.....	104
Removing Instances.....	105
Reassigning Assigned Tasks.....	105
Reassigning Available Tasks	107
Updating Worksteps	107
Resuming Suspended Worksteps	110

Chapter 9—Using the Balanced Scorecard

Using the Balanced Scorecard	113
Combining ITPC and Balanced Scorecard.....	114
Viewing Balanced Scorecard Applications	114
Editing Balanced Scorecard Perspectives	116
Using the Balanced Scorecard Designer.....	117
Designing a New Balanced Scorecard.....	118
Generating Rules in Balanced Scorecards	122
Viewing and Modifying Existing Balanced Scorecards.....	124

Chapter 10—Using the Infopad Manager

Modifying Infopad Values.....	126
Exporting Infopads.....	127

Appendix A—Predefined Reports

Creating Status Analysis Reports 129
 Example 130
Creating Time Analysis Reports 131
 Example 132
Creating Workload Analysis Reports 133
 Example 134
Report Examples 135

Glossary

Index

Preface

This guide is part of the documentation set for IT Process Centre (ITPC).

Audience

The range of ITPC modules creates the opportunity for four types of users, summarized in the following table:

Table 1 ITPC User Types and Responsibilities

User Type	Responsibilities
ITPC User	Responsible for carrying out specific business tasks using ITPC applications. Examples include: <ul style="list-style-type: none">• An office administrator submitting an online purchase request.• HR personnel scheduling interviews for a potential hire.• A sales representative responding to a customer request.• An engineer reviewing a trouble ticket reported by a customer.
ITPC Manager	Responsible for automating business processes in a particular business domain. BPM Portal's Management module serves as the primary interface to ITPC for the ITPC Manager, enabling the manager to monitor, analyze, and control business processes. Also uses the Process Modeler for modeling and simulation.
Application Developer	Responsible for creating customized applications for implementing business processes and developing interfaces associated with tasks. ITPC application developers may work closely with ITPC business managers to define the requirements of an application, and determine the business processes.
ITPC Administrator	Responsible for configuring ITPC components, managing user/group profiles, and administering ITPC applications and utilities.

Information on ITPC Documentation

IT Process Centre (ITPC) documentation contains information for the entire range of ITPC users. In the following table, we recommend the guides that are most relevant to each type of user.

Table 2 ITPC Documentation

If you are the...	Read the...
ITPC User	<i>BPM Portal User's Guide</i> <i>Quick Start Guide</i> <i>Terminology Guide</i> <i>Tutorial Guide</i>
ITPC Manager	<i>BPM Portal Manager's Guide</i> <i>BPM Portal User's Guide</i> <i>Terminology Guide</i> <i>Tutorial Guide</i>
Application Developer	<i>API Reference Guide</i> <i>Application Developer's Guide</i> <i>BizLogic Developer's Guide</i> <i>BizPulse User's Guide</i> <i>BizSolo User's Guide</i> <i>BPM Portal Manager's Guide</i> <i>BPM Portal User's Guide^a</i> <i>BPM Studio User's Guide</i> <i>Clustering Guide</i> <i>Customization Guide</i> <i>Managed Adapters Guide</i> <i>Quick Start Guide</i> <i>Terminology Guide</i> <i>Tutorial Guide</i> <i>Web Services Developer's Guide</i>
ITPC Administrator	<i>BizPulse User's Guide^b</i> <i>BPM Portal Administrator's Guide</i> <i>BPM Portal Manager's Guide</i> <i>BPM Portal User's Guide</i> <i>Installation Guide</i> <i>Managed Adapters Guide</i> <i>Terminology Guide</i> <i>Troubleshooting Guide for Administrators</i>

a. Demonstrates how to thoroughly test ITPC applications.

b. Refer to the sections detailing BizPulse Admin.

Conventions Used in this Manual

This document uses the following conventions and terminology notations.

Table 3 Conventions in this Manual

Convention	Purpose
bold	Indicates titles of command buttons, check boxes, options, lists, dialog boxes and portal page names.
<i>bold italic</i>	Represents notes that alert you on specific ITPC elements and similar advisory information.
<i>italic</i>	Indicates directory paths, file names and book titles.
monospace	Represents code segments or examples.
backward slash “\”	Indicates the path in Windows environment. For UNIX environment, replace with forward slash “/”
ITPC_HOME or %ITPC_HOME%	Represents the installation directory of ITPC.

Product Support Contact Information

If the product documentation does not provide a solution to your specific issue, or if you need clarification on the issue, please contact the EMC Product Support Team. You can contact the team through the Internet, e-mail, telephone, or by postal mail.

To enable us to quickly answer your questions, please have the following information available:

- Your name, installation site address and the license key for EMC software.
- Your ITPC version and build number.
- Your operating system, application server and browser, with version and service pack details, if any.
- Your database management system and version, and information on JVM and JDBC used.

Where to Get Help

EMC support, product, and licensing information can be obtained as follows.

Product information — For documentation, release notes, software updates, or for information about EMC products, licensing, and service, go to the EMC Powerlink website (registration required) at:

<http://Powerlink.EMC.com>

Technical support — For technical support, go to EMC Customer Service on Powerlink. To open a service request through Powerlink, you must have a valid support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.

Your Comments

Comments and suggestions about our product documentation are always welcome.

To provide feedback:

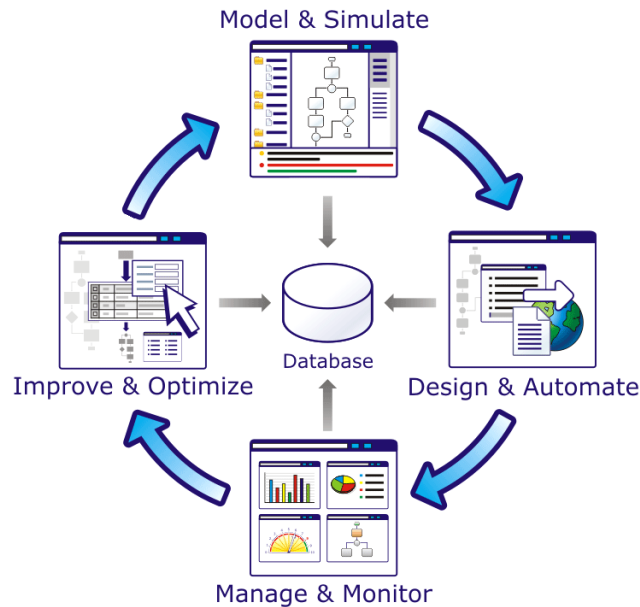
- 1 Go to: <http://Powerlink.EMC.com>
- 2 Click the **Feedback** link.

Chapter 1

An Overview of ITPC

IT Process Centre (ITPC) is a comprehensive business process management platform, that enables companies to quickly transform their business processes into flexible and manageable Web applications, distributed over intranets, extranets, and the Internet.

Figure 1 ITPC Overview



ITPC addresses every stage in the business life cycle: Define, Integrate, Deploy, Monitor, Analyze, Improve, and Control. By adopting an end-to-end approach, ITPC incorporates all the key elements required to meet the ever-changing demands of e-business while providing customers with confidence for e-business success. Providing integrated management tools, ITPC lets customers monitor operations proactively, modifying automated processes on the fly based on changing external operations online.

ITPC Components

ITPC is a suite of integrated components that enables you to easily build intranet, extranet, and Internet applications and manage your e-business. ITPC consists of the following components:

Figure 2 ITPC Components

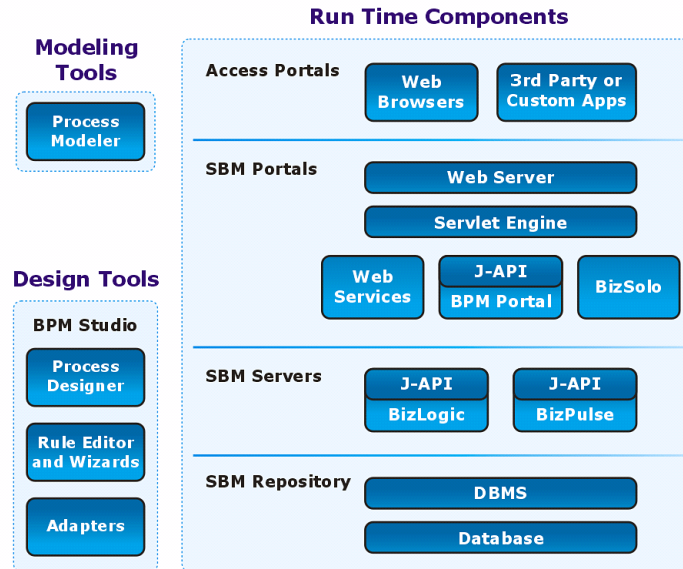


Table 4 ITPC Components

Component	Description
BPM Portal Home	The Home module of BPM Portal is the primary interface for ITPC Users, enabling them to interact with ITPC applications. Users can complete entries to various tasks and applications, and link to the support infrastructure required to achieve these tasks.
BPM Portal Management	The Management module enables ITPC Managers to query, report on, and control processes and resources, and is only visible to ITPC Managers.
BPM Portal Administration	The Administration module enables ITPC Administrators to modify configuration parameters, manage user/group access control, and install/uninstall ITPC applications.
Web Services	This component allows ITPC application developers to; a) publish their applications as Web services, and b) find and convert other available Web services on the Internet into ITPC applications.
BizSolo	This component provides a framework for developing and implementing Web-enabled workflow applications.
BPM Studio	This is the primary application development tool for ITPC, which provides an Eclipse-based integrated development environment in which users can create ITPC applications, processes, Web applications, and rule files.
Process Modeler	This tool is used to design templates for basic business processes, and to run simulations of processes and individual worksteps. Users can also save or retrieve processes from the ITPC process repository.

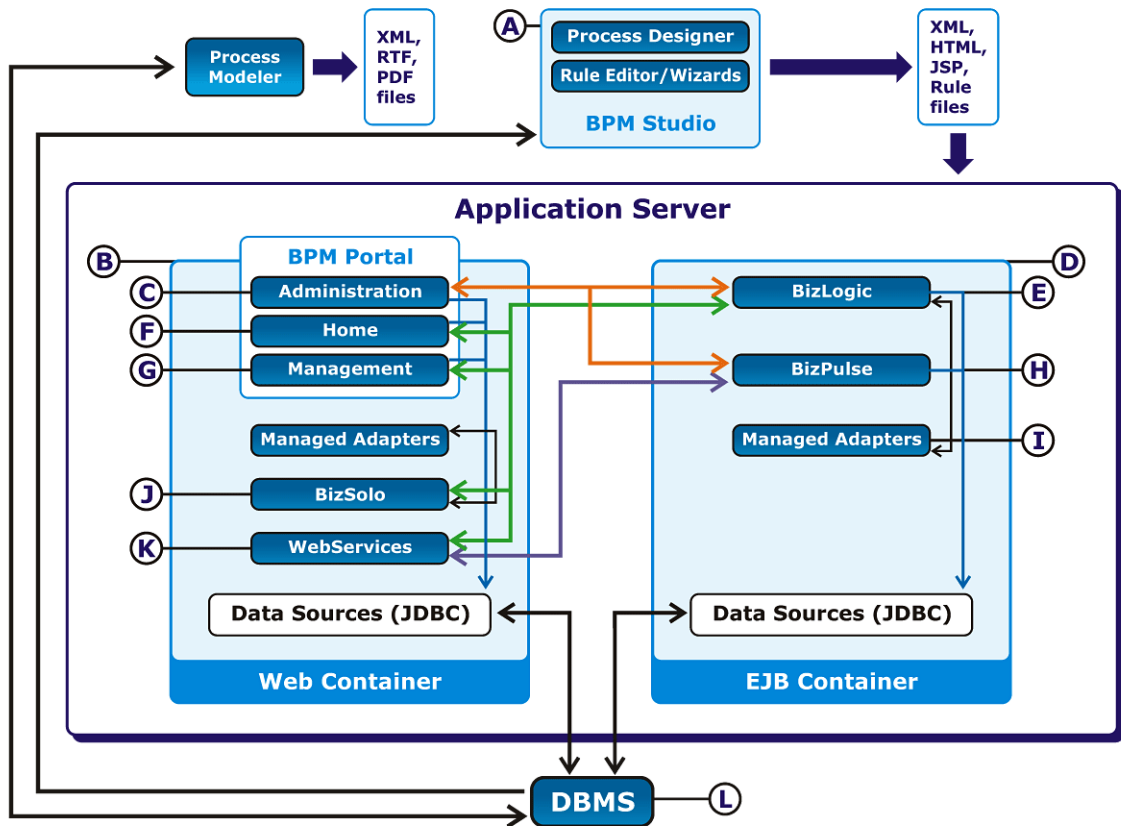
Table 4 ITPC Components

Component	Description
BizLogic	This is a flexible, lightweight, scalable workflow process engine for intranets, extranets, and the Internet.
BizPulse	This open, event-driven rule engine is used to formulate and enforce policies in business applications.

How ITPC Works

The following figure provides an overview of the interaction between ITPC components.

Figure 3 How ITPC Works



The following explanations correspond with the labels shown in [Figure 3](#), and describe how the components operate.

- A. BPM Studio and/or Process Modeler provide an integrated development environment (IDE) for ITPC, where you can design and deploy business processes. The application developer designs a process template in the IDE that reflects the business flow and other business process requirements. ITPC then generates an *.spt or *.swt file for the process template. If desired, business rules for the process template can be defined using the Rule Editor, a BizPulse component that is launched with BPM Studio.
- B. The Web Container specifies a run time environment for servlet-based portals that include the BPM Portal, BizSolo and Web Services. The BPM Portal provides user interfaces for the Home, Management, and Administration modules.
- C. Once the process template is defined, ITPC Administrators use the Administration module to install the process on the BizLogic server. ITPC Administrators can also configure ITPC components, manage user/group access control, and publish ITPC applications as Web services. Once installed, users access applications through servlets that pass the requests over an RMI/IIOP connection to the BizLogic server within an EJB Container.
- D. The EJB Container provides a run time environment that executes and manages Java-based program components that run on the server side of a client/server network. Within the EJB Container are the BizLogic server and BizPulse server.
- E. The BizLogic server writes events to event tables in the database. Each BizLogic process uses JDBC to connect to database server as well as store events in the database. Within the BizLogic server, BizStore uses JDBC to connect to the database server process and retrieve the events deposited by the BizLogic process. BizStore interprets the events and populates the process tables. These populated tables are used by BPM Portal modules.
- F. Once the process template is installed as an ITPC application, ITPC Users use the Home module to access applications, obtain information to perform their tasks, and launch the application to start process instances from the BizLogic server.
- G. Once the process template is installed as an ITPC application, ITPC Managers use the Management module to (depending on access privileges) launch the application to start process instances, monitor execution of process instances, and create reports. Servlets receive manager requests and pass them onto the BizLogic server over an RMI/IIOP connection. ITPC Managers use the Report Builder to define management reports that retrieve information through JDBC to the database server.
- H. BizPulse is a rule-based event/message processing server that loads application rules and executes them against the BizLogic and/or external events/messages. This server persists data in the database for recovery and with the help of JDBC connects to the database.
- I. Managed Adapters exchange information between ITPC applications and external applications by converting ITPC-specific protocol to the protocol of an external system such as a database or ERP system. When users add a Managed Adapter to a workstep, they can define complex mapping between ITPC dataslots and adapter inputs/outputs of the external application. At run time when the workstep is executed, the Managed Adapter sets the adapter inputs and configuration, and maps the outputs to the appropriate output dataslots.
- J. BizSolo is a run-time component that executes the presentation flows. This component provides a Model, View, Controller (MVC) paradigm for developing presentation flow-based applications and executing them in a Web container.

- K. ITPC's Web Services component allows BizLogic and BizSolo applications to be published as Web services.
- L. The relational database management system serves as a persistent store for all ITPC data storage needs. The BPM Portals and servers connect to DBMS using the JDBC driver.

ITPC User Types

There are four user types within ITPC:

- **ITPC Users.** ITPC Users use ITPC applications to coordinate specific business tasks with another department within their company, with another company within their organization, and/or with a business partner in another organization. The Home module in BPM Portal serves as the primary interface in which ITPC Users run ITPC applications.
- **ITPC Managers.** ITPC Managers are typically experts in a particular business domain, such as Quality Assurance or Human Resources. They might need to work with managerial personnel from other groups in automating some of the business procedures that these groups share. The Management module in BPM Portal serves as the primary ITPC interface for business managers to coordinate and integrate business processes, enabling them to exchange information with each other, and to share functionality over such standard communication protocols as the Internet or e-mail.
- **ITPC Application Developers.** ITPC Application Developers are responsible for analyzing business processes and developing interfaces associated with tasks or processes creation. Application Developers are often not domain experts themselves, but work closely with ITPC Managers to define the business process and determine the requirements of an application. Application Developers use BPM Studio or Process Modeler to define the business process; the resulting process template file is tested, simulated, deployed and run as an ITPC application.
- **ITPC Administrators.** ITPC Administrators are responsible for configuring ITPC components, managing user/group profiles and access control, and installing/uninstalling ITPC applications. The Administration module in BPM Portal serves as the primary ITPC interface for ITPC Administrators to administer ITPC applications.

All ITPC user types can communicate by using one or more ITPC applications and/or by communicating between ITPC applications and external applications. Examples include:

- A QA Department manager requesting the Human Resources Department to approve the hiring of a QA Engineer.
- HR personnel coordinating interview scheduling with a regional office in another state.
- Engineers collaborating with a business partner's Engineering Department to develop specifications for an application.

Chapter 2

Getting Started

IT Process Centre (ITPC) provides primary Web-based user interface in the form of BPM Portal. It is a complete portal through which you can interact with ITPC applications.

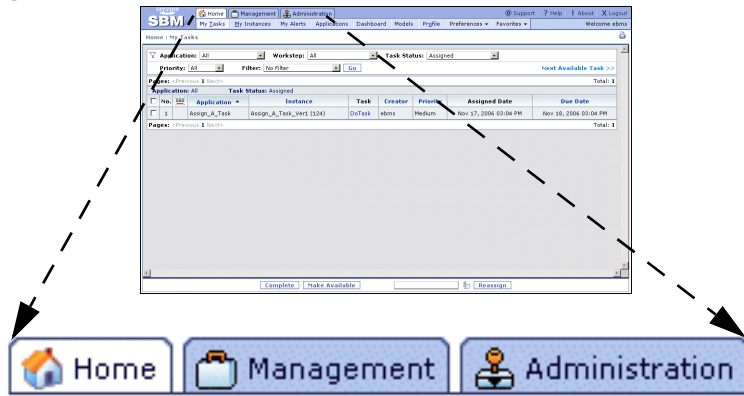
When you log into BPM Portal, it displays the Home module tab for all users, irrespective of your user type and your user permissions. As an application user, you can display and modify tasks assigned to you, and manage your preferences. It also displays other tabs in addition to Home. However, access to other modules depends on your user type and permissions.

If you have ITPC Manager rights, the Management module is also available to you, where you can query, report, and control processes and resources for users.

If you also have administrative rights, in the Administration module, you can modify configuration parameters controlling ITPC operations, manage ITPC components, and install/uninstall applications.

Note: Though all modules are shown to you in the figures, you can access only those modules for which you have access rights.

Figure 4 Overview of BPM Portal



As an ITPC User,
view your tasks and
instances.

As a Business Manager,
control your processes
and resources.

As an Administrator,
configure and manage
components and users.

This chapter describes how to log into and out of the BPM Portal, the screen layout, and how to explore the Home module's interface. As the interface is uniform for all modules, this information is helpful for other modules also.

Logging In

To access BPM Portal and use it, you need to log in to it. Your ITPC Administrator typically adds you as a new ITPC User, and assigns you a User Name and Password. To log in to BPM Portal, you need to use this User Name and Password.

To log in to BPM Portal:

1. Start the Login page according to your platform:

Table 5 Logging in to BPM Portal

Using...	Perform the following...
Windows 2000/XP	From the Start menu choose Programs > EMC > ITPC 2.1 > Login to BPM Portal if you are using the installation machine. Otherwise enter <code>http://machine_name.domain.com:port_number/sbm/bpmportal/login.jsp</code> in your browser.
UNIX	Enter <code>http://machine_name.domain.com:port number/sbm/bpmportallogin.jsp</code> in your browser.

If you are logging in for the first time, then the Login page will be displayed as shown in the following figure.

Note: If you log in after a session timeout, then an appropriate message is displayed on the Login page.

Figure 5 BPM Portal Login Page

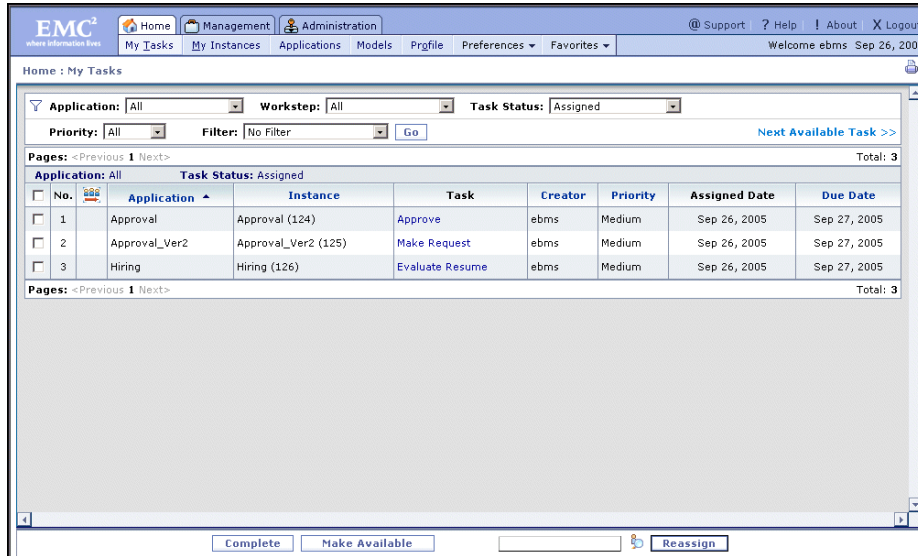


Note: If you are using a theme other than the default one, then the screens will look different than shown in this document. For more details, see [Using Themes](#) on page 19.

2. Type your **User Name** and **Password**, and click **Login**.

BPM Portal authenticates your User Name and Password and by default, displays the Task List page, as shown in the following figure.

Figure 6 Task List



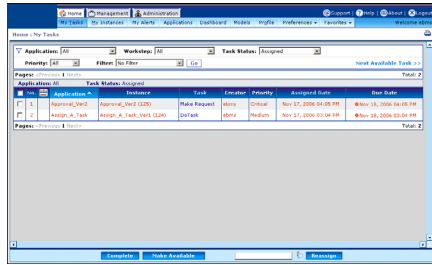
As a typical ITPC User, you will have access only to the Home module. Other modules to which you may have access are displayed along with Home, as additional tabs depending on your user type and user permissions.

Note: You can change your password any time by using **Home > Profile**.

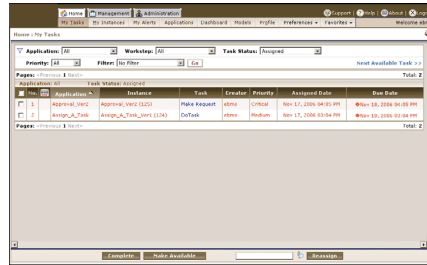
Using Themes

ITPC provides five predefined themes for BPM Portal and for applications in the portal. Your ITPC Administrator can select one of these themes as the presentation for your portal; and can select the same or another theme for the presentation used by applications in the portal.

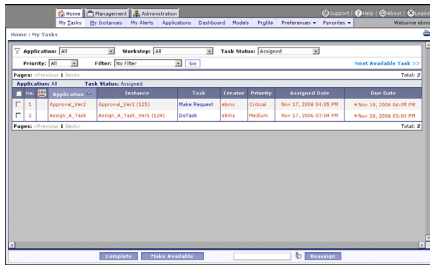
Figure 7 Themes



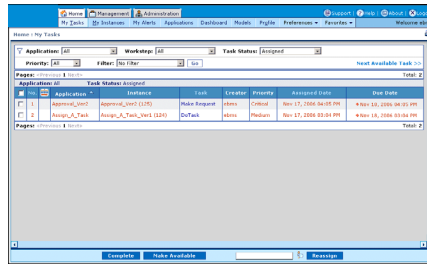
theme01



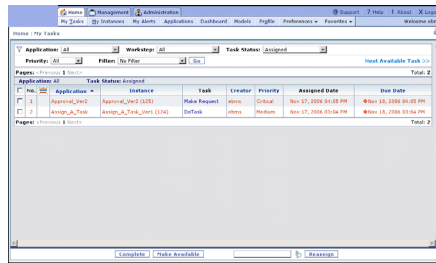
theme02



theme03



theme04



theme05

All figures in this document are displayed with theme05, which is the default theme. For more details, see *Customization Guide*.

Exploring BPM Portal

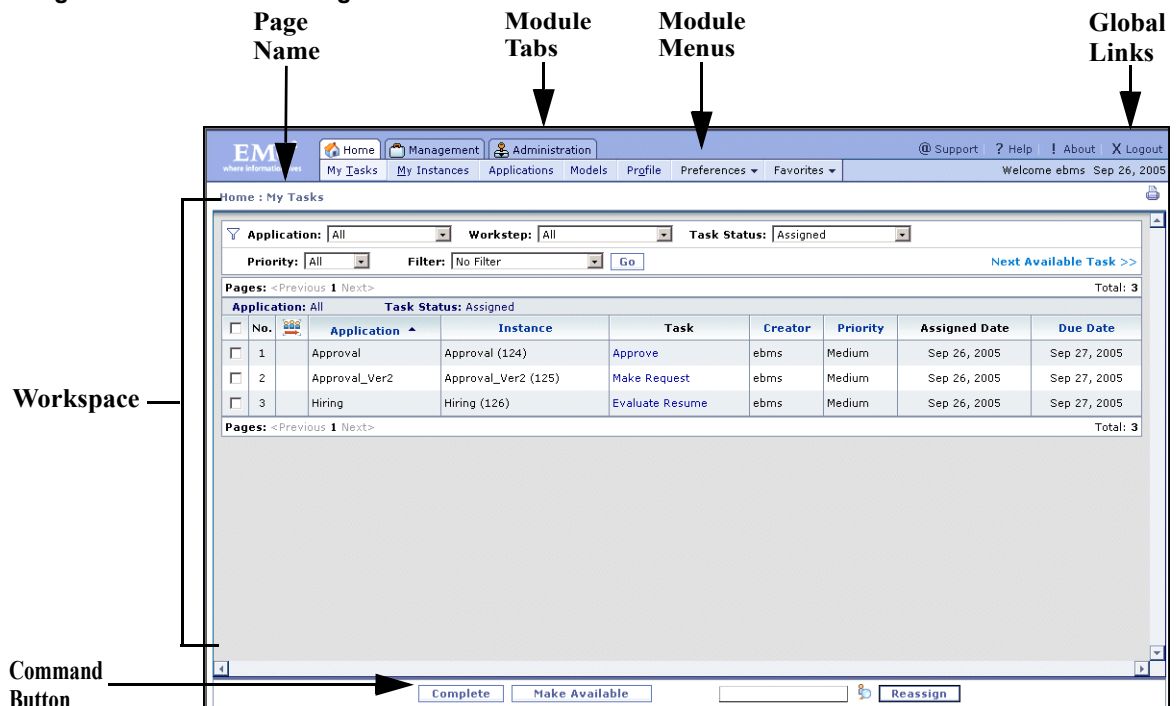
When you log in to the BPM Portal for the first time, you will see the default Home tab, with the Task List page listing tasks assigned to you, as shown in [Figure 8](#).

Note: Use the Profile menu to select the language you prefer and use the Preferences menu to select a filter that sets the page's display. After configuring the Home tab, your selections are displayed the next time you log in to BPM Portal.

Page Layout

The terminology used for a typical BPM Portal page is explained below.

Figure 8 Default Home Page



The main areas of a page are:

- **Global links:** Located at the top right corner of every page, these links are available at all times during the session.
- **Module tabs:** For your convenience, features of different modules are grouped in sections. All features of a particular group are located in its own Module tab.
- **Module menus:** Each tab has a set of specific menus.
- **Page name:** This shows the current page name. At the right side, a welcome message is displayed with the date when you logged in.
- **Link trail:** This shows the pages you navigated through to reach the current page. You can click any link in the link trail and go back to that page. If you click a link in the link trail without first saving

contents of the current page, the data in the current page will not be saved.

- **Workspace:** Your data is displayed in this area. Generally it is displayed in one of the following ways:
 - **Form:** This lets you interact with the portal. Typically, forms contain text boxes, check boxes, and options that help you enter data. Forms can be in read-only or editable mode depending upon the contents and access privileges.
 - **List:** This lets you view your data in a tabular format. Typically, lists contain filter bars, search options, and page controls that manage which data is displayed and how it should be displayed.
- **Command buttons and Links:** The commands that help you interact with the data are represented by buttons. Buttons that help you accomplish some task but do not change the data values are typically located below the link trail. The links are located beside the buttons. Buttons that operate on the data shown in the current page and change their values are located below the workspace.

Keyboard Shortcuts

BPM Portal provides the following keyboard shortcuts to access its various module menus and menu options.

Table 6 Keyboard Shortcuts

Module	Keys	Menu / Menu Option
Home	CTRL+SHIFT+T	My Tasks
	CTRL+SHIFT+M	My Instances
	CTRL+SHIFT+H	My Alerts
	CTRL+SHIFT+S	Applications
	CTRL+SHIFT+D	Dashboard
	CTRL+SHIFT+O	Profile
	CTRL+SHIFT+F	Preferences > Filters
Management	CTRL+SHIFT+I	Overview > Instances
	CTRL+SHIFT+A	Overview > Applications
	CTRL+SHIFT+R	Reports > My Reports
	CTRL+SHIFT+N	Instance Manager > Instances
	CTRL+SHIFT+K	Instance Manager > Tasks
	CTRL+SHIFT+W	Instance Manager > Worksteps
	CTRL+SHIFT+C	Balanced Scorecard > Console
Administration	CTRL+SHIFT+V	System > Log Viewer
	CTRL+SHIFT+U	User Management > Users
	CTRL+SHIFT+G	User Management > Groups
	CTRL+SHIFT+Q	User Management > Queues
	CTRL+SHIFT+P	User Management > Permissions
	CTRL+SHIFT+E	User Management > Delegate Settings
	CTRL+SHIFT+L	Applications > BizLogic
CTRL+SHIFT+Z	Applications > BizSolo	

As a typical ITPC User, you will have access only to the Home module. Other modules to which you may have access are displayed along with Home, as additional tabs depending on your user type and user permissions.

You can customize these shortcuts by adding a new one or changing an existing one as per your requirement. For more details, see the *Customization Guide*.

Using Filter Bars

A filter allows you to reduce clutter and focus on the relevant data by displaying only selected data in the workspace.

Use the Filter bar (see following figure) to apply a filter. Specify values by selecting them from the lists and/or entering them in the text boxes, and then click **Go**. The combination of these values forms a filter.

Figure 9 Filter Bar



The screenshot shows a filter bar with the following elements: a search icon, 'Application: All', 'Workstep: All', 'Task Status: Assigned', 'Priority: All', 'Filter: No Filter', and a 'Go' button.

Global Filters

ITPC now provides global filters for most common filtering conditions. They are:

- Overdue Tasks
- Tasks Due Today
- Tasks Due This Week
- Tasks Due This Month
- Tasks Due This Quarter
- Tasks Due This Year
- Critical Priority Tasks
- High Priority Tasks

You can select a global filter as your default filter from the **Home > Profile** menu. Alternately, you can use it as required.

Sorting a Column

If a column header is underlined, you can click it to sort the listed items on that column header. A downward pointing triangle beside the column header indicates that items are sorted in descending order. To sort them in ascending order, click the column header again.

Figure 10 Column Sorting

Instance ▲
Approval_Ver2 (124)
Assign_A_Task_Ver2 (133)
Hiring (126)
PurchaseOrder (129)

Instance ▼
PurchaseOrder (129)
Hiring (126)
Assign_A_Task_Ver2 (133)
Approval_Ver2 (124)

Navigating Through the List

The paging controls allow you to navigate through pages of the current list. These controls are located immediately above and below the list.

Figure 11 Paging Control

Pages: <Previous 1 Next>	Total: 4
---------------------------------	----------

The number of items to be displayed per page is specified by the ITPC Administrator in the Administration module. For more details, refer to the “*Using the ITPC Configuration Interface*” section of the *BPM Portal Administrator’s Guide*. If the total number of items cannot be displayed in a page, then the exceeded items are displayed on the subsequent pages.

If the number of pages are 10 or less, then all page numbers up to the last page are displayed below the list. You can click a page number to display the corresponding page. If the number of pages is more than 10, then click **Next**> to access the set of next 10 pages. Similarly, you can click <**Previous** to access the set of previous 10 pages. The total at the far right of the paging controls represents the total number of items in the list across all pages.

Drilling Down

If more information is available about an item in the list, then such an item is displayed with a hyperlink. You can click the hyperlink to drill down to the next level of data and view details of that item.


Figure 12 Drilling Down

Instance ▲	Task
Approval_Ver2 (124)	Make Request
Assign_A_Task_Ver2 (133)	DoTask
Hiring (126)	Evaluate Resume
PurchaseOrder (129)	DeliveryTime

Selecting Rows


You can select one or more rows of items from the list of items displayed on the current page by clicking their respective check boxes in the first column. To select all rows in the current page, select the check box in the header row. Selection of rows is indicated by changing color of selected rows.

Figure 13 Rows

<input type="checkbox"/>	No.		Application	Instance ^
<input checked="" type="checkbox"/>	1		Approval_Ver2	Approval_Ver2 (124)
<input type="checkbox"/>	2		Assign_A_Task_Ver2	Assign_A_Task_Ver2 (133)
<input checked="" type="checkbox"/>	3		Hiring	Hiring (126)
<input type="checkbox"/>	4		PurchaseOrder	PurchaseOrder (129)

To clear a particular row, click its check box again. If you select the check box in the header row and then clear a check box of a row; then the check box in the header row is cleared.

Printing

The Print icon () displays the contents of the current page in a printable format. You can use your browser's print feature to print it.

Finding ITPC Details

To quickly find out the application server, database type and its version, ITPC version and its build number you are using, click **About** from the global links. It displays all these details in a pop-up window. You will need this information while contacting the ITPC support team.

Getting Support

If you do not find the solution to your problem in the product documentation, then you can contact the support team. Click **Support** from the global links (or on the BPM Portal Login page) to launch your default mail tool to send a mail to the support team.

Accessing Help

You can access online help by clicking **Help** from the global links. The help is launched in a separate browser window. BPM Portal provides context-sensitive help, displaying the help topic that is relevant to the current module.

Logging Out


To quit BPM Portal, click **Logout** on the global links. After a successful logout, BPM Portal automatically displays the BPM Portal Login page.

Chapter 3

Basic Operations

This chapter explains the basic operations you perform while using BPM Portal. You can perform some or all of these operations in various BPM Portal screens. However, all these operations may not be available in each BPM Portal screen.

Specifying a Date

You can enter a date (and time) in the various text boxes involving a Date (for example, Due Date, Start Date, End Date) by directly typing it. Alternatively, you can click the Select Date icon (), which is generally located next to a Date box, to specify a date, as shown in the following steps:


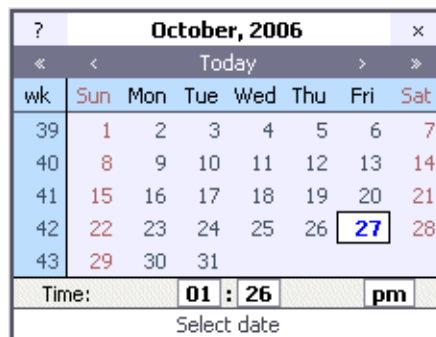
1. Click the **Select Date** icon () beside the Date box. For a blank Date box, the Select Date window displays the current month's calendar and by default, highlights today's date and the current time.

Figure 14 Specifying a Date



?		October, 2006						×
<		Today						>
wk	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
39	1	2	3	4	5	6	7	
40	8	9	10	11	12	13	14	
41	15	16	17	18	19	20	21	
42	22	23	24	25	26	27	28	
43	29	30	31					
Time:		01 : 26		pm				
Select date								

2. To select a date from the displayed month, click the desired date. The selected date and time is displayed in the Date box.


To select today's date, click **Today**.

3. To display the calendar for another month, use the single arrows provided above the days of the week. Click the arrow pointing right for the next month, or the arrow pointing left for the previous month. Alternatively, to select any other month, you can click and hold the mouse on either of the arrows and then drag it to the desired month.
4. Similarly, to display the calendar for another year, click the double-arrow pointing right for the next year, or the double-arrow pointing left for the previous year. Alternatively, to select any other year, you can click and hold the mouse on either of the double-arrows and then drag it to the desired year.
5. To change the default time, click the hour and minute boxes in the **Time** section, to increment the value by 1 unit. Alternatively, to decrement the value, hold down SHIFT and then click the respective boxes. To change the value by multiple units, point to the respective boxes and then drag to the right to increment or to the left to decrement the value.

If the ITPC Administrator has set a 12-hour clock, then click **AM** or **PM** to switch between these values.

Note: By default, the Select Date window displays the calendar with each week starting Sunday. To change this setting to another day of the week, click the day in the calendar header.

Searching Users

You can enter a user name in the various text boxes involving Users (for example, User Name, Reassign, Delegated to) by directly typing it. Alternatively, you can click the Search User icon (), which is generally located next to a User text box, to search for a user, by performing the following procedures:


1. Type a user name in the **User Name** text box. When the Search User icon () is displayed beside the text box, click on it to open the Search Users page, where you can search for the users.

Figure 15 Searching Users

The screenshot shows a web interface titled "Search User". At the top, there is a search bar with four input fields: "User Name:", "First Name:", "Last Name:", and "Group:". A "Go" button is located to the right of these fields. Below the search bar is a "Quick Search" section with a dropdown menu set to "All" and a horizontal list of letters from A to Z. The main part of the interface is a table with the following columns: "No.", "User Name", "First Name", "Last Name", and "Email". The table contains 12 rows of user data. At the bottom of the table, there is a pagination control showing "Pages: <Previous 1 Next>" and "Total: 12". Below the table, there are two buttons: "Add" and "Cancel".

No.	User Name	First Name	Last Name	Email
1	deborah	Deborah	Cox	deborah@savvion.com
2	ebms	ebms	ebms	ebms@savvion.com
3	ebmsadmin	ebmsadmin	ebmsadmin	ebmsadmin@savvion.com
4	jack	Jack	Murphy	jack@savvion.com
5	jeremy	Jeremy	Coe	jeremy@savvion.com
6	john	John	Doe	john@savvion.com
7	lisa	Lisa	Hamilton	lisa@savvion.com
8	mike	Mike	Wilson	mike@savvion.com
9	richard	Richard	Johnson	richard@savvion.com
10	sarah	Sarah	Cox	sarah@savvion.com
11	thomasc	Thomas	Cresap	thomasc@savvion.com
12	thomash	Thomas	Hamilton	thomash@savvion.com

2. You can also search for the users by specifying either the user name, or the first name or the last name. If you specify the group name, it will search for the users in that group, otherwise it will search in all groups.
3. After typing the user name, first name, last name, and optionally, group, click **Go**. You can also use the * as a wild card. Type in the first letter and then the asterisk (example, a*) and all users beginning with that letter will display. It also works for portions of names; e.g., type in *son and all names ending in son (Jackson, Peterson, etc.) will be displayed. Type Mc*son and users such as McPherson and Mcwilliamson will be displayed.

BPM Portal lists all the users satisfying your search criteria. You can navigate through this list as explained in the [Navigating Through the List](#) on page 24.

4. To go directly to the list of users starting with a particular letter, click that letter in the Quick Search bar.
5. Depending on the page and current operation, BPM Portal allows you to select one or more users. Select users by clicking the options in the first column of those users, and then click **Add**. The selected users' user names are entered in the **User Name** text box.

Note: Depending on the page and current operation, the **Add & Continue** button may also be available. Click this button to add the current user and continue adding more users.

Searching for a group is similar to searching for a user. While searching for a group, you need to specify the group name in the **Group Name** box by directly typing it. Alternatively, use the Search Bar to locate the specific group by performing a procedure similar to the one explained above for searching the users.

Working with Attachments

BPM Portal enables you to attach, update, and remove documents associated with entities such as tasks. For instance, you can use this feature to circulate a resume as a part of a hiring review process, or to circulate one or more functional specifications associated with a design approval process.

Note: The ability to attach documents is not part of every task—the application must be designed to enable this feature.

The ITPC administrator at your organization can configure your system to use either the JavaScript or Java applet interface styles for the document attachment feature. This section describes both user interface styles. Java applet is the default interface.

Your ability to attach, update, and remove documents depends on the type of workstep that stores the document. The possible cases are summarized in the following table:

Table 7 Attachment Update Options

If the attachment is...	You can...
Read-only	View attached documents, but you cannot attach new documents, nor can you delete or update existing attached documents. You can, however, save a copy on your computer.
Read/write	Attach, remove, and update documents.

Whether an attached document will be in read-only or read/write mode, depends upon the settings specified while defining the document dataslot. For more information, see the “About Document Dataslots” section of the *Application Developer’s Guide*.

You may attach any kind of file (.doc, .xls, .pdf, .gif, .html) as long as the file is located in your computer. When you open an attachment, the BPM Portal lets the browser identify the associated application.

Note: The default setting for document attachment size is 5 MB. Contact your system administrator if you want to increase this size to attach larger documents.

Using the Java Applet Interface

The examples shown here are demonstrated with BPM Portal with Java Applet Interface.

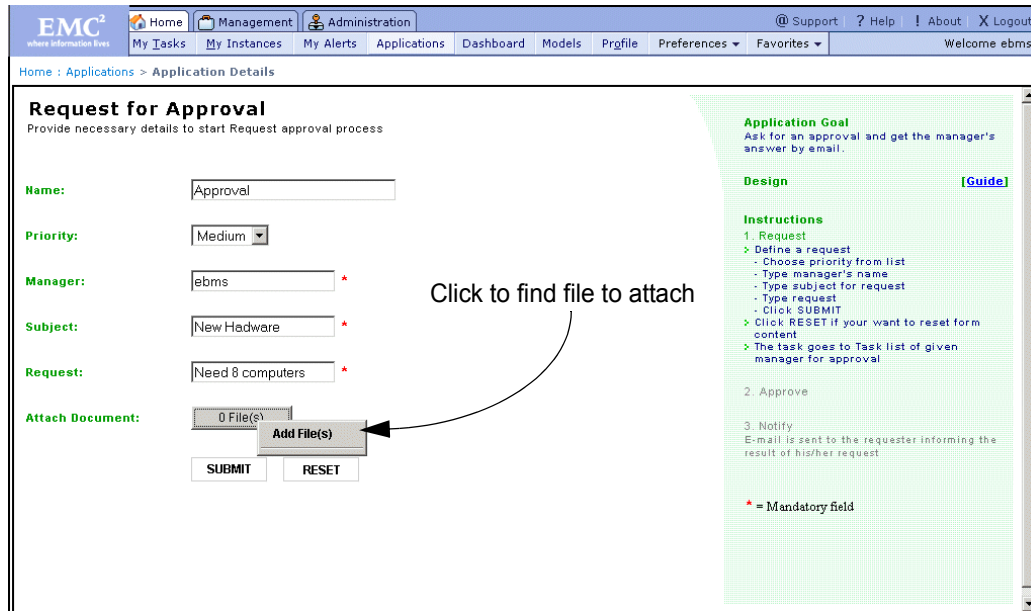
Attaching a Document

You may attach a document using the Java applet interface, either while starting an application (from the ITPC Application page) or while completing a task (from the Task Details page).

1. Click the **File(s)** button in the Document field as shown in [Figure 16](#).

BPM Portal displays a pop-up menu with available document options.

Figure 16 Attaching a Document Using the Java Applet Interface



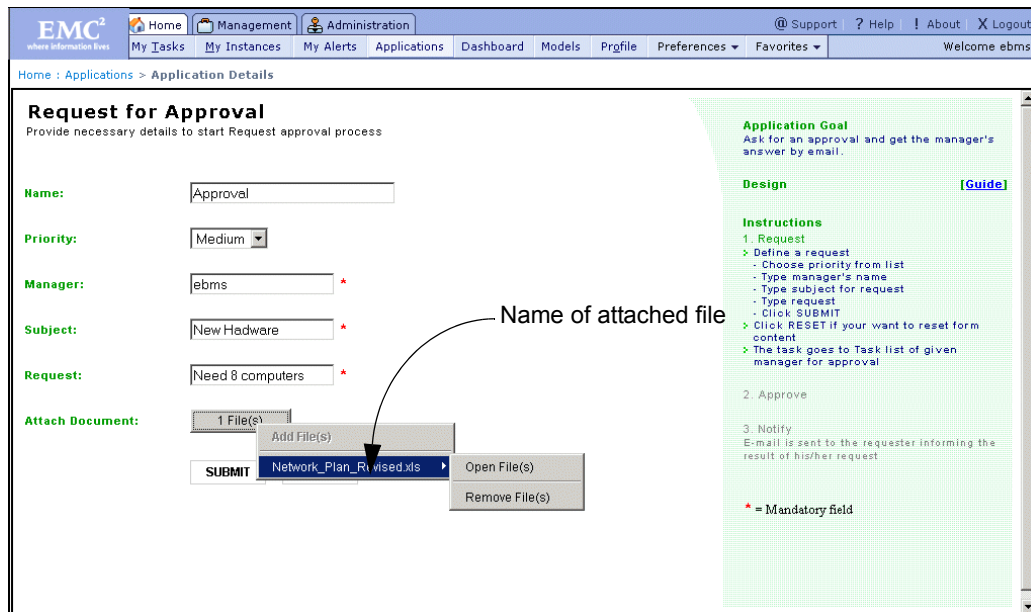
2. Choose **Add File(s)** from the pop-up menu.

BPM Portal displays the Attach Document window, enabling you to move through drives and folders.

3. Select a file and then, click **Open**.

BPM Portal adds the file to the pop-up menu, as illustrated in *Figure 17*.

Figure 17 Attached Files Appear on the Pop-up Menu



4. You can attach additional documents if the task allows for multiple attachments.

See the *BPM Studio User's Guide* for more information on attaching multiple documents.

NOTE: Documents attached are uploaded at the time the task is created, completed or saved.

Updating Documents

You can update a document attached to a task from the Task Details page. To do so, follow these steps:

1. Click the **File(s)** button.

BPM Portal displays a pop-up menu of attached documents.

2. Select and open the document to update from the pop-up menu.

3. Modify the document and save your changes.

BPM Portal automatically uploads the updated document to the BPM Portal server when the task is saved or completed. It is not necessary to manually reattach the document. However, you must save your updated document (Word, Excel, etc.) in order to access it from the pop-up menu.

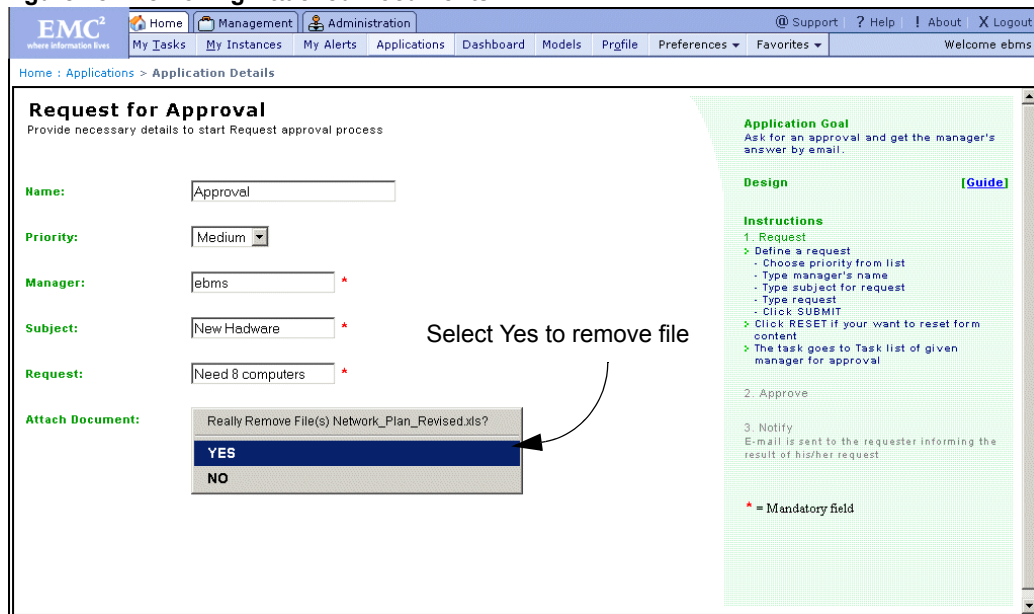
NOTE: A document is uploaded to your system only when the task is created, saved or completed. Accessing the document from the pop-up before saving the updates yields the original attached document, not your updated document.

Removing Attached Documents

You can remove a document attached to a task from the Application Details page. To do so, follow these steps:

1. Click the **File(s)** button.
BPM Portal displays a pop-up menu of attached documents.
2. Select the document you wish to remove.
3. From the submenu, choose **Remove** and then select **Yes** to the confirmation question as shown in the following figure. BPM Portal removes the selected document.

Figure 18 Removing Attached Documents



Updating Documents Accessed by Multiple Users

BPM Portal allows multiple users to concurrently update the contents of their attached documents with or without other users seeing their modifications or edits. The ability to see other users' document modifications depends on one of two types of document attachments. These are as follows:

- **Unprotected.** Allows a document that is updated and reattached by one user to be viewed, updated or removed by another user who is completing the same task.
- **Protected.** Allows users to update and reattach documents without other users viewing their modifications.

Note: When you create a Document dataslot in BPM Studio, you can set the Editable by Author Only check box to prevent other users who also receive the attachment from either seeing or altering the changes you made to the document. When a user reattaches his/her updated document, the user's name appears in front of the file name (for example, *robin_filename.doc*). Refer to the *BPM Studio User's Guide* for more information on document attachment user capabilities.

All changes to the document attachment will become visible only when the document is unprotected.

An ITPC user can send a confidential document to multiple ITPC users by attaching it to a task as a protected document. Each of these recipient ITPC users will receive that task in their respective Task List page.

Each of them can individually access that task, open the document, make necessary changes and save it in their local directory. They can then attach the modified document to the same task and mark that task completed. At any time, none of the recipient ITPC users can see other users' document even though they will be accessing the same task and same copy of the document attached to it.

When all the recipient ITPC users complete their respective tasks, a new task is added in the originator's Task List page. This task has all the recipient ITPC users' modified documents as attachments. To help the originator identify the sender of the document, BPM Portal automatically prefixes the user name of the sender and an underscore, to each modified file name (for example, *robin_filename.doc*).

With this feature, BPM Portal provides you collaboration without compromising the confidentiality.

Using the JavaScript Interface

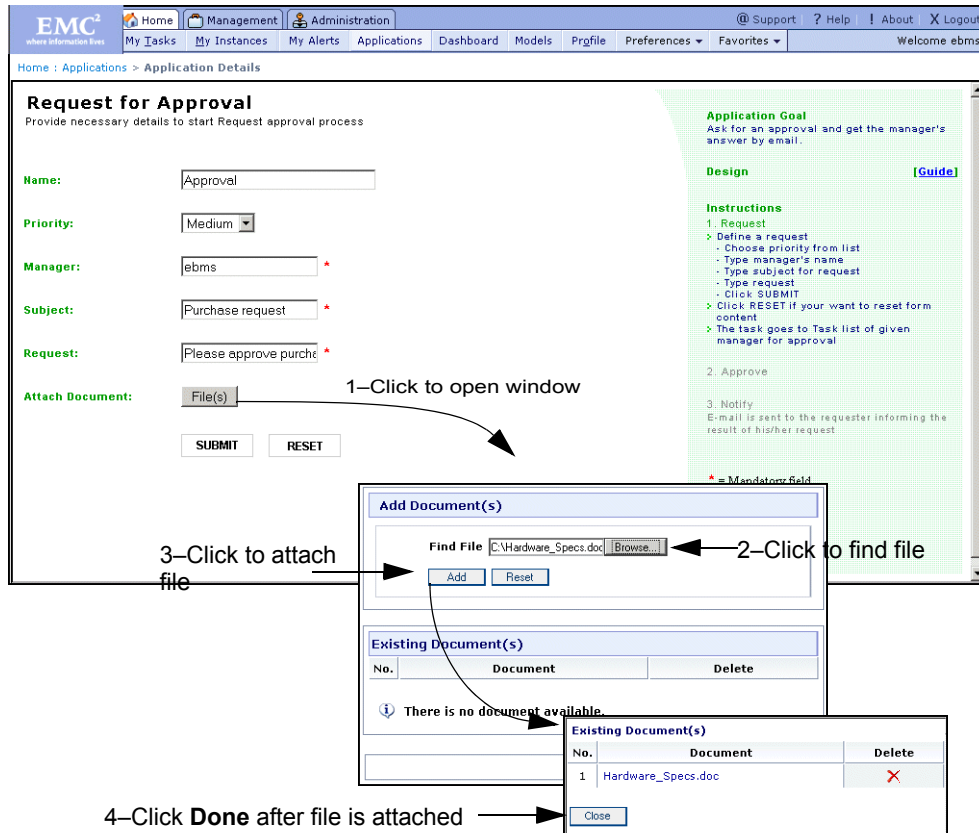
The examples shown here demonstrate BPM Portal with JavaScript interface.

Attaching a Document

You may attach a document using the JavaScript interface, either while starting an application (from the ITPC Application page) or while completing a task (from the Task Details page).

1. Click the **File(s)** button in the Attach Document field, as shown in the following figure.

Figure 19 Creating a Task that Supports Document Upload



BPM Portal displays a window enabling you to select and attach the document from the local or network directory.

2. Click **Browse** to select the file to attach. Select a file and click **Open** in the Choose file window. The path of the selected file is displayed in the Find File text box. You can click **Reset** to clear this path. Note that, when you click **Reset**, only the path of the last selected file is removed from the Find File text box. Any previously attached files are not removed. You have to remove them explicitly. For more information, see [Removing Attached Documents](#) on page 35.
3. Click **Add** to attach the document.
The file is added in the Existing Document(s) table in the window, as illustrated in [Figure 19](#).
4. You can attach additional documents if the task allows for multiple attachments. Otherwise, you can attach only a single document.
See the *BPM Studio User's Guide* for more information on attaching multiple documents.
5. Click **Close**.

BPM Portal navigates back to the previous page.

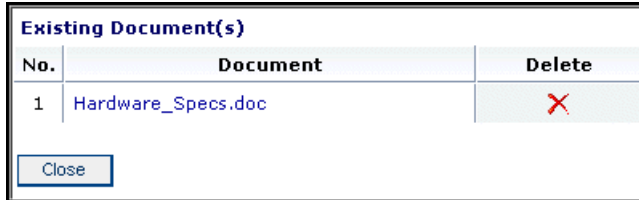
Note: Documents attached using JavaScript are uploaded to the BPM Portal server immediately.

Updating Documents

You can update a document attached to a task from the Task Details page. To do so, follow these steps:

1. Click **File(s)**. BPM Portal displays a window showing the list of attachments, as illustrated in the following figure.

Figure 20 Attached Documents



No.	Document	Delete
1	Hardware_Specs.doc	X

Close

2. Click a document to update it.

If the document is read/write, you must save the document to your local file system and reopen the file in order to modify or edit it. Your changes are reflected in your saved document and not in the original BPM Portal document attachment. If the attachment is read/write, you must reattach your modified and saved document to the task in order to pass your changes along in BPM Portal. The Delete icon is displayed only for the document with read/write attachment option.

If your attachment is read-only, you will not be able to reattach the document to the task if you modify it.

Removing Attached Documents

To remove attached documents from a task, complete the following steps:

1. Click **File(s)**.

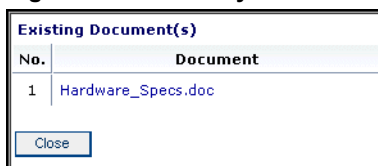
BPM Portal displays the attachment window, as illustrated in [Figure 20](#).

2. Click **Delete** button next to the document to remove it.

BPM Portal removes the document from the list.

NOTE: You cannot delete an attached file from a task if the attachment option is read-only. An example is shown in the following figure. See [Table 7](#) for more details.

Figure 21 Read-only Documents Window



No.	Document	Delete
1	Hardware_Specs.doc	

Close

Updating Documents Accessed by Multiple Users

You may also use the JavaScript interface, which allows multiple users to concurrently modify the contents of their attached documents with or without others seeing the modifications. The basic principles of updating documents accessed by multiple users, using the JavaScript interface are same as that of using the Java Applet interface. For more details, see [Updating Documents Accessed by Multiple Users](#) on page 32.

Chapter 4

Introducing the Management Module

This chapter describes the new features introduced in EMC IT Process Centre (ITPC) 2.1, introduces you to the Management module of BPM Portal, and presents an overview of the Management user interface.

Before logging into the Management module, accomplish the following things:

- [Adjusting Your Browser Cache Setting](#).
- [Customizing the Date Format for Display](#) (optional).

You can then:

- Open the Management module by [Logging into the Management Module](#).
- Learn about controlling access to Management features by [Reviewing User Access/Permissions](#).

What's New

ITPC provides the following new features in the Management module:

- **Heatmap**
- **Creating reports using JasperReports**
- **Wizard-like interface for Balanced Scorecard Designer**

- **Easy access to Chart View**
- **Dashboard Improvements**
- **Report Versioning**
- **Application Overview Status List**
- **PSV Display Improvement**
- **Tabular View column**
- **Estimated Duration vs. Elapsed Time Report, a new Out-of-Box report**
- **Support to show all instances with sub-processes in a report**
- **Improved BizSQL Report output**
- **BPM Portal Report column header sorting**

Adjusting Your Browser Cache Setting

To ensure that you are always viewing up-to-date information, you can set the cache parameter for your browser to check newer versions of stored pages every time you visit by navigating to the settings using the paths shown in the following table:

Table 8 Browser Cache Settings

For this browser...	Navigate to...
Internet Explorer	Tools > Internet Options > open the General tab > Temporary Internet Files > Settings, where you can select one of four options.
Netscape Navigator	Edit > Preferences > expand the Advanced heading > Cache, where you can select one of three options.

You also need to install the Sun JDK version 1.3 or later, and set it as the virtual machine of your browser. For more details about downloading and installing it, refer to Sun Microsystems' site and documentation.

Customizing the Date Format for Display

The Management module uses the Java class `SimpleDateFormat` to display times and dates, which you can configure using the `DateFormat` parameter in the `bpmportal.properties` file in your `%AppServer%\sbm\WEB-INF\classes\properties` directory (There may also be property files for each available language—e.g., `bpmportal_en.properties` for English, `bpmportal_ja.properties` for Japanese in this directory). Under this system, use a time pattern string to specify the specific time and date format for your date format (in `bpmportal.properties`) or for a specific language (e.g., to change a date format only for

Japanese, open the *bpmportal_ja.properties*). Additionally, you need to make the same changes in the *bpmportal.properties* and the property file for each available language in the *%ITPC_HOME%\conf\properties* directory. ASCII letters are reserved as pattern specifiers in the SimpleDateFormat pattern, and the symbols are defined in the following table:

Table 9 SimpleDateFormat Time Pattern Strings

Symbol	Meaning	Presentation	Example
G	era designator	Text	AD
y	year	Number	1996
M	month in year	Text & Number	July & 07
d	day in month	Number	10
h	hour in am/pm (1~12)	Number	12
H	hour in day (0~23)	Number	0
m	minute in hour	Number	30
s	second in minute	Number	55
S	millisecond	Number	978
E	day in week	Text	Tuesday
D	day in year	Number	189
F	day of week in month	Number	2 (2nd Wed in July)
w	week in year	Number	27
W	week in month	Number	2
a	am/pm marker	Text	PM
k	hour in day (1~24)	Number	24
K	hour in am/pm (0~11)	Number	0
z	time zone	Text	Pacific Standard Time
'	escape for text	Delimiter	
“	single quote	Literal	'

Note: As indicated in [Table 9](#), DateFormat is case-sensitive.

Refer to the following rules when using time and date formats:

- The number of pattern letters determines the format, according to the following:
 - (Text): If there are four or more pattern letters, use the full form. If there are less than four pattern letters, use the short or abbreviated form, if one exists.
 - (Number): The minimum number of digits. Shorter numbers are zero-padded to this amount. Year, however, is handled specially—if the count of ‘y’ is two, the Year will be truncated to two digits.
 - (Text & Number): Three or over, use text, otherwise use number.
- Characters in the pattern that are not in the ranges of [‘a’..‘z’] and [‘A’..‘Z’] are treated as quoted text. For instance, characters such as ‘:’, ‘.’, ‘‘’, ‘#’ and ‘@’ appear in the resulting time text even though they are not specified within single quotes.
- A pattern containing an invalid pattern letter results in a thrown exception except during formatting.

The default date format setting for ITPC applications is MM/dd/yyyy, which displays a date of February 18, 2006 as 02/18/2006. The following table presents examples of the date format pattern using U.S. locales:

Table 10 Format Pattern Examples for U.S. Locales

Format Pattern	Result
"MM/dd/yyyy (ITPC default)"	07/10/2006
"yyyy.MM.dd G 'at' hh:mm:ss z"	2006.07.10 AD at 15:08:56 PDT
"EEE, MMM d, 'yy"	Mon, July 10, '06
"h:mm a"	12:08 PM
"hh 'o'clock' a, zzzz"	12 o'clock PM, Pacific Daylight Time
"K:mm a, z"	0:00 PM, PST
"yyyy.MMMMMM.dd GGG hh:mm aaa"	2006.July.10 AD 12:08 PM

Logging into the Management Module

You can log into the Management module through the BPM Portal, the single sign-on portal for ITPC. You need to log in only once to gain access to any other ITPC modules for which you have been granted permissions. These modules can include Management, Home and Administration.

Note: If you are using Internet Explorer 6.0 SP1, make sure that you have the Microsoft Virtual Machine installed. To verify this, select Tools > Internet Options, and open the Advanced tab. Under the "Microsoft VM" heading, make sure the "JIT compiler for virtual machine enabled (requires restart)" check box is selected.

After starting the servers, you can log into BPM Portal. For more details, see [Logging In](#) on page 17 .

Click the **Management** tab to access the Management module. ITPC automatically authenticates your user name and password and displays the **Instances Overview** page.

Note: ITPC's Access Control Management feature displays an error message if you were not granted permission to use this resource.

To access features in the Management module, use appropriate module menus. This module contains the following menus:

- **Overview.** Provides an overview of all active processes, as shown in [Using Management Overview Features](#) on page 44 .
- **Dashboard.** Provides a visual representation of the progress and status of application processes. For more information, see [Using the Management Dashboard](#) on page 62 .
- **Reports.** Displays available reports and provides the interface to define and create reports. For more information, see [Executing and Creating Reports](#) on page 66 .
- **Instance Manager.** Allows you to efficiently manage large numbers of process instances, worksteps and tasks, and to perform tasks in batches rather than singly. For more information, see [Using the Instance Manager](#) on page 100 .
- **Balanced Scorecard.** A performance measurement system that enables you to determine how your organization’s business activities are helping it meet its strategic goals. For more information, see [Using the Balanced Scorecard](#) on page 113 .
- **Infopad Manager.** Enables you to update the information provided in an infopad, a table that stores such global data as application parameters or rule parameters. For more information, see [Using the Infopad Manager](#) on page 126 .

To access other ITPC modules that are available to you, click a module tab to display a range of menus under that tab. Open a menu and select a submenu item to open the feature.

Once you log in to the BPM Portal, no further authentication is required when you open a new module.

Using the BizManage API

The BizManage API, a public API that provides Management module users with access to data that was previously internal, facilitates the customization of Management features. ITPC application developers and customizers no longer need to resort to workarounds and reverse-engineering to create the customized pages that they require – the BizManage API now exposes the elements needed to modify the Management module to users’ specifications.

The BizManage API also uses HTML templates for each type of element, allowing for different levels of customization within the interface pages for each building block. The API can access the lowest-level types of data available and utilized by the Management module, which prevents one of the primary causes for the workarounds that were necessary for customization in the past. While recognizing the need for low-level support, the BizManage API also offers higher-level support that includes packaged data and more complex renderings.

Finally, the BizManage API provides a set of features that enables BPM Portal modules to share a single login command.

Accessing the BizManage API

The BizManage API is implemented as a bean, enabling the user to easily access the API from within all necessary types of applications.

To simplify code and make customization easier, the Management module provides elemental data, i.e., commonly used data that generally is formatted for use within JSPs and/or for display within servlets.

For more detailed information on the BizManage API, see the *API Reference Guide*.

Reviewing User Access/Permissions

The Access Control Manager (ACManager) provides more comprehensive and finer-grained security for ITPC users. During application development, the ITPC Administrator can determine the access a ITPC Manager has to a specific application and what permissions the user has: e.g., can the ITPC Manager access a specific process instance; or can the Management module user perform any action on a BizSQL report; or is the user denied permission to perform any action on the Dashboard. Although the results of this ACManager feature is seen in the Management module, it is defined by ITPC Administrators through the Administration module. If, as a ITPC Manager, you want to allow or prohibit certain users access to specific applications and/or grant or revoke specific permissions to a user, contact your ITPC Administrator. See the *BPM Portal Administrator's Guide* for additional information.

Process-Level Permissions

To better understand how ACManager access/permissions work with Management features, consider the following points involving permissions for process templates, process instances and process dataslots:

- To view and/or update a process template, a ITPC Administrator must assign you the corresponding rights. The view action enables you to see the item; the update action enables you to revise it. If you have not been assigned view and/or update permissions for a process template, it will not appear in the Management module.
- To view and/or update a specific process instance, a ITPC Administrator must assign you the corresponding rights. You can also be assigned view/update permissions for all process instances.
- To view and/or update a specific process dataslot, a ITPC Administrator must assign you the corresponding rights. You can also be assigned view/update permissions for all process dataslots.

To view/update a process dataslot, you must be granted the associated permissions; i.e., to access a process dataslot, you must have the process instance permission and the process template permission.

Report Permissions

To view/execute existing Management reports:

1. The ITPC Administrator must first grant you the permission for the application(s) from which the report is derived.
2. The ITPC Administrator must assign you the permission to perform any action on the specific report type. In ITPC, there are four types of reports: Single Application, MultiApps, External and Infopad Report.
3. Once you have the required permissions, the **Go** button in the **Create New Report** page is enabled and you can execute an existing report (see [Running an Existing Report](#) on page 81).

NOTE: The report may be filtered, since any process instance or dataslot that the user does not have permissions for is not shown.

4. To create a report, you must have permission for the application(s) the report will be derived from and have the Create a Report permission for the application. Once these permissions are granted, the **Query** button in the **Create New Report** page is enabled and you can create a report (see [Creating Application \(Query\) Reports](#) on page 83).
5. To delete a report, you need the permissions described in step 4, as well as the Remove a Report permission. With these permissions, the **Remove** button in the **Create New Report** page is enabled and you can delete a report (see [Removing an Existing Report](#) on page 95).
6. To modify an existing report, you need the permissions described in step 4, as well as the Modify a Report permission. With these permissions, the **Modify** button in the **Create New Report** page is enabled and you can modify an existing report (see [Modifying an Existing Report](#) on page 94).

To hold ReportBuilder permissions, the ITPC Administrator must assign you the permission to perform any action on any ReportBuilder, as well as permissions for the application(s) from which the report is derived.

To view/update BizSQL reports, you must have the permissions required for External reports and an additional permission to execute a BizSQL report (for more information, see [About External Reports](#) on page 81).

Permissions for Other Management Features

- To obtain permissions for the Dashboard, the ITPC Administrator must assign you the permission for the specific application, then grant an Execute permission to perform an action on a Management Dashboard item.
- To hold permission to view and/or update Infopads, the ITPC Administrator must assign you the view and/or update permissions for a selected infopad.

Note: Remember that you must verify that top-level permissions (e.g., to an application) have been assigned in order for lower-level permissions (e.g., updating a report or accessing the Dashboard) are working.

Logging Out

To quit BPM Portal, click **Logout** on the global links. After a successful logout, BPM Portal automatically displays the BPM Portal Login page.

Note: Please remember that when any applications are installed in ITPC to which you have been granted permission as a Manager, you must log out, then log in again, to ensure that this permission is reflected in ITPC.

Chapter 5

Using Management Overview Features

The Management module of the BPM Portal is organized into a series of Web pages utilizing applets to enable you to quickly and efficiently manage EMC IT Process Centre (ITPC) applications. This chapter describes procedures that enable you as a ITPC Manager to monitor and update ITPC applications and process instances by performing the following functions:

- *Checking the Status of an Instance*, by displaying all instances for all applications, or using the filtering functions to view the status of specific instances for a selected application. You can also dynamically update the worksteps and workitems of an instance, and print the current status of the instances.
- *Updating Worksteps and Workitems*, dynamically modifying an active or suspended workstep or workitem without leaving the Management module.
- *Checking the Status of an Application*, by selecting an application and reviewing its status. You can also view and update its global dataslots, as well as modify and send workstep instructions to other users of the selected application.

Note: See *Chapter 4, Introducing the Management Module* for an introduction to the Management interface. See *Chapter 7, Executing and Creating Reports* for detailed information about using the Reports function to define and execute reports.

Instances Overview Page

To view the Instances Overview page, in the Management module, click Overview > Instances. This page indicates the status of the application instances, as shown in the following figure.

Figure 22 Instances Overview Page

Use the Filter bar to search for specific instances.

Instances that meet the filter criteria shown in the workspace.

Click a Flow icon to open the Process Status Viewer and see a flow chart for the process instance.

The Instances Overview page displays information about the application instances you are currently using. By default, it displays all instances and the following information about each instance:

Table 11 Instance Overview Information

Column	Description
Application	A unique identifier for the application instance.
Instance	The name of the process instance.
Status	The status of the filtered instance.
Creator	The name of the user who created the instance.
Tabular	Click the icon in this column to display the tabular view of the process instance.
Flow	Click the icon in this column to display the process instance flowchart at the point of the active task.
Priority	Priority level as determined by the user initiating the application. It can be Low, Medium, High, or Critical.
Elapsed Time	The time elapsed since the start time.
Start Date	The date the task was initiated.
End Date	The date the task was (or should be) completed, as determined by the application developer when setting the estimated duration in the Process Properties window.

In addition to the default columns, you can add dataslots as columns using the Dataslot Properties dialog box in the BPM Studio. For more information, see *BPM Studio User's Guide*. These dataslot columns are sortable; that means, you can sort the contents of this page based on this column header. For more information, see [Sorting a Column](#) on page 23 . This helps to quickly locate instance(s) based on the application specific dataslot values.

Note: Specify the date format for the reports using the `DateFormat` parameter in `bpmportal.properties`. See [Customizing the Date Format for Display](#) on page 37 for more information about the date format syntax. ITPC displays a warning message if you specify an invalid format for a Date field.

To manage the contents of the list, you can filter and/or sort them. To navigate through the pages, you can use the paging controls. For more details about these operations, see [Exploring BPM Portal](#) on page 21 .

The Instances Overview page enables you to:


- Use the Filter bar to search through all applications, or a selected application, for specific process instances.
- Check the status of the specified process instances.
- Open the Tabular View to see the properties of each workstep displayed in a tabular format that presents data in a unified view.
- Open the Flow View to see the process flow (i.e., the flow of work from one workstep to the next). From the Flow View, you can also see the instance's information flow (i.e., the flow of data from one workstep to the next), as shown in the Dataslots View. You can also dynamically modify the process flow from the Flow View (for more information, see [Editing Process Instances Using the Flow View](#) on page 51).

Note: This page is also the Management module's default page, and the user can return to this page at any time by clicking the **Management** tab in the BPM Portal.

Checking the Status of an Instance

To check the status of an instance, complete the following steps:

1. In the Management module, click Overview > **Instances**, to view the Instances Overview page, as shown in the [Figure 22](#).
2. Use the search features in the Filter bar to specify the process instances you want to monitor.
 - a. Select a ITPC application from the **Applications** drop-down list. Data on all instances for the selected application (or for all applications, if you choose All) are displayed in the workspace.
 - b. Select an option from the **Status** drop-down list. Options include: All, Active, Completed, Removed or Suspended. Active indicates the instance is active and can be run. Suspended indicates the instance is temporarily stopped until the Resume option is selected.
 - c. Select an option from the **Duration** drop-down list. Options include: Hours, Weeks, Days, Business Days. You can use this search criteria only for instances with a Completed status.

- d. Specify a Creator, if applicable. If needed, you can click the adjacent icon to search and add users. For more details, see [Searching Users](#) on page 27 .
- e. Select an option from the **Priority** drop-down list. Options include: All, Critical, High, Medium and Low.
- f. Specify the period by selecting an option from the **Date** drop-down list. To define a more specific time range, select Custom from the Date drop-down list and then specify the dates in the **From** and **To** boxes. Alternatively, click the **Select Date** icon () to set the respective from and/or to dates. For more details, see [Specifying a Date](#) on page 26 .

Note: Specify the date format for the reports using the DateFormat parameter in *bpmportal.properties*. See [Customizing the Date Format for Display](#) on page 37 for more information about the date format syntax. ITPC displays a warning message if you specify an invalid format for a Date field.

3. After you have finished entering filtering criteria, click **Go** to locate the specified instance(s).
ITPC displays all the instances satisfying your filter criteria, in the workspace.

Viewing Process Status

Click the Management tab to access the Management module. Click the Overview menu and select **Instances** to view the **Instances Overview** page.



The Instances Overview page enables you to:

- Use the Filter bar to search through all applications, or a selected application, for specific process instances.
- Check the status of the specified process instances.
- Open the Tabular View to see the properties of each workstep displayed in a tabular format that presents data in a unified view.
- Open the Flow View to see the process flow (i.e., the flow of work from one workstep to the next).
- From the Tabular View and Flow View, you can also see the instance's information flow (i.e., the flow of data from one workstep to the next, as shown in the Dataslots View).



Note: This page is also the Management module's default page, and the user can return to this page at any time by clicking the **Management** tab in the BPM Portal.

To check the status of an instance, complete the following steps:

1. In the Management module, click Overview > **Instances**, to view the Instances Overview page, as shown in the [Figure 22](#).
2. Use the search features in the Filter bar to specify the process instances you want to monitor.
 - a. Select a ITPC application from the Applications drop-down list in the upper left of the Filter bar. Data on all instances for the selected application (or for all applications, if you choose All) are displayed in the workspace, as shown in the following figure.

- b. Select an option from the Status drop-down list. Options include: All, Active, Completed, Removed or Suspended. **Active** indicates the instance is active and can be run. **Suspended** indicates the instance is temporarily stopped until the **Resume** option is selected.
 - c. Select an option from the **Duration** drop-down list. Options include: Hours, Weeks, Days, Business Days. Use this search criteria only for instances with a **Completed** status.
 - d. Specify a Creator, if applicable. Click the Edit Creator icon () to open the User List, from which you can select a valid ITPC user.
 - e. Select an option from the **Priority** drop-down list. Options include: All, Critical, High, Medium and Low.
 - f. Select an option from the **Date** drop-down list. Options include: Today | Yesterday, This Week | Last Week, This Month | Last Month, et al. To define a more specific time range, click the Select Date icon () and choose a start date and end date from the pop-up calendars.
3. After you have finished entering filtering criteria, click **Go** to locate the specified instance(s).

The filtered instances appear in the workspace. The columns include:

- **Application:** A unique identifier for the application instance
- **Instance:** The name of the process instance.
- **Status:** The status of the filtered instance.
- **Creator:** The name of the user who created the instance.
- **Tabular:** Click the **Tabular** icon () to display the tabular view of the process instance.
- **Flow:** Click the **Flow** icon () to display the process instance flowchart at the point of the active task (see [Table 12](#) for color coding).
- **Priority:** The priority level as determined by the user initiating the process instance.
- **Elapsed Time:** The time elapsed since the start time.
- **Start Date:** The date the task was initiated.
- **End Date:** The date the task was (or should be) completed, as determined by the application developer when setting the estimated duration in the Process Properties dialog box.

Note: Specify the date format for the reports using the DateFormat parameter in *bpmportal.properties*. See [Customizing the Date Format for Display](#) on page 37 for more information about the date format syntax. ITPC displays a warning message if you specify an invalid format for a Date field.

- Click the **Tabular icon** in the Tabular column to view the properties of each workstep displayed in a tabular format that presents data in a unified view.

The Tabular View displays the Start workstep as the first workstep at the top of the list. It is followed by the remaining worksteps in alphabetical order and the End workstep is displayed as the last workstep. The same color coding described in [Table 12](#) is also used in the Tabular View.

Figure 23 Tabular View

No.	Workstep	Performer	Estimated Duration	Start Date	End Date	Priority	Status	Action
1	Start	-	1hrs	Oct 17, 2005	Oct 17, 2005	Medium	Completed	
3	DoTask	sbms	1days	Oct 17, 2005		Medium	Activated	
Workitem(s) Total: 1								Show All

When you are in the Tabular View, you can:


- Update an Active workstep by modifying its Priority or by changing its Action; e.g., suspending an active workstep.
 - Update a workitem by changing the Performer or selecting an Action.
 - Send an e-mail to the performer(s) by clicking the Performer link. ITPC launches your default mail client and enters the e-mail addresses of the performer(s). If there are multiple performers comprising any combination of, list of users and list of groups, then ITPC enters individual e-mail addresses of those users and group members. However, if a group contains users and another group, then ITPC enters e-mail addresses of only the users but does not enter e-mail addresses of the nested group's members.
- Click the **Flow icon** () in the Flow column to open the **Flow View**, where you can view the instance in a flowchart, as shown in the [Figure 24](#) on page 50. The worksteps color coding is explained in [Table 12](#).

Figure 24 Flow View

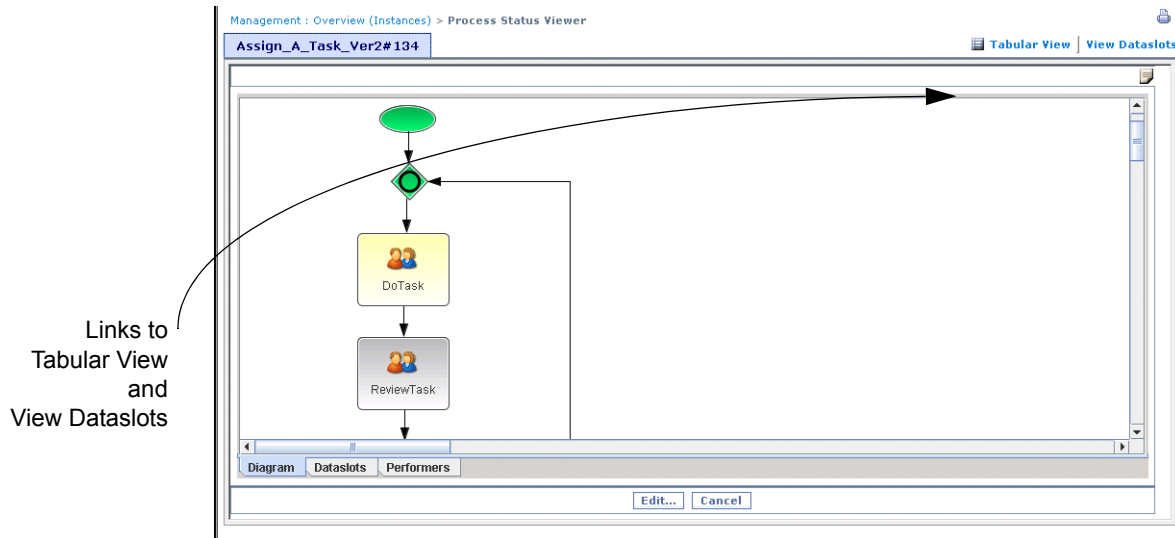


Table 12 Workstep Color Coding

Workstep Color...	Indicates...
Yellow	Active workstep
Gray	Inactive (i.e., unperformed) workstep
Green	Completed workstep
Orange	Suspended workstep

Note: If you want to display the Flow View without any BPM Studio features, you need to add `bpmportal.pieditor.override` parameter in the `bpmportal.conf` file, and set its value as `TRUE`.

6. To access dataslot information for the process instance from the Tabular or Flow View, click **View Dataslots** to open the **View Dataslots** page, as shown in the figure below. This page appears if you have been granted Dataslot permissions.

Figure 25 View Dataslots Page

The screenshot shows a web form titled "View Dataslots" for process instance "Assign_A_Task_Ver2#134". The form contains the following fields and values:

Assignee:	ebms
Comments:	
Creator:	ebms
Decision:	Redo
DueDate:	11/30/2005 04:10PM
End Date:	
Instructions:	
Priority:	Medium
Start Date:	Oct 17, 2005
Status:	Activated
TaskName:	
TaskPriority:	Medium

At the bottom of the form are three buttons: Save, Reset, and Cancel.

If you have only View permission for the Dataslot resource, the fields in the View Dataslots page are read-only. If you have View and Update permissions for the Dataslot resource, the fields are editable, as shown above.

To change the dataslot information for the process instance:

- a. Modify the priority of the instance by selecting an option in the Priority drop-down list.
- b. Modify the status of the instance by selecting from the options in the Status drop-down list.

Note: Only Active application instances can be modified. However, you can attach documents to a Suspended application instance.

- c. Modify the remaining dataslots as needed, and click **Save** at the bottom of the form. ITPC updates the dataslots after your confirmation. To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

Editing Process Instances Using the Flow View

The Flow View enables users to dynamically modify the workflow of a selected process instance. Before using the dynamic workflow feature of Flow View, make sure that the selected process instance is in an Active state and that none of the worksteps are in a Suspended state. Also, all worksteps assigned an Active status in the process instance must be human-performed worksteps.

When implementing dynamic workflow, the BPM Portal obtains the process template information through the process instance SVO—you cannot directly access the dynamic process template/workstep template SVO. Upon completion of modifying the dynamic process instance, the process template is removed if the *removeOnCompletion* is “true” during the creation of a dynamic process template.

The Flow View is a scaled down version of the BPM Studio. You can perform many BPM Studio operations in this mode such as adding worksteps, modifying workstep properties, viewing dataslots, and changing performers. However, before you attempt editing the current instance, note that:

- The selected process instance must be Active and that none of the worksteps should be in the Suspended state.
- All Active worksteps in the process instance must be human-performed worksteps.
- The edited process instance can run concurrently with the original process instance, or the original process instance can remain Suspended.

This Flow View is composed of:

- A Toolbar containing icons for the Select and Connect tools.
- A Task pane (or sidebar) that, by default, lists Shapes; that is, the worksteps and other process instance elements that comprise the structure of the process instance displayed in the workspace.
- The workspace, used to edit your process instance diagram, and workspace tabs that include the:
 - **Diagram** tab. The default page where you edit process instance diagrams, as shown in the following figure.
 - **Dataslots** tab. Contains all the dataslots defined for the selected application. Click this tab to display the Dataslots page. You can view all dataslots available for the selected process instance on this page.
 - **Performers** tab. Contains a list of all the performers used in the process instance.

This Flow View allows you to edit a process instance directly from your browser, and is very similar to the BPM Studio. However, unlike BPM Studio, which is used to create and/or edit process templates, this Flow View can be used to edit process instances only. For more information, see *BPM Studio User's Guide*.

From the Flow View, you can:

- Modify the properties of any Inactive workstep by double-clicking it.
- Add a workstep to the process instance.
- Remove an Inactive workstep.
- Drag and drop existing predefined adapters that are present in the Performers list, or that have been created elsewhere and added to the Performers list.
- Provide support for Swim Lanes for Performers, after the swim lanes were added in the BPM Studio.

Note that while you are editing the current process instance, you are not allowed to:

- Remove worksteps that are in Active, Suspended or Completed state.
- Add or delete dataslots.
- Modify dataslot metadata and values.
- Add or delete performers.
- Define new adapters or a subprocess.
- Drag and drop Managed Adapters from the task pane.
- Add Rollback to an activity.
- Specify header and footer for a workstep.
- Modify properties for an Active or Completed workstep.
- Save any modifications if the process instance is Suspended or has a Suspended workstep.
- Use versioning with dynamic process instances.
- Connect to a server and retrieve the list of processes already installed.
- Connect to WSDL and select the method for a new Web Service.
- Complete tasks by email. When the dynamic process instance is dynamically created, the performers of the activated human-performed tasks are not notified about their tasks.

Note: You can modify any process instance only once. If further modification is attempted, a warning message is displayed.

Note: If you want to display the Flow View without any BPM Studio features, you need to add `bpmportal.pieditor.override` parameter in the `bpmportal.conf` file, and set its value as `TRUE`.

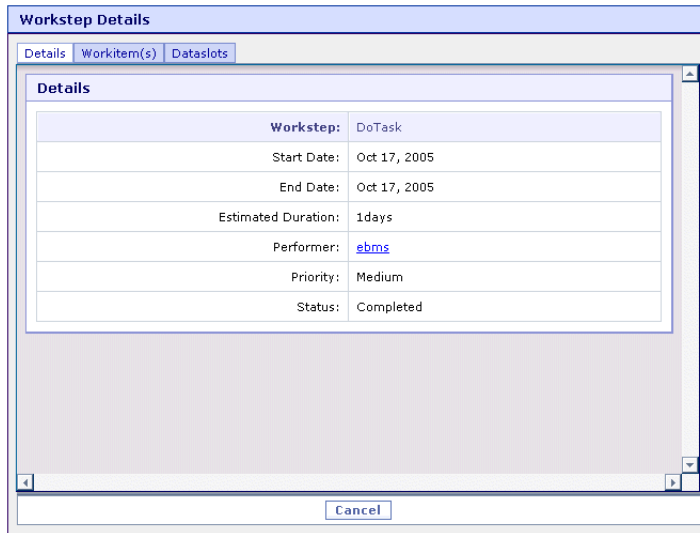
Updating Worksteps and Workitems

You can dynamically update worksteps and workitems in the Management module by performing the following procedures.

1. From the **Flow View** page, click any completed (green), active (yellow) or suspended (orange) workstep from the flowchart to open the **Workstep Details** window.

- The **Workstep Details** window for a completed workstep (see figure below) displays read-only data that cannot be modified.

Figure 26 Workstep Details Window for a Completed Workstep




Active or suspended worksteps display a dialog window with editable fields, where you can update certain workstep and workitem properties. The following figure presents the **Workstep Details** window for an active workstep.

- To send an e-mail to the performer(s), click the Performer link. ITPC launches your default mail client and enters the e-mail addresses of the performer(s). If there are multiple performers comprising any combination of, list of users and list of groups, then ITPC enters individual e-mail addresses of those users and group members. However, if a group contains users and another group, then ITPC enters e-mail addresses of only the users but does not enter e-mail addresses of the nested group's members.

Figure 27 Workstep Details Window for an Active Workstep




- To dynamically modify an active or suspended workstep or a workitem during run-time:

- a. In the Workstep Details section, select an option from the Priority drop-down list to update the workstep's priority.
- b. In the Workitem(s) section, update information about the Performer by entering data in the Performer box or by clicking  to open the **User List** page, where you can select a valid user from the list of ITPC users.
- c. In the Workitem(s) section, update Action information by selecting an option from the drop-down list in the Action column.
- d. If you want to suspend the workstep, click **Suspend Workstep**. The **Suspend Workstep** option changes the workstep color to orange, and temporarily stops the process at the suspended workstep until the issue causing the suspension is resolved or you resume workstep execution.
- e. If you want to complete the workstep, click **Complete Workstep**. The **Complete Workstep** option changes the workstep color to green. ITPC takes a while to mark the workstep as completed and change its color. Therefore, you may have to refresh the screen more than once to reflect the color change.
- f. If the Completed workstep has been designated as a Rollback Point (i.e., it is the workstep from which the work flow will be restarted if the process fails during execution), a **Rollback** button is displayed in the Workstep Details window. Select **Rollback** to “roll back” the process to the rollback point. For more information on rollback, see “Using the Rollback Process” in the *BPM Studio User's Guide*.
- g. Click **Save** to save any changes you made in the Workstep Details page. ITPC automatically reloads the Flow View.

Click **Cancel** to delete any updates, and return to the **Flow View** page.

Note: Completed worksteps and workitems cannot be modified. Removed instances also cannot be modified.

Printing the Flow View in the Process Status Viewer

In the Flow View page, click the **Print** icon () in the top right corner of the screen (refer to [Figure 24](#)) to display a printable version of the Flow View. ITPC displays the Flow View in a separate, browser window. To print it, use the print command from the Web browser.

Note: The printable Flow View is presented in the PNG graphic format. You cannot click on the worksteps in this window to modify the properties. To do so, return to the Flow View page.

Checking the Status of an Application

To view the Application Overview page, in the Management module, click Overview > Applications. The **Application Overview** page enables you to:

- Check the status of one or more selected applications.
- See the process flow (i.e., the flow of work from one workstep to the next), as shown in the **Flow View**.
- See the tabular view that displays each workstep and its instructions for a selected application in a tabular format, as shown in the **Tabular View**.
- See the information flow at the application level, by opening the **Global Dataslots** view.
- Prepare or modify instructions or comments and send them to users of the process you are managing, by using the **Application Information** link.

To check the status of an application, complete the following steps:

1. In the Management module, click Overview > **Applications**. The Application Overview page is displayed as shown in the following figure.

Figure 28 Application Overview Page

No.	Application	Status	Tabular	Flow
1	Approval	Installed		
2	Approval_Ver2	Installed		
3	Assign_A_Task_Ver1	Suspended		
4	Assign_A_Task_Ver2	Installed		
5	Assign_A_Task_Ver4	Suspended		
6	Assignment	Installed		
7	BalancedScorecard	Installed		

2. Select a ITPC application and/or select a status from the **Applications** and **Status** drop-down list respectively, and click **Go**. The Application Overview page is displayed. This page displays information about the applications satisfying your filtering criteria. By default, it displays all applications and the following information about each one of them:

Table 13 Application Overview Information

Column	Description
Application	A unique identifier for the application instance.
Status	The status of the filtered instance.
Tabular	Click the icon in this column to display the tabular view of the process instance.
Flow	Click the icon in this column to display the process instance flowchart at the point of the active task.

To navigate through the pages, you can use the paging controls. For more details about these operations, see [Exploring BPM Portal](#) on page 21 .

3. Click the **Tabular** icon in the Tabular column to view each workstep for a selected application displayed in a tabular format. Here also, you can enter new, or modify existing, instructions for each workstep.
4. Click the **Flow** icon in the Flow column to view a workflow chart of the selected application in the workspace.
5. Click a workstep to open the Workstep Instructions window (see the following figure), where you can enter new, or modify existing, instructions for that workstep.

Figure 29 Workstep Instructions Window



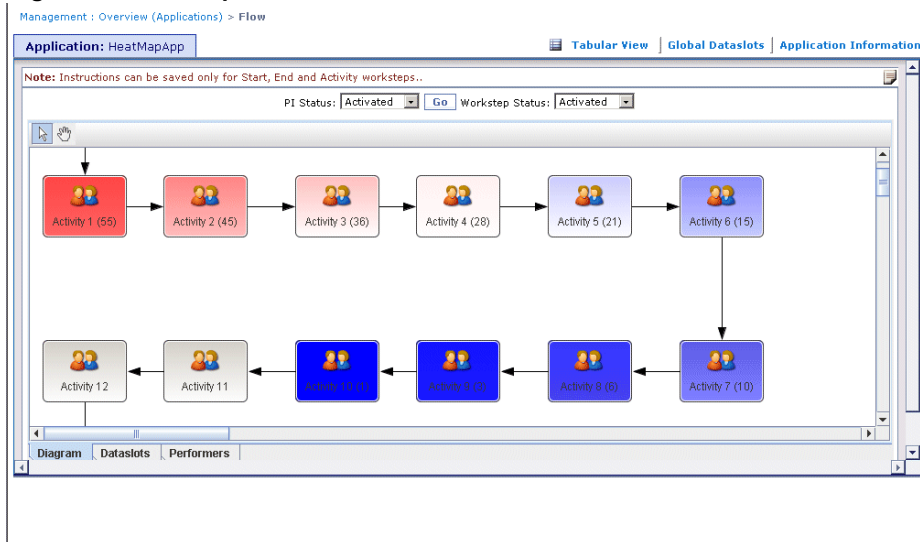
The screenshot shows a dialog box titled "Workstep Instructions". Inside the dialog, there is a label "Workstep:" followed by the text "Approve". Below that is a label "Instructions:" followed by a text input field containing the text "Approve the following Request". At the bottom of the dialog, there are three buttons: "Save", "Reset", and "Cancel".

6. Click **Save** to save the instruction and go back to the previous page.
To cancel the action and exit the current window, click **Cancel**.
7. To change from the Tabular view, click the **Flow View** link to view the Flow View. Similarly, to change from the Flow view, click the **Tabular View** link to view each workstep for a selected application displayed in a tabular format. Here also, you can enter new, or modify existing, instructions for each workstep.
8. Click **Save** to save any changes you made in the Workstep Instructions window or in the Tabular View page. Click **Reset** to clear any data you entered and return to the original settings.

Using the Heatmap

When you click the Flow icon for a process in the Application Overview page, a color-coded Flow View or *Heatmap* is displayed as shown below.

Figure 30 Heatmap



A heatmap helps a ITPC Manager to:

- Get an overview of the status of the currently active instances. Using this as a tool a business manager can identify potential bottlenecks in the process.
- Identify worksteps that have been suspended, for a variety of reasons and take necessary actions to resume the suspended processes.
- Analyse the history of the completed instances to identify potential trends and opportunities for optimization.

In the Flow View, you can use the PI Status to filter the instances and Workstep Status drop-down lists to filter the worksteps in the heatmap based on their status. You can select **Completed** from the PI Status, click **Go**, and then **Completed** from the Workstep Status, or select **Activated** from the PI Status, click **Go**, and then select **Activated**, **Suspended** or **Completed** from the Workstep Status drop-down list. The heatmap graphically shows the status of all worksteps for the specified status of process instances. For example, if you select Activated from the PI Status drop-down list and Suspended from the Workstep Status drop-down list, then the heatmap displays all suspended worksteps of all the active process instances. When you change Workstep Status option, the heatmap is automatically refreshed. However, when you change the PI Status option, you need to click **Go** to refresh the heatmap.

Each workstep is color-coded as described in the following table.

Table 14 Heatmap Color Coding

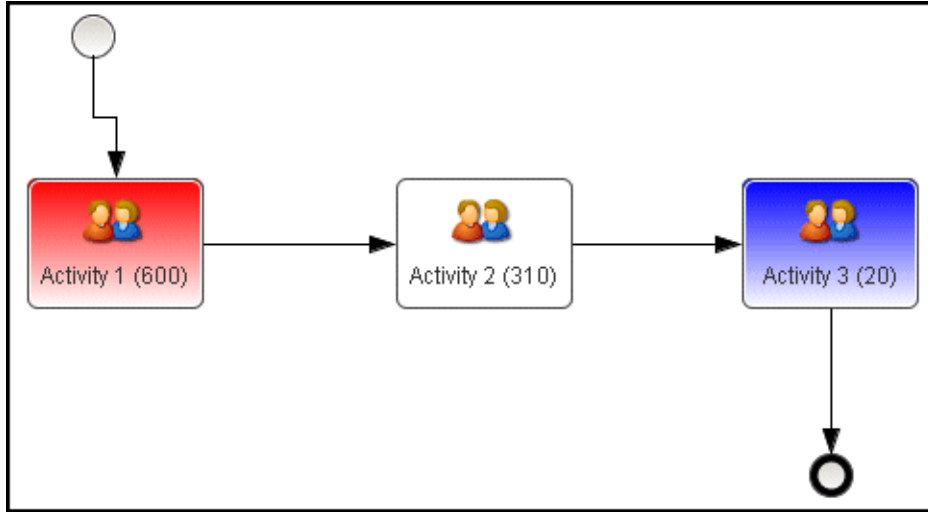
Color Range	Description
Red to White	For values between the maximum and the median ^a .
White to Blue	For values between the median and the minimum.

a. Median is calculated by adding all the values for each activity and dividing this sum by the total number of activities.

The number in the parenthesis after the activity label indicates the total number of workstep instances of the specified status.

A bottleneck can be identified by a red workstep immediately followed by one or more white worksteps, as shown in the following figure.

Figure 31 Heatmap of a Bottleneck



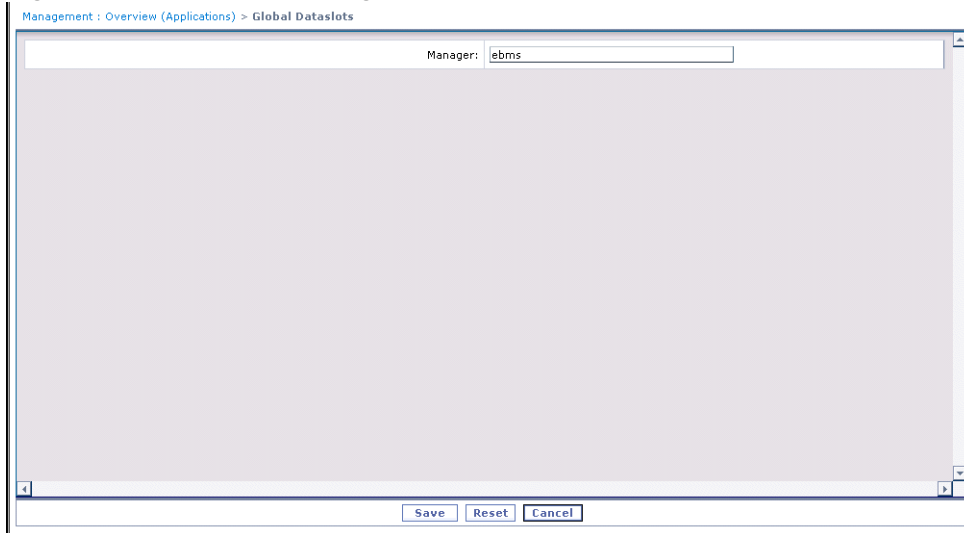
Modifying Global Dataslots

Global dataslots are application-level dataslots that occur in each process instance of the application. In previous releases, dataslot values were limited to individual process instances.

To view and/or dynamically update dataslot information globally (i.e., at the application level), from the Management module:

1. In the Management module, from the Application Overview page, click the application name to display **Global Dataslots** page; or click the Tabular or Flow icon and then click **Global Dataslots** to display the **Global Dataslots** page (see the figure below), displaying all the dataslots that occur across the application.

Figure 32 Global Dataslots Page



2. Modify the information in the activated boxes as required.
3. Click **Save** to save your changes. ITPC reloads the page and automatically updates the values across all process instances.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

Sending Information to Application Users

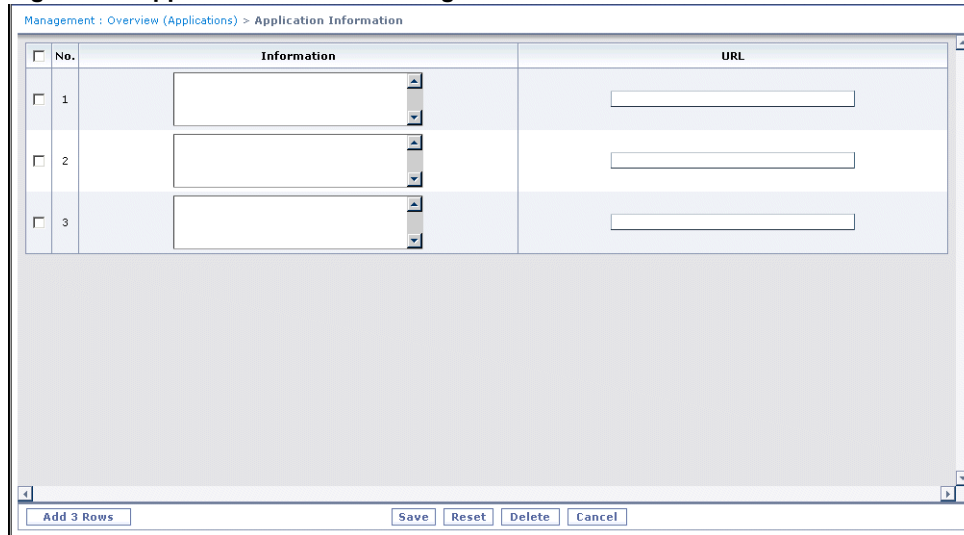
The Application Information feature in the Management module enables you to modify workstep instructions at a process template level and to send the modified instructions to other users of the application without having to modify the original process template, providing application users with the most up-to-date information.

Use this feature to enter new, or modify existing, instructions for the application. Instances created after the change receive the new instructions, while old instances retain the original instructions.

To use the Application Information feature:

1. In the Management module, click Overview > **Applications**. The Application Overview page is displayed.
2. Select an application from the **Applications** drop-down list, and information on that application is displayed in the workspace.
3. Click the **Application Information** link. The Application Information page is displayed, as shown below. By default, three rows are displayed.

Figure 33 Application Information Page



The screenshot shows a web application interface titled "Management : Overview (Applications) > Application Information". It features a table with three rows. Each row has a checkbox in the first column, a "No." column with values 1, 2, and 3, an "Information" column with a text input field and a dropdown arrow, and a "URL" column with a text input field. Below the table, there are four buttons: "Add 3 Rows", "Save", "Reset", and "Delete", and a "Cancel" button.

4. Select a check box and enter instructions, comments or other details in the corresponding Information box.
5. Enter the Web site address in the corresponding URL box.
6. To add rows, click **Add 3 Rows**. A set of three rows are automatically added.
To delete one or more rows, select the check box for each row you want to remove and click **Delete**.
7. Click **Save** to save the changes. ITPC saves the changes and after your confirmation, automatically sends the information to the specified URL address.
To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

Note: You can only use this feature to send information on Activity, Start, and End worksteps.

Chapter 6

Using the Management Dashboard

This chapter explains you how to use the Dashboard feature of the Management module.

Management Dashboard

The Management Dashboard enables managers to display a graphic overview of the status of several business processes on a single Web page and to monitor the progress of these processes. The user can choose one of the following Management Dashboard views:

- The default Global view, which contains seven panes and is designed to give the user the entire picture of what is happening across all ITPC applications.
- The Application view, which contains six panes and is designed to provide specific information about the selected application.

The **Management Dashboard** page provides a set of widgets that display application data within one of the sections within a Global view or an Application view. The widgets dynamically execute associated or predefined queries for each section. You can specify various properties for these widgets by using their tags in the *dashboard.jsp* file. The `<ChartSQL>` element of this file specifies a query string that establishes data retrieval processes from the database for the widget, and the `<ChartURL>` element specifies the URL of the pre-defined report to be displayed when that widget is clicked. The widgets provide visual summaries that include the pie and bar charts, and the gauges, as shown in [Figure 34](#) on page 63 and [Figure 35](#) on page 64. You can click any widget to view its details. For more information, see [Viewing the Details of a Widget](#) on page 65 .

Each time a new process with active instances is installed, ITPC enters the data in a default Dashboard Table, or updates the data in an existing Dashboard table after a delay which is configurable. This information is seen by ITPC Managers when they access the Management Dashboard. However, users must log out and log in again to see changes in a database reflected in the Management Dashboard. For example,

if the infopad count in one of the widgets increases to 9 in the database and its default range is 0-5, you must first increase the range of the widget in the *dashboard.jsp* file. To see the new infopad count of 9 reflected in the Management Dashboard, you must log out of the Management module and then log in again, to see the new value displayed in the Management Dashboard.

Customizing the Management Dashboard

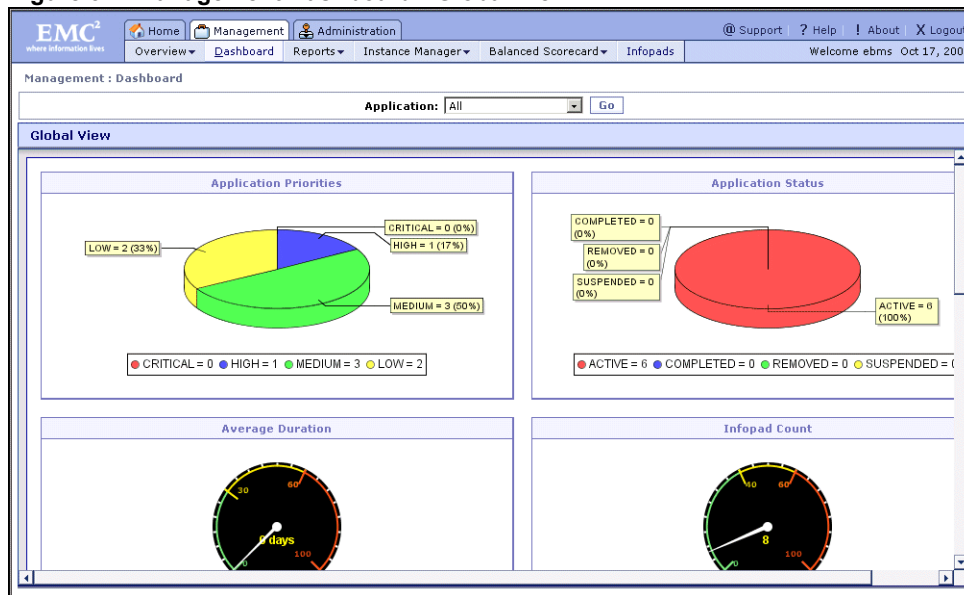
Customizing the Management Dashboard and creating custom dashboard tables are the responsibilities of Application Developers, and involve modifying the *dashboard.jsp* file and a Java-based table populating mechanism. Custom console tables can be designed to collect application-specific information, which can then be viewed through the Management Dashboard. For more information on managing, populating and customizing data in the Management Dashboard, see the *Customization Guide*.

Accessing the Management Dashboard

To access the Management Dashboard:

1. In the Management module, click **Dashboard**, to view the Management Dashboard page.

Figure 34 Management Dashboard - Global View



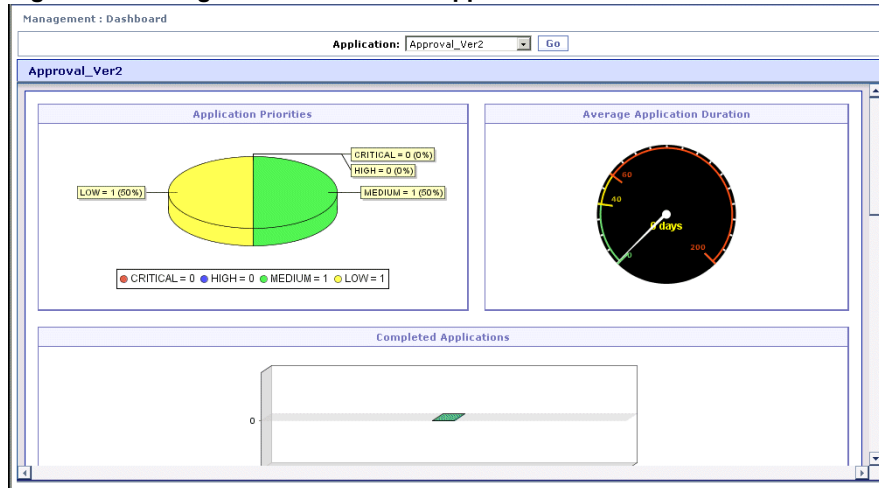
2. The **Management Dashboard** provides a Global View, which presents data for all active applications (see the figure above), and an Application View, which present data for a selected application (see [Figure 35](#) on page 64). The Global View appears by default and contains the following widgets:
 - **Application Priorities**, which displays, in a pie chart format, the overall ratio of Critical, High, Medium and Low priority instances for all applications.
 - **Application Status**, which displays, in a pie chart format, the number of instances with an Active, Completed, Removed or Suspended status.
 - **Average Duration**, which displays, in a gauge format, the average time (in minutes) to complete an application. When there is no data for this widget, a black arrow indicates zero.

- **Infopad Count**, which displays, in a gauge format, the number of infopads available in all applications.
- **Active Applications**, which displays, in a bar chart format, the applications that are active and the ratio of active instances for each application.
- **Applications Due Today**, which displays, in bar chart format, the number of instances for each application that is due on the current day.
- **Overdue Applications**, which displays, in bar chart format, the number of overdue instances for each application.

NOTE: If you have many applications, then in the barchart widgets, like Active Applications, Applications Due Today and Overdue Applications, the parameters on the x-axis (for example, application names) may overlap, and therefore, may not be legible. You can overcome this problem by resizing these widgets by using the `chartHeight` and `chartWidth` attributes of the respective `barchart` tag from the `dashboard.jsp` file. For more details, see the *Customization Guide*.
If you want to quickly find the names of few of these applications, then you can move the cursor on the corresponding bar, and the name of that application is displayed as a tooltip.

3. To obtain views of the status of a specific application, select that application from the **Application** drop-down list and click **Go**. The Application View appears (see the following figure).

Figure 35 Management Dashboard - Application View



The Application View contains the following widgets:

- **Completed Applications** displays, in a bar chart format, the number of Completed instances for the selected application.
- **Average Application Duration** displays, in a gauge format, the average time (shown by default in minutes) to complete an instance for the selected application.
- **Application Priorities** displays, in a pie chart format, the overall ratio of Critical, High, Medium and Low priorities for active worksteps for the selected application.
- **Active Worksteps** displays, in a bar chart format, the ratio of active worksteps that each user is performing for the selected application.
- **Worksteps Due Today** displays, in bar chart format, the number of worksteps due on the current day for each performer for the selected application.

- **Overdue Worksteps** displays, in bar chart format, the number of overdue worksteps for each performer for the selected application.

Note: ITPC Application Developers can customize the information displayed and how it is presented in the Dashboard pages. For more information on customizing, see the *Customization Guide*.

Viewing the Details of a Widget

You can click any widget to drill down to the next level of data and view its details. When you click a widget, a different report is invoked. The following tables present the type of reports and tables invoked by each widget, when you click the 'All' link in the top right-hand corner of that widget.

In the Global View, data for all active applications is displayed in the reports.

Table 15 For All Applications

Widget	Page (Report Type)	Table Title
Application Priorities	Status Analysis	All Active Instances
Average Duration	Time Analysis	Completion Time for All Instances
Active Applications	Status Analysis	All Active Instances
Infopad Count	Infopads	Infopad: <App_Name>
Applications Due Today	Workload Analysis	All Instances Due Today
Overdue Applications	Time Analysis	Overdue Time for All Active Instances
Application Status	Status Analysis	Status of All Instances

In the Application View, data for a selected application is displayed in the reports.

Table 16 For the Selected Application

Widget	Page (Report Type)	Table Title
Completed Applications	Status Analysis	Completed Instances for <App_Name>
Average Application Duration	Time Analysis	Completion Time for <App_Name> Instances
Application Priorities	Status Analysis	Active Instances for <App_Name>
Active Worksteps	Status Analysis	Active Worksteps for <App_Name>
Worksteps Due Today	Workload Analysis	<App_Name> Worksteps Due Today
Overdue Worksteps	Time Analysis	Overdue Time for Active Worksteps for <App_Name> Worksteps

If you click a particular slice of the pie chart or a bar of the bar chart, then the same report with the details of the clicked slice or bar is displayed.

For more information about these reports, see [Appendix A, Predefined Reports](#).

Chapter 7

Executing and Creating Reports

This chapter describes how EMC IT Process Centre (ITPC) Managers can use either JasperReports or the ITPC Report Builder to create new reports or use existing reports to further manage and review ITPC applications.

Creating and Deploying Reports Using JasperReport

You can use the extensive reporting capabilities of JasperReports — an open source Java reporting tool — to create and execute reports that meet your specific requirements. You may use any JasperReports Designer to create your reports. However, ensure that it is saved as a “jrxml” file. You can deploy your JasperReports as a common report or specific application report.

Deploying as a Common Report

To deploy your JasperReports as a Common Report in ITPC, copy your report file (jrxml) to `%APP_SERVER_HOME%\sbm\ebmsapss\common\reports` directory, where `%APP_SERVER%` is the root directory of your application server.

Deploying as an Application Report

To deploy your JasperReports as an application specific report in ITPC, copy your report file (jrxml) to `%APP_SERVER_HOME%\sbm\ebmsapss\<application_name>\reports` directory, where `%APP_SERVER%` is the root directory of your application server and `<application_name>` is the name of the application for which this report is being deployed.

Using a Database other than ITPC Connection Pool

If you want to use a database other than ITPC, you have to create a file in the same directory where your report is stored, with the name `<report_name>.properties.datasource`. This file should contain the JDBC URL, driver class, user name and password. A sample of this file is shown below:

```
#####
# This file has been provided to set sample jasper jdbc datasource for
# sample jasper report
# jasper.reports.datasource.url: JDBC URL
# jasper.reports.datasource.driver: Driver Class
# jasper.reports.datasource.user: User
# jasper.reports.datasource.password: Password
#####

jasper.reports.datasource.url=<your_database_url>
jasper.reports.datasource.driver=<your_database_driver>
jasper.reports.datasource.user=<your_database_user>
jasper.reports.datasource.password=<your_database_password>
```

In order to avoid compilation error(s), make sure that the driver classes already exist in your portalServer class path.

Adding JAR files to Jasper Compiler Class Path

To add your custom classes to Jasper compiler class path, follow these steps:

1. Open the `bpmportal.conf` file from the `%ITPC_HOME%\conf` directory.
2. Add your jar file separated with “|” token to the `bpmportal.jasper.compiler.classpath` attribute, and save the file.

A sample of this file is shown below:

```
# <param name="bpmportal.jasper.compiler.classpath">
# <alias>Jasper Compiler Classpath</alias>
# <visible>true</visible>
# <description>This classpath is used to set jasper compiler for
reports.</description>
# <legalvalues>Should contain bpmportal.jar, jasperreports.jar,
servlet.jar, commons-digester.jar and %APPSERVER%/sbm/WEB-INF/classes in
classpath format.</legalvalues>
# <group>CONFINFO</group>
# </param>
bpmportal.jasper.compiler.classpath=@@ITPC_HOME@@/lib/
bpmportal.jar|@@WEBAPP_DIR@@/WEB-INF/lib/
jasperreports.jar|@@WEBAPP_DIR@@/WEB-INF/lib/
commons-digester.jar|<your_class_path>
```

Setting Up Jasper Assistant Plugin in BPM Studio

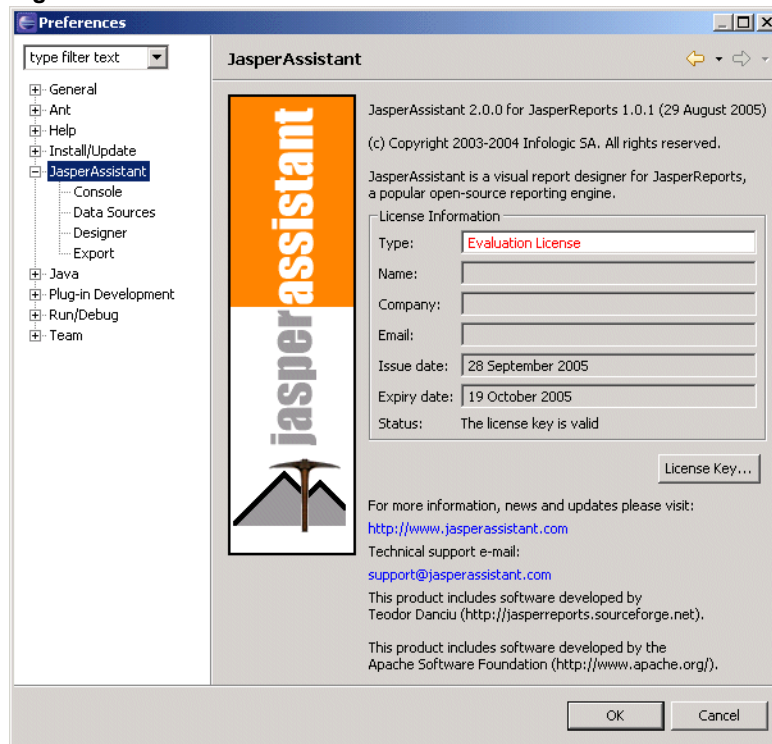
You can use Jasper Assistant plugin with BPM Studio to create your Jasper reports. While installing BPM Studio, select the BPM Studio with Eclipse option. You may select other options as per your requirements.

Download the Jasper Assistant Plugin, JasperAssistant_2.0.0_Eclipse3.0, from <http://www.jasperassistant.com/download.html>, extract its zip file in a directory, and copy only the feature and plugin directories to `<BPMSTUDIO_HOME>` directory. Similarly, also download GEF-runtime-3.0.1.zip from <http://www.jasperassistant.com/installation.html>. Note that the GEF-runtime-3.0.1 files starts from default Eclipse directory. Therefore, it is recommended that you extract it into temporary directory and then copy the features and plugins directories into your `<BPMSTUDIO_HOME>` directory.

To create a JasperReport using Jasper Assistant plugin in BPM Studio:

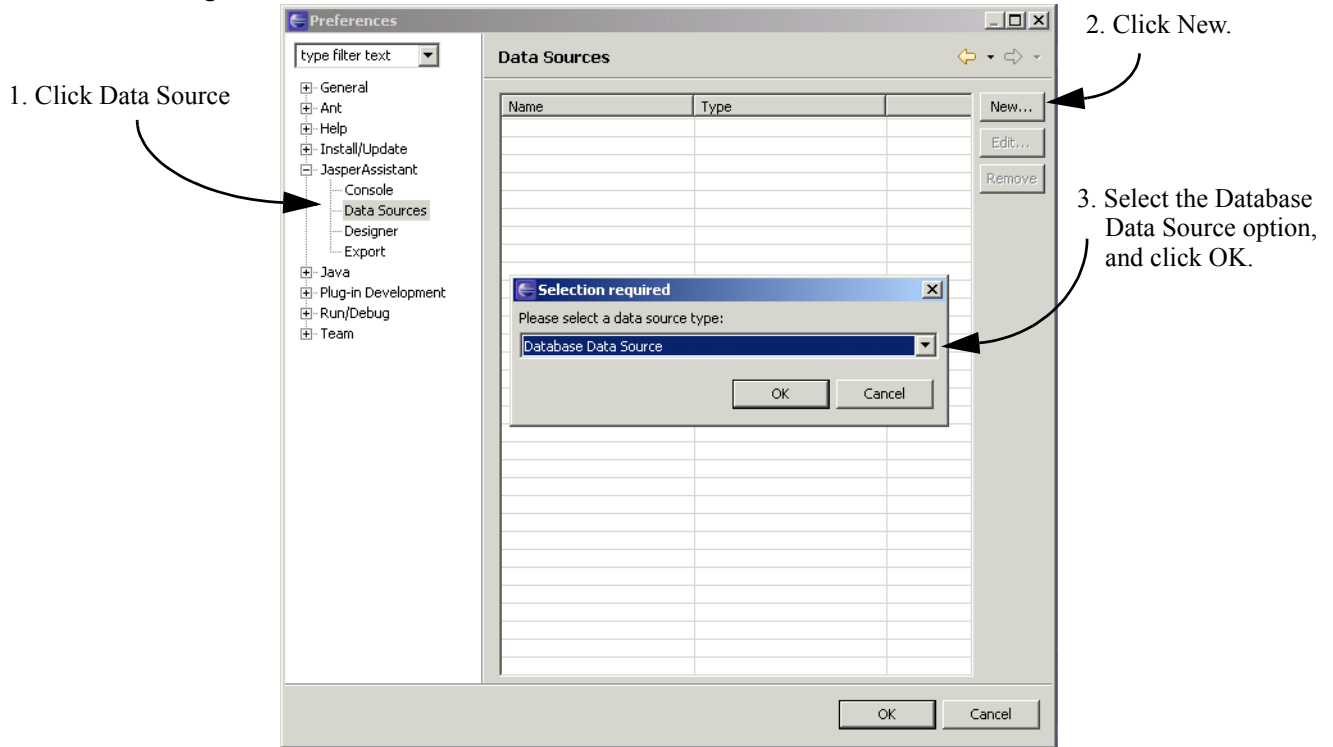
1. Start the BPM Studio. From the Window menu, select **Preferences**. The Preferences dialog window is displayed as shown in the following figure.

Figure 36 Preferences Window



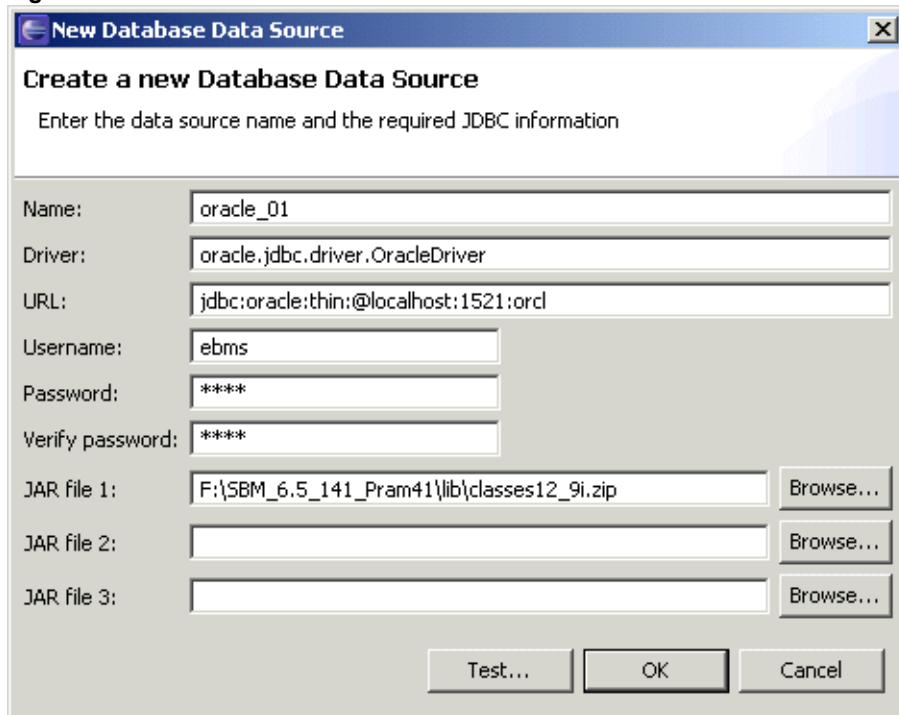
2. In the Preferences dialog window, click **Jasper Assistant** to expand it. Select the **Data Source** option, and click **New** button. The Selection required window is displayed as shown in the following figure.

Figure 37 Preferences Window



3. Select the **Database Data Source** option from the drop-down list and click **OK**. The New Database Data Source dialog window is displayed as shown in the following figure.

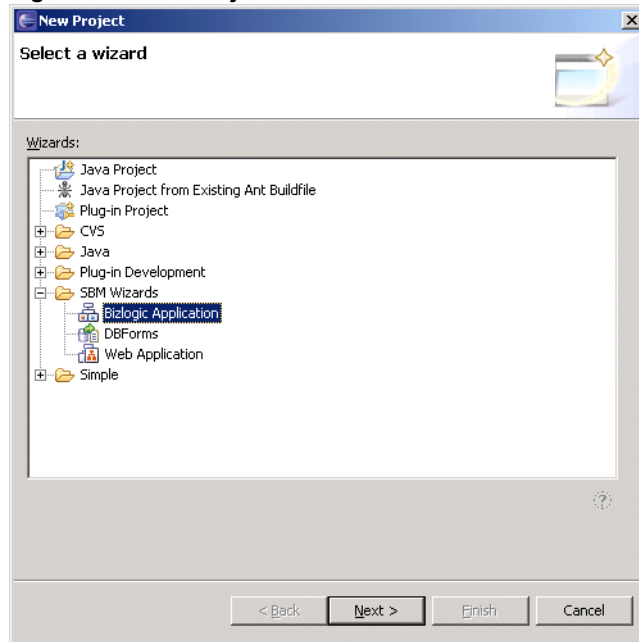
Figure 38 New Database Data Source Window



- a. Specify a name, driver, URL, username and password in appropriate text boxes. You can find these details in the `%ITPC_HOME%\conf\smbdb.properties` file.
- b. In the JAR file 1 text box, specify the absolute path of the `classes12_9i.zip` file from ITPC.
- c. Click **Test** to test the data source test.
- d. After successful testing, click **OK** to close the New Database Data Source dialog window. Then click **OK** to close the Preferences dialog window.

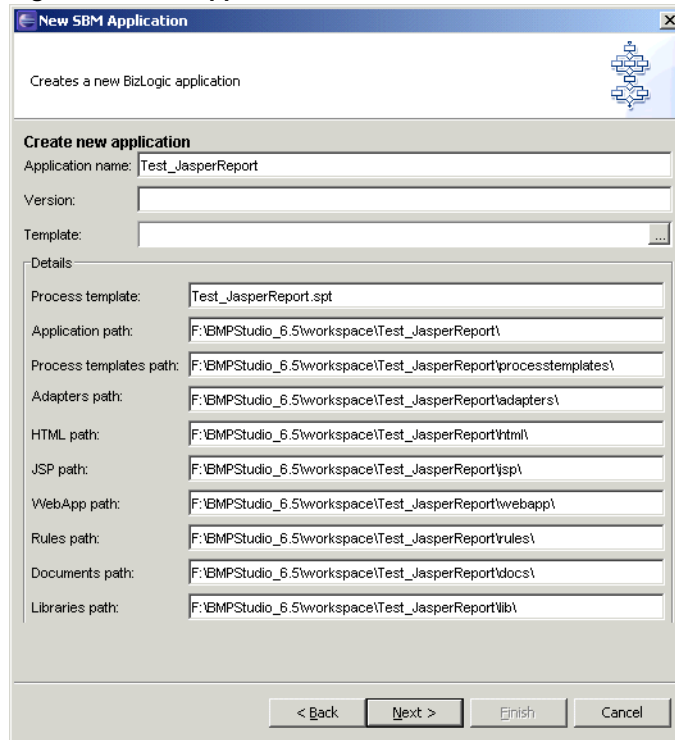
- From File menu, select New and then **Project**. The New Project Wizard opens.

Figure 39 New Project Window



- From the ITPC Wizards, select the **BizLogic Application** option, and click **Next**. The **New Application** dialog window is displayed.

Figure 40 New Application Window



- a. Specify the required details, and click **Next** to continue.

Figure 41 New Application Window

The screenshot shows a dialog box titled "New SBM Application" with a close button (X) in the top right corner. A red error message at the top left reads "Please enter a manager name". Below this is a "Create new process" section. It contains a "Process name:" field with the text "Test_JasperReport". Underneath is a "Details" section with several input fields: "Description:" (a large empty text area), "Category:", "Version:", "Author:", "Group:", "Manager:" (with the text "ebms"), and "Duration:" (with a dropdown arrow). At the bottom of the dialog are four buttons: "< Back", "Next >", "Finish", and "Cancel".

- b. In the Project Location screen, select an appropriate option to create the project in workspace or specify the location of a directory where it should be created.

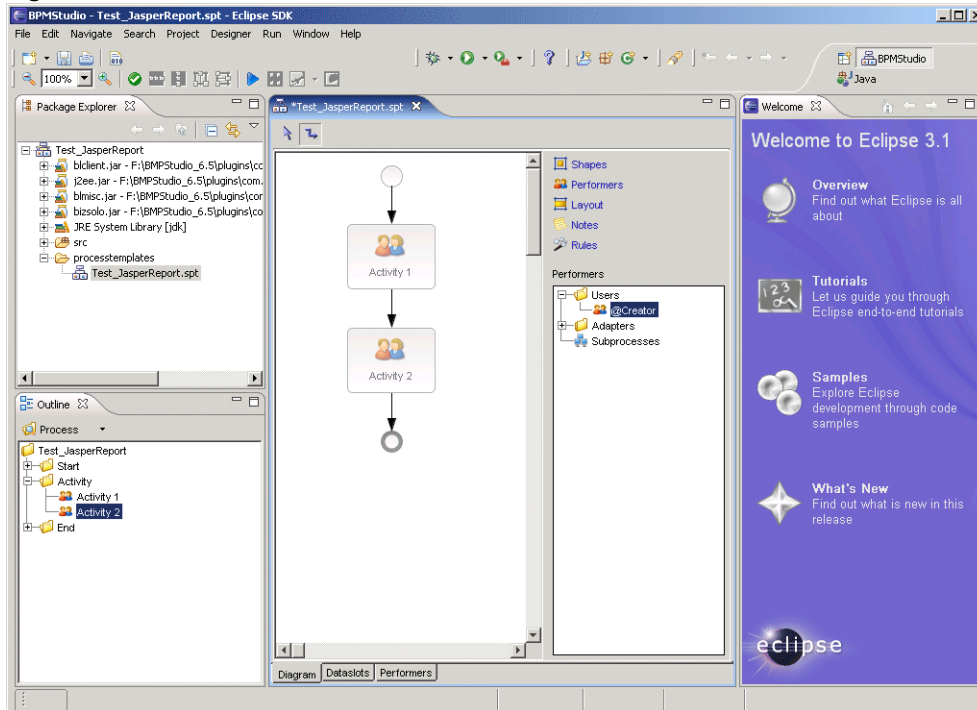
Figure 42 New Application Window

The screenshot shows the same "New SBM Application" dialog box, but now on the "Project location" screen. The title bar and close button remain. The main heading is "Project location" with the subtitle "Project location of the SBMApplication". There is a "Project name:" field containing "Test_JasperReport". Below this is a "Project contents" section with two radio button options: "Create project in workspace" (which is selected) and "Create project in external location". Underneath these options is a "Directory:" field containing the path "F:\BMPStudio_6.5\workspace\Test_JasperReport" and a "Browse..." button. At the bottom of the dialog are four buttons: "< Back", "Next >", "Finish", and "Cancel".

c. Click **Finish**. The Open Associated Perspective confirmation window is displayed. Click **Yes** to close it.

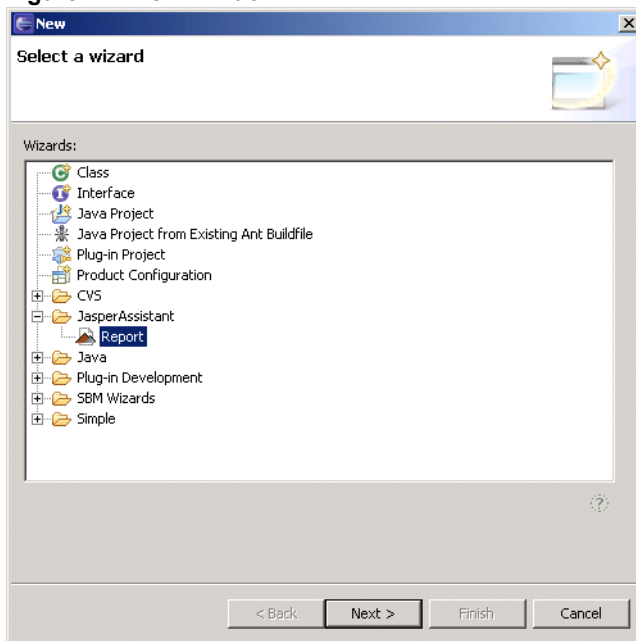
6. In the BPM Studio, add few worksteps and save the application.

Figure 43 BPM Studio



7. From the File menu, click New, and then **Other**. The New dialog window is displayed.

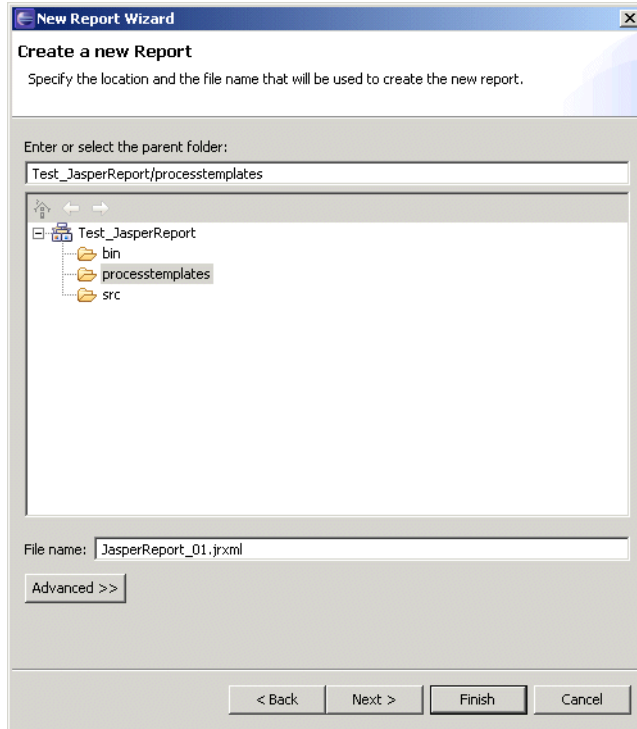
Figure 44 New Window



a. Click **Jasper Assistant** to expand it.

- b. Select the **Report** option, and click **Next** button. The New Report Wizard window is displayed.

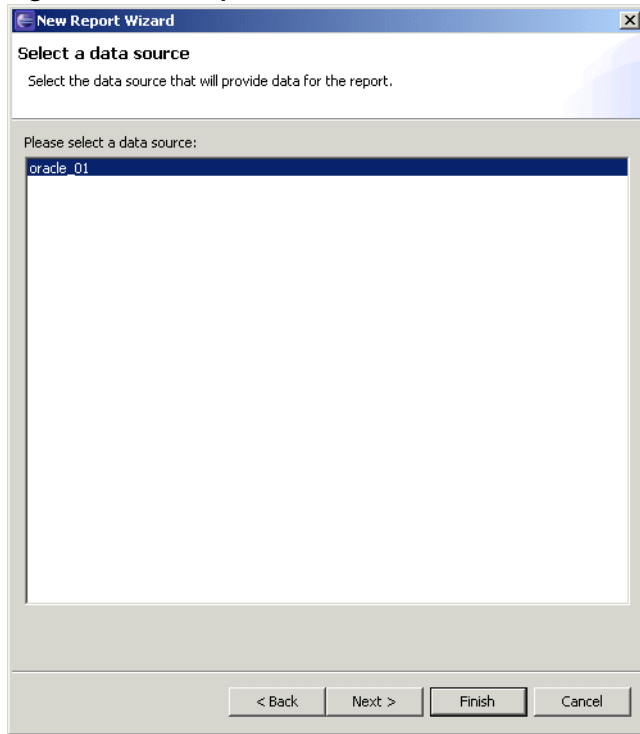
Figure 45 New Report Wizard Window



- c. Specify the value(s) as required, and click **Next**.

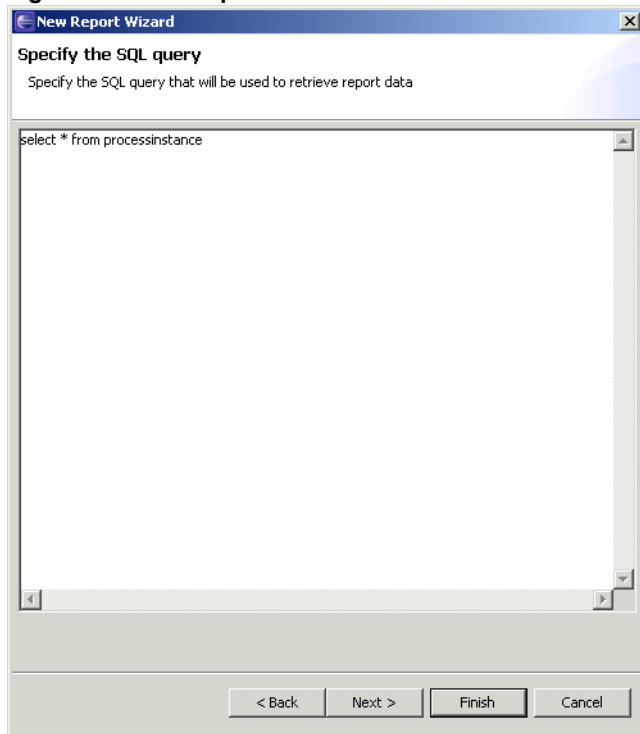
- d. Select the datasource that you created earlier, and click **Next**.

Figure 46 New Report Wizard Window



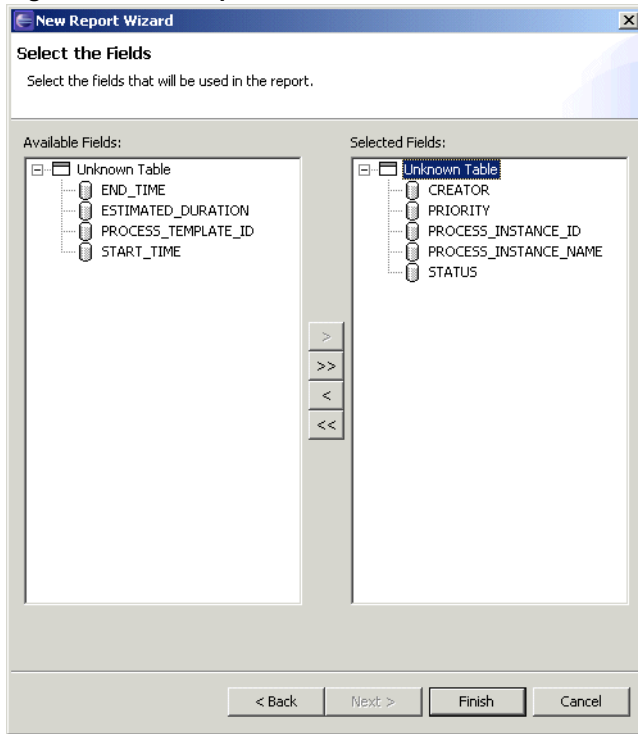
- e. Specify the SQL query to be used to retrieve report data, and click **Next**.

Figure 47 New Report Wizard Window



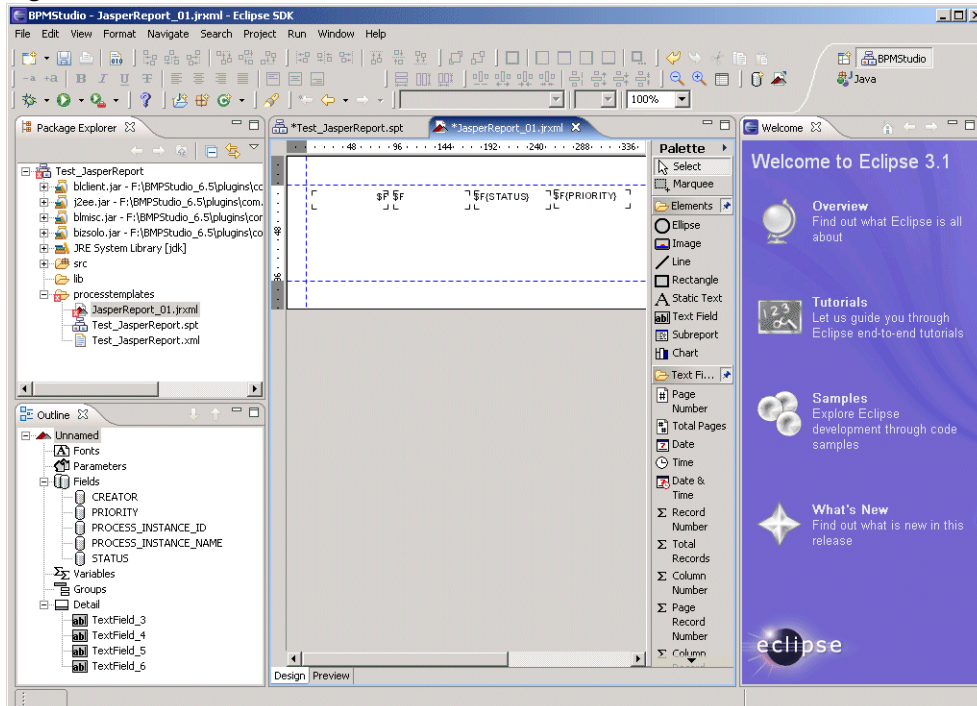
- f. Select the fields to be used in the report, and click **Finish**.

Figure 48 New Report Wizard Window



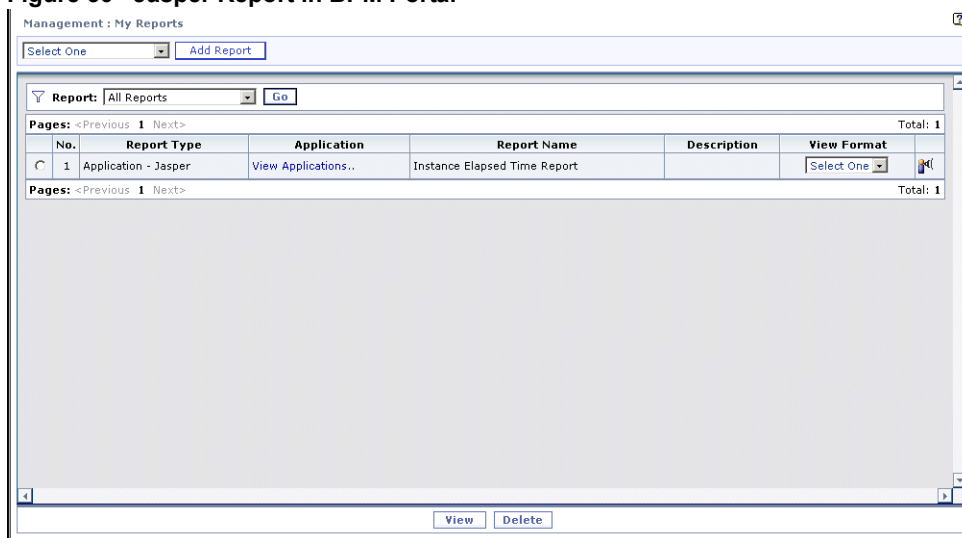
8. In the BPM Studio, expand the fields tab. Drag the required fields and drop them in the details band. You can customize your reports by using Palette and/or adjusting height/width. You may use Preview feature to view the designed report.

Figure 49 BPM Studio



9. From the File menu, click **Save All** and close BPM Studio. An application with the name you specified is created in the %BPMSTUDIO_HOME%\Workspace directory.
10. Copy this to %ITPC_HOME%\ebmsapps directory. Create a folder with name reports in the %ITPC_HOME%\ebmsapps\- 11. Deploy this application from the BPM Studio.
- 12. Install the application. The newly created Jasper Reports will be listed in the Report List page of the Management module.

Figure 50 Jasper Report in BPM Portal



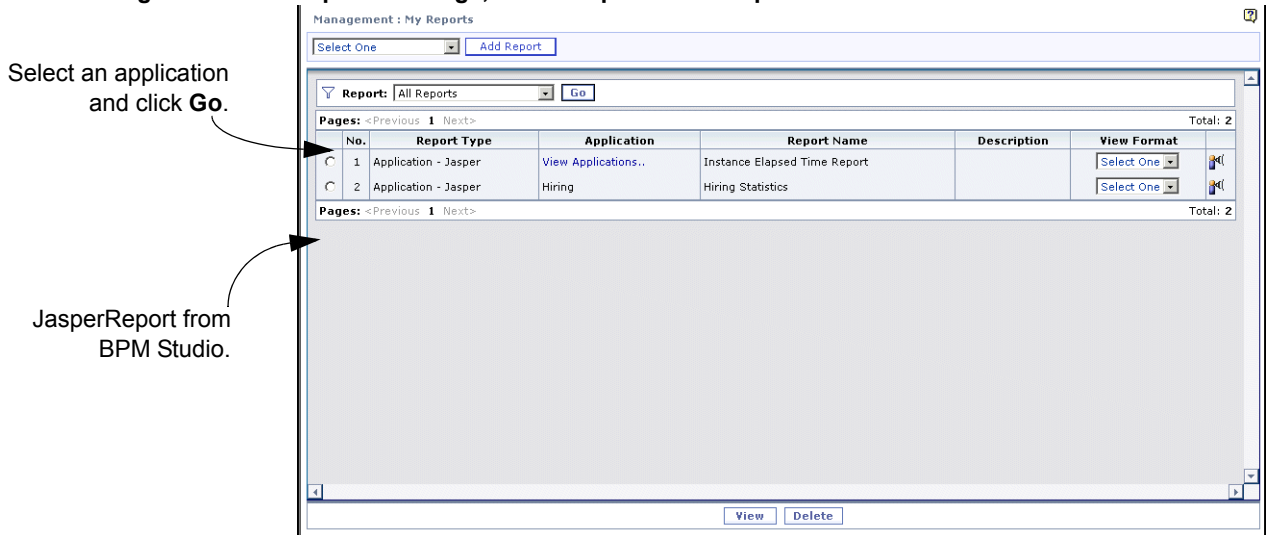
NOTE: If you want to specify datasource other than ITPC database, then you have to create the <application_name>.properties.datasource file, and enter the details of the new datasource in it. For more information, see [Using a Database other than ITPC Connection Pool](#) on page 67.

Managing Reports Created Using JasperAssistant

To access the report you created using JasperAssistant through the BPM Portal:

1. In the Management module, click Reports > **My Reports**, to view the Report List page.
2. From the **Report** drop-down list, select the application where you saved the report you created using JasperAssistant. In this example, we select testreports. Click **Go**, and testreports application's reports are displayed in the workspace, as shown in the following figure.

Figure 51 The Report List Page, with a Report from JasperAssistant



3. For JasperReports, a drop-down list is displayed in the View Format column that provides options for the report's presentation. Options include: HTML, PDF, RTF, CSV, XLS and XML.

The XML and XLS options display a link. You can right-click on that link and save the report in your machine to view it locally.


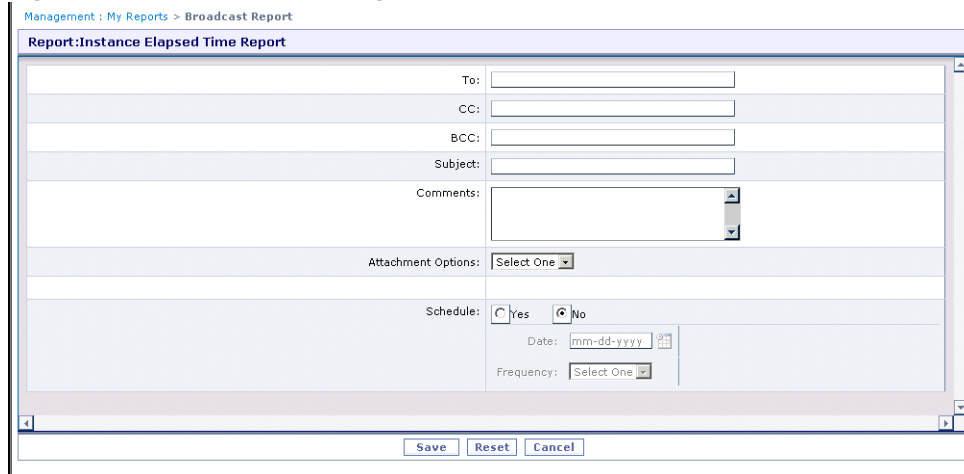
4. JasperReports may also include Broadcast and Schedule options. Click the **Broadcast** icon () to open the **Broadcast Report** page, where you can enter data to automatically email the report to specific addresses. As shown in the figure below, you can enter the subject, add comments and select the format of attachments. Options include: HTML, RTF, Text and PDF.

Figure 52 Broadcast Report Page



The screenshot shows a web form titled "Report: Instance Elapsed Time Report". The form includes the following fields and options:

- To:** Text input field
- CC:** Text input field
- BCC:** Text input field
- Subject:** Text input field
- Comments:** Text area with a vertical scrollbar
- Attachment Options:** A dropdown menu currently showing "Select One"
- Schedule:** Radio buttons for "Yes" and "No", with "No" selected.
- Date:** A text input field with the placeholder "mm-dd-yyyy" and a calendar icon.
- Frequency:** A dropdown menu currently showing "Select One"

At the bottom of the form are three buttons: "Save", "Reset", and "Cancel".

5. To run and distribute the report on a specific date and on a predetermined frequency:
 - a. Select the **Yes** option in the Schedule section.
 - b. Enter a date in the Date box or click the Select Date icon to display a calendar that facilitates the date entry. Select an option from the Frequency drop-down list.
 - c. Click **Save** to execute the Broadcast and Schedule operations. ITPC saves these settings after your confirmation.
6. To view the report, select this JasperReport in the Report List page, select a format from the View Format drop-down list, and click **View**.

To modify the report, return to BPM Studio. Use ITPC to only view and/or run the reports developed in BPM Studio with JasperAssistant plugin.

Creating and Executing Reports in BPM Portal

Using the Management module, you can define and execute single application reports, multi-application reports, and external reports. In the Management module, click Reports > **My Reports**, to view the Report List page. This page presents the three possible scenarios explained in the following table:

Table 17 Reports Display Scenarios

If there are . . .	You will see . . .
No ITPC applications specified to be monitored by the user.	No Records Found.

Table 17 Reports Display Scenarios

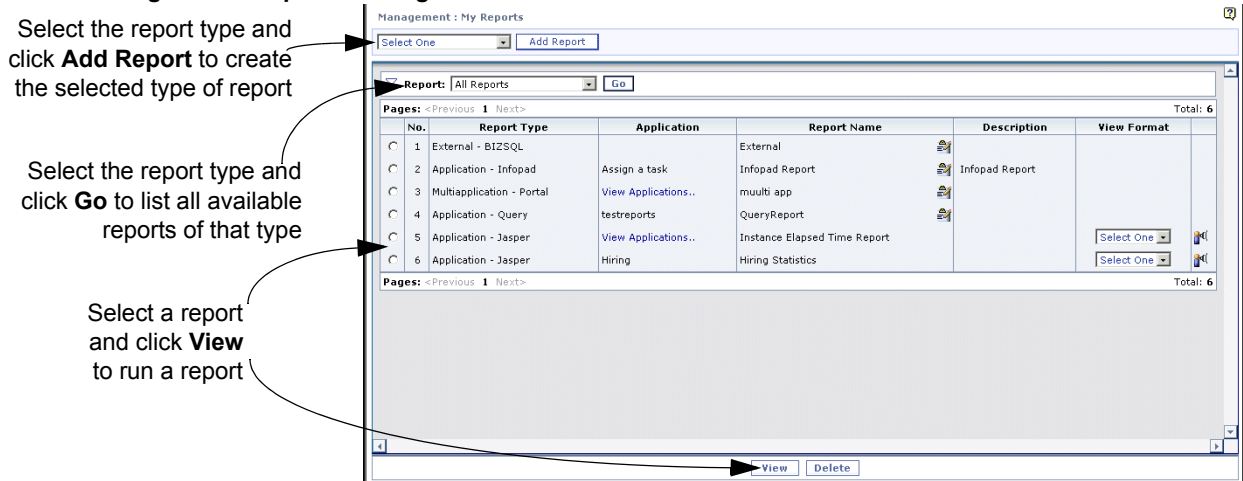
If there are . . .	You will see . . .
No existing or predefined reports available.	No Records Found.
Existing, predefined reports for selected ITPC applications, multiple ITPC applications, or externally defined reports.	<p>The following information:</p> <ul style="list-style-type: none"> • The type of report • The application name for which the reports are defined • The name of each report • The description of each report • The format of the report • The number of reports, displayed as <i>Total: x</i>

The **Report List** page enables you to define your own business reports. Use this page to:

- Execute existing reports.
- Create reports for a single application, multiple applications, and external report servers.
- Test a new query.
- Modify existing reports.
- Define parameters for reports.
- Remove existing reports.

You may have defined several reports in the selected application. Select one of the listed reports and click **View** to execute the report and view each report instance, listed under the report’s defined attributes (for more information, see [Running an Existing Report](#) on page 81). To create a report, use the **Add Report** button at the top of the page (for more information, see [Creating Application \(Query\) Reports](#) on page 83).

Figure 53 Report List Page



About Multiapplication Reports

Creating multiapplication reports enables you to monitor and manage multiple applications at the same time. For example, managers can create a report that lists all application instances for a particular user independent of the application. You can also define reports that perform filtering on various task attributes.

For more information about creating or modifying Multiapplication reports, see [Creating Multiapplication Reports](#) on page 87. Select Multiapplications from the Report drop-down list on the **Report List** page to list the available MultiApp reports.

About External Reports

Creating external reports enables you to access and execute reports using external report servers. You can send parameters and values to report servers which generate reports accessible through the Management module of the BPM Portal. The following table describes the types of external reports.

Table 18 External Report Types

Report Type	Description
Crystal Reports	If the Crystal Reports tool is installed on your network, this option accesses all available reports generated through this application.
HTML	Similar installation as Crystal Reports except the default URL button is disabled and is not used to create HTML reports. Reports are generated using external reporting servers or ASP in HTML format.
BizSQL	Reports generated using BizSQL. This capability is integrated with ITPC, enabling you to place SQL statements in a file (you must use the *.bizsql extension for all databases) for execution by the Management module. This file is stored in the <App_Server>\sbm\BizManage\reports folder under the path that your application server is using. For example, for Pramati application server, the path is %ITPC%\pramati\server\nodes\portalServer\archives\public_html\sbm\BizManage\reports . Once executed, ITPC formats the results and presents the output using standard HTML. Users can view only those BizSQL reports for which they have been given permissions. These permissions are controlled using the Permission Create page in the Administration module. For more information on BizSQL security, see the <i>BPM Portal Administrator's Guide</i> .

Running an Existing Report

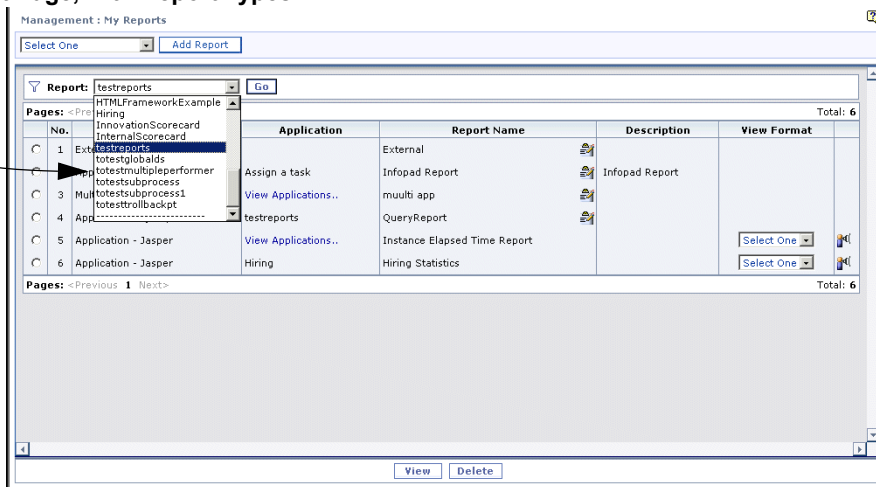
To execute an existing report, complete the following steps:

1. In the Management module, click Reports > **My Reports**, to view the Report List page.

- Select the type of report that corresponds to the existing report you want to execute from the Reports drop-down list at the top of the page, and click **Go** (see the figure below). You can choose between Multiapplications (draws data from more than one application), All Reports (lists all available applications), External Reports (integrates with an external report server), or select a specific application (provides a Query report or an Infopad report for a single application).

Figure 54 Report List Page, with Report Types

Select a report type, then click **Go** to display reports of the type in the table below.



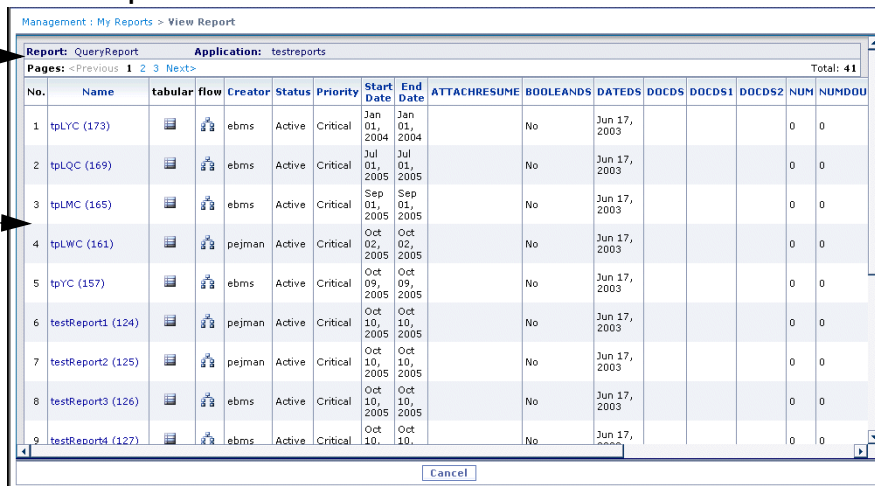
- Select a report from the list of reports and click **View** to run the report and display it in the View Report page (see the following figure). The report name, in this case QueryRepwithTaskType, is displayed above the table, and each process instance within the report is listed as a row in the table. Columns represent attributes you selected when creating the report (see [Creating Application \(Query\) Reports](#)).

If you select an Application (Query), Multiapplication or External (BizSQL) report, then you can click the instance name from the Name column to see the Chart View of the selected instance. Click **Cancel** to close the Chart View and go back to the View Report page.

Figure 55 Running a Selected Report

Report Name

Report's Process Instances



Creating Application (Query) Reports

This section describes how to use ITPC's Report Builder to define new queries and create reports of application and task instances from a single application. After first defining a new query, the user can then save the defined query as a new report.

Note: See [Creating External Reports](#) on page 90 for more information on defining a query and creating External Reports.

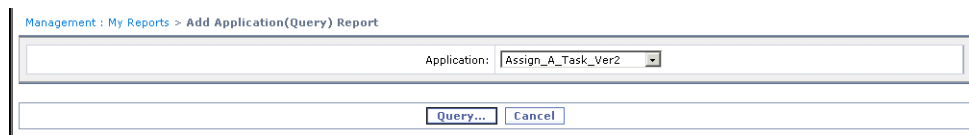
To define a new query:

1. From the **Report List** page, select the report type from the drop-down list at the top of the page (refer to [Figure 53](#) on page 80).

Selecting Query Report enables you to create a report from one of the installed applications.

2. Click **Add Report**, and the Add Application (Query) window for the report type you chose in the preceding step opens, as seen in the following figure.

Figure 56 Add Report Window

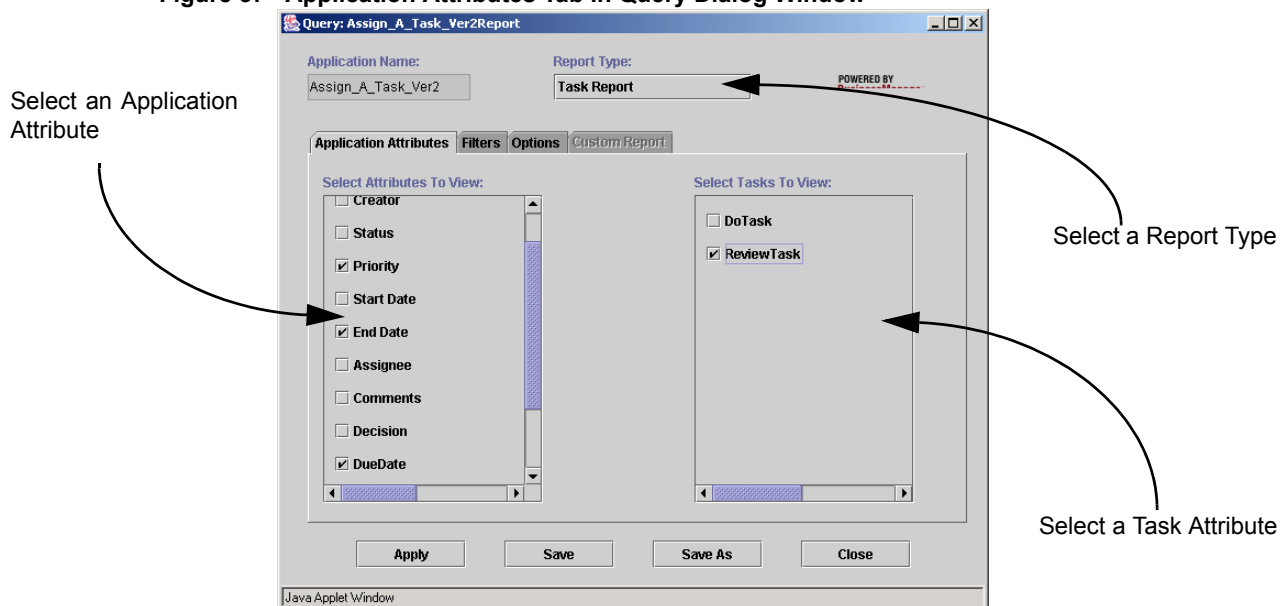


The screenshot shows a dialog box titled "Management : My Reports > Add Application(Query) Report". Inside the dialog, there is a label "Application:" followed by a dropdown menu showing "Assign_A_Task_Ver2". At the bottom of the dialog, there are two buttons: "Query..." and "Cancel".

3. Select the application for which you want to create a report from the Application drop-down list.
4. Click **Query** to display the **Query** dialog window (see [Figure 57](#)). ITPC selects the Application Report type and the Application Attributes tab by default. The list of attributes shown in this Application Attributes tab differs from the attributes associated with a Multiapplication Report.

5. Select one of the following report types:
 - **Application Report.** ITPC retrieves only the application attributes, which are displayed in the panel on the left of the **Query** dialog window.
 - **Task Report.** As shown in the following figure, ITPC retrieves application attributes and all task attributes (workitems) related to the application that have been assigned to the user.

Figure 57 Application Attributes Tab in Query Dialog Window



6. Select the application and/or task attributes you want to include in the query definition (which can later be saved as a new report).

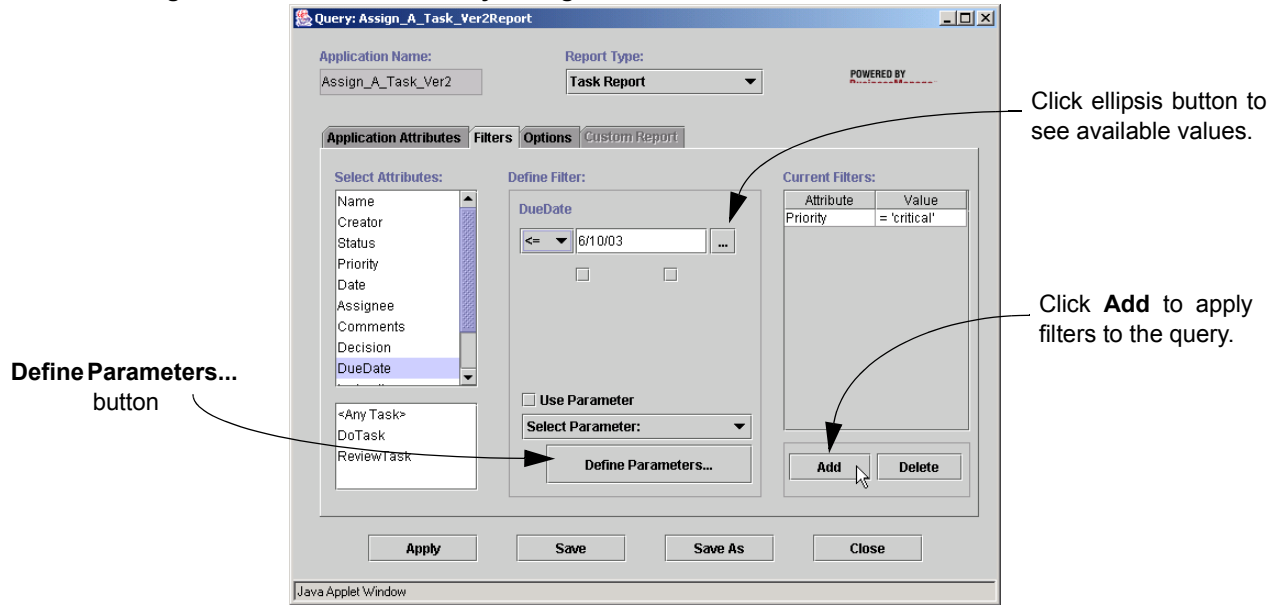
The Name attribute is mandatory and is always selected.

7. Click the **Filters** tab.

The Filters tab (see [Figure 58](#)) enables you to customize the information presented in your reports. Select attributes for the filter from those listed in the Select Attributes panel. The contents of the Define Filter panel changes to match the particular attribute selected in the Select Attributes panel.

- To define a filter, type the reference value into the Name text box in the central section of the **Query** dialog window, or click the **ellipsis** button (**...**) to the right of the Name text box to have Report Builder display the list of all available values that have been defined.

Figure 58 Filters Tab in Query Dialog Window



- After selecting and defining a filter to apply to the new query definition, click **Add**.

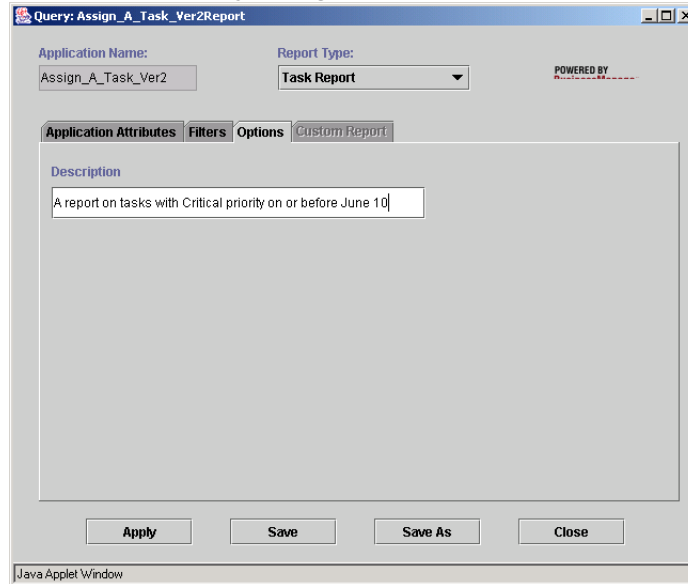
As shown in the figure above, ITPC adds the filter to the list in the Current Filters panel. Use the **Delete** button to remove selected filters from this list.

- Add additional filters, if required.

11. Click the **Options** tab and enter a brief description in the activated text box (see the following figure).

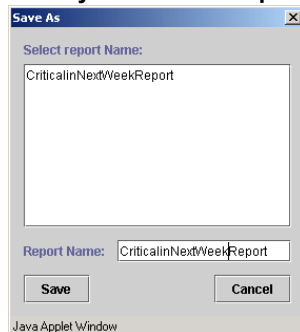
This optional description will appear on the **Reports** page next to the report name (refer to [Figure 53](#) on page 80).

Figure 59 Options Tab in Query Dialog Window



12. Click **Apply** to view the results, which ITPC displays in the **View Report** page.
13. Refine the results, if necessary, and click **Apply** to view the new result in the View Report page.
In this page, you can click the instance name from the Name column to see the Chart View of the selected instance. Click **Cancel** to close the Chart View and go back to the View Report page. Click **Cancel** to close the View Report page and go back to the Query dialog window.
14. To create a new report, click **Save As**.
15. In the **Save As** dialog box (see the following figure), enter a name for the new report in the Report Name box and click **Save**.

Figure 60 Saving a Query to Create a Report



Note: ITPC cannot display a report that includes the forward slash (/) in its name. Therefore, it is recommended that it should not be used in the report name.

16. Click **Close** to exit the Report Builder.

ITPC displays all saved reports for the selected report type and the selected application in the Select a Report panel (refer to [Figure 53](#) on page 80.).

Creating Multiapplication Reports

This section describes how to use ITPC's Report Builder to define new queries and create reports of application and task instances from multiple applications. After first defining a new query, the user can then save the defined query as a new report.

Note: See [Creating External Reports](#) on page 90 for more information on defining a query and creating External Reports.

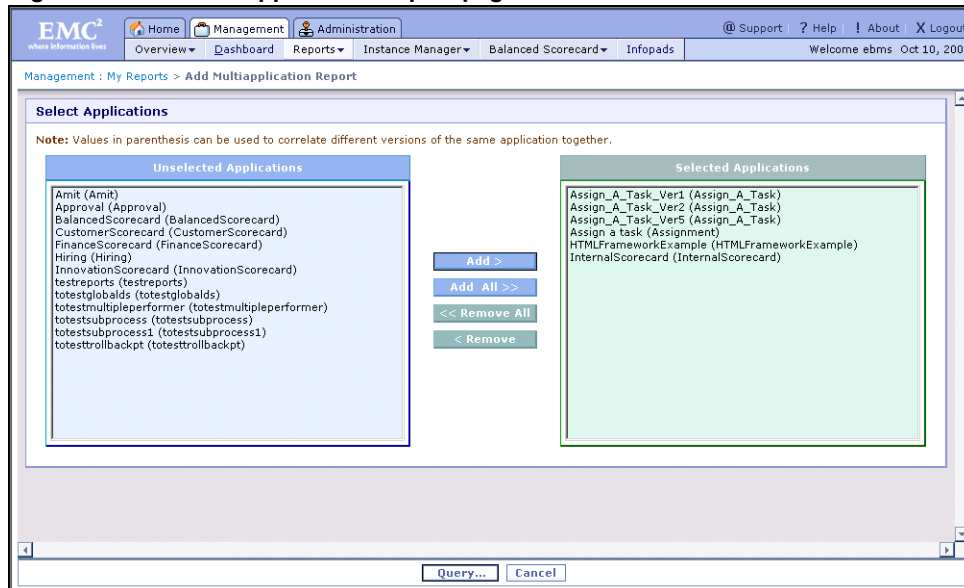
To define a new query for multiple applications:

1. From the **Report List** page, select Multiapplication Report from the drop-down list at the top of the page (refer to [Figure 53](#) on page 80).

Selecting Multiapplication Report enables you to create a report from all or multiple installed applications.

2. Click **Add Report**, and the **Add Multiapplication Report** window opens, as seen in the following figure.

Figure 61 Add Multiapplication Report page



3. Select one of the applications for which you want to create a report from the Unselected Applications panel and click **Add** to add it to the Selected Applications panel.
4. Click **Add All** to add all the applications listed in the Unselected Applications panel to the Selected Applications panel. Click **Remove** or **Remove All** to delete one or all of the applications listed in the Selected Applications panel.

NOTE: The list of selected applications including delimiters should not exceed 4000 characters.

5. Click **Query** to display the **Query** dialog window (see [Figure 57](#)). ITPC selects the Application Report type and the Application Attributes tab by default. The list of attributes shown in this Multiapplication Attributes tab may differ from the attributes associated with a single Query report (for a single application).
6. Follow procedures described in steps 5-16 in [Creating Application \(Query\) Reports](#) on page 83 to complete the creation of a multiapplication report.

Defining Parameters for Application and Multiapplications Reports

ITPC's Management module enables you to create parameters for application attributes, generating dynamic reports based on values that can be specified at the time the report is executed. After defining one or more parameters, ITPC prompts you to supply these values when you execute the query or report.

To define a new parameter, complete the following steps:

1. In the **Query** dialog window, click the Filters tab, then **Define Parameter** (refer to [Figure 58](#) on page 85), to open the **Define Parameters** dialog window (see the following figure)

Figure 62 Define Parameters Dialog Window

Name	Default Value
status	PI_ACTIVATED

2. Type the name of the parameter in the Name box and enter the corresponding user prompt.
3. Enter a default value for the parameter.
4. Click **Add** to register the parameter. The parameter appears in the Current Parameters panel, and can be used for the current report or any future report.

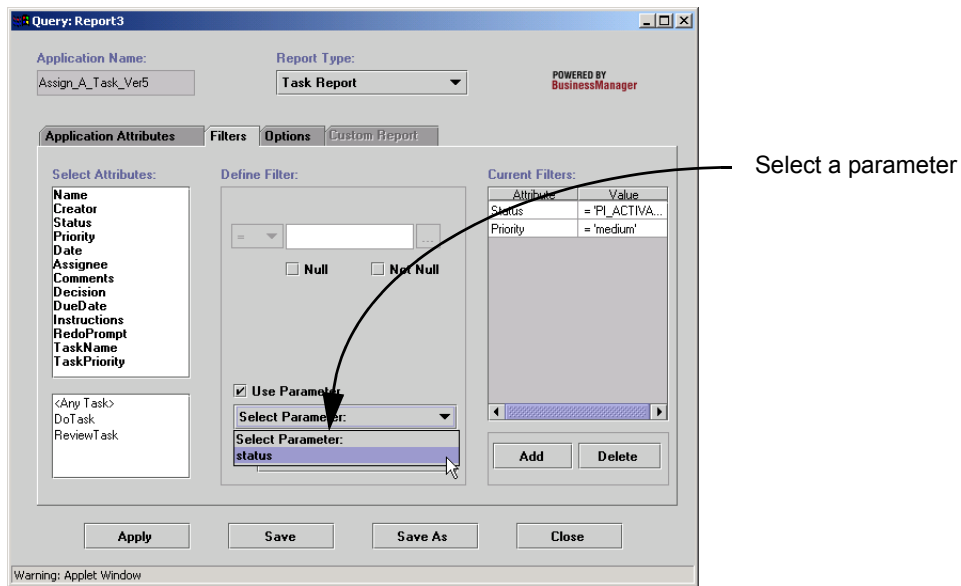
Whether creating a query or modifying a report, you can define parameters of report filters that will generate reports based on a specific set of selected data.

To define parameters for report filters, complete the following steps:

1. In the **Query** dialog window, click the **Filters** tab.
2. Select attributes of the filter parameter from the Select Attributes panel.
3. Set the **Use Parameter** check box.
4. Click **Select Parameter**.

ITPC displays available parameters in the drop-down list illustrated below.

Figure 63 Selecting a Filter Parameter



5. Select a parameter from the Select Parameter drop-down list.
6. Click **Add**.

ITPC adds the filter parameter to the list displayed in the Current Filters panel.

7. Click **Save** to save the report.

Note: While executing the query or report, a prompt appears to supply the defined parameter. Enter the value and click **Go** to generate the report.

Report Versioning

You can run a multiapplication report on an application that has more than one versions. You can save this report. If you add more versions of this application, the multiapplication report will automatically report on each added version, but only if these versions have the same application name; for example, Approval_V4, Approval_V5, Approval_V6.

Creating External Reports

ITPC enables you to integrate externally defined reports. Use the ITPC Report Builder to create external reports that can access and execute reports using external report servers.

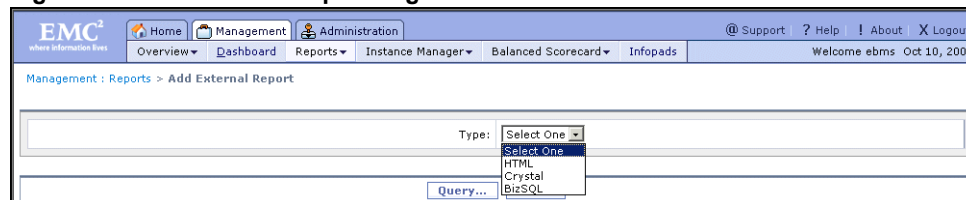
To define an External Report, complete the following steps:

1. From the **Report List** page, select **External Report** from the Report drop-down list at the top of the page (refer to [Figure 53](#) on page 80).

Selecting External Report enables you to create a report that can access and execute reports using external report servers.

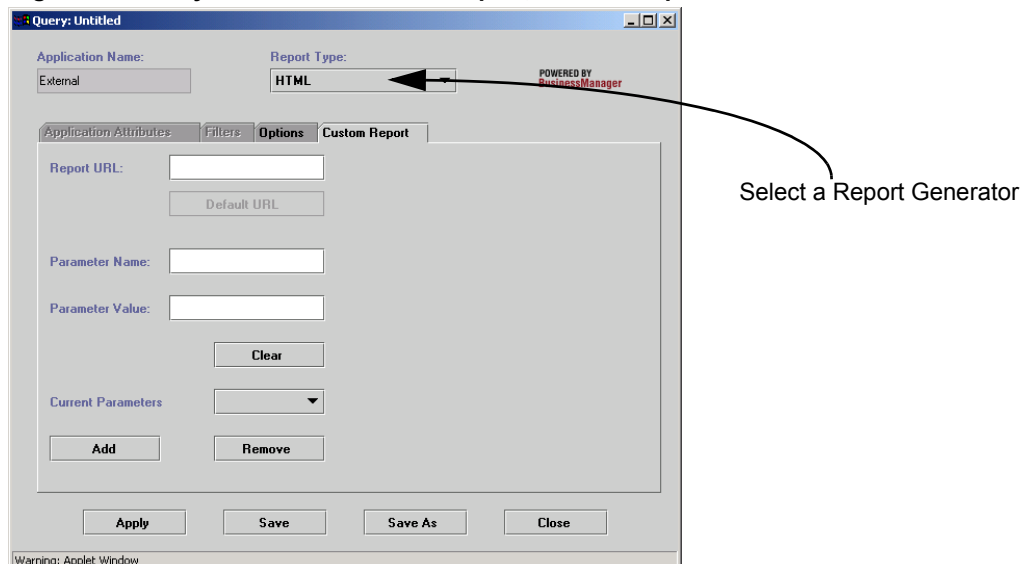
2. Click **Add Report**, and the **Add External Report** page opens, as seen in the following figure.

Figure 64 Add External Report Page



3. Select the generator of the report from the Type drop-down list. Options include Crystal, HTML, and BizSQL. See [Table 18](#) for a description of the External report types.
4. Click **Query**. ITPC displays the **Query** dialog window opened by default to the Custom Report tab, as illustrated in the following figure. You can change the report generator, if required, using the Report Type drop-down list.

Figure 65 Query window for External Report, Custom Report Tab



5. When creating HTML reports, enter the URL of the HTML server in the **Report URL** box. For HTML, the default URL button is enabled only if the value is available in the `.conf` file; otherwise the default URL button is disabled and therefore cannot be used as a basis for creating the reports.

6. When creating Crystal Reports, enter the URL of the Crystal Report server in the Report URL box.

Alternately, click the **Default URL** button to have ITPC fill in the default Crystal Report Server specified in the *bpmportal.conf* configuration file, if available.

7. When creating BizSQL reports, specify a file name instead of a URL in the Filename box (see [Figure 67](#)). This file contains the SQL statements for execution by ITPC. The BizSQL files are in the `<App_Server>\sbm\BizManage\reports` directory. The file extension is **.BizSQL*, which works for all databases. The path to the BizSQL file depends on the application server you are using. For more information see [Table 18](#).

NOTE: If you want to include the Chart View in your BizSQL report, then your query must contain following parameters from ITPC database:

```
process_template_name, process_template_id,  
process_instance_name and process_instance_id
```

Note the following conditions when using BizSQL syntax:

- a. You must use the exact syntax when developing BizSQL reports. The following parameterized sql query is provided as an example:

```
select * from processinstance where processinstance.creator = '<%= who  
%>'
```

where the parameter value must be enclosed within the `<%= %>` tag, and you must enter a space before and after the query name. The tag must also be enclosed with single quotes.

Optionally, you may also use non-parameterized SQL queries, the syntax for which is as shown in the following examples (in these examples, * = all):

```
Select * from processinstance where processinstance.creator IN  
'<%= who %>'
```

```
Select * from processinstance where processinstance.creator =  
'<%= who %>'
```

```
Select * from processinstance where processinstance.creator NOT  
'<%= who %>'
```

Please make sure that you enter the SQL query as is shown in the above examples with appropriate changes as per your requirements.

- b. Do not put a semicolon at the end of an Oracle SQL statement; it causes an invalid character error.
- c. Use the following syntax if you want to display a valid field under a customized label in BPM Portal:

```
select field1 AS label1, field2 AS label2, field3 as label3,...  
from table name
```

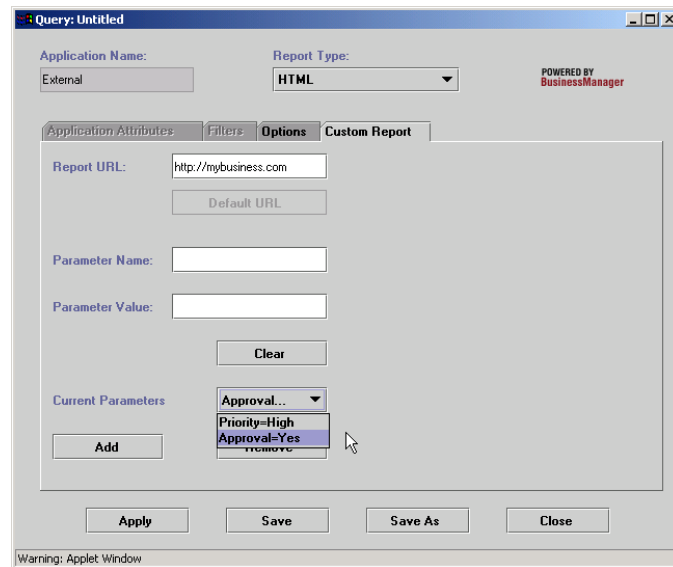
or in a specific example:

```
Select PROCESSINSTANCE.PROCESSINSTANCENAME AS Task from  
PROCESSINSTANCE
```

where PROCESSINSTANCE.PROCESSINSTANCENAME is the field, Task is the label and PROCESSINSTANCE is the table name.

8. To define parameters for External reports:
 - a. Enter a parameter name and value in the Parameter Name and Parameter Value boxes respectively, and click **Add**. Use these parameters to uniquely identify the report.
 - b. ITPC adds the parameter definition to the Current Parameters drop-down list, as illustrated in the following figure.

Figure 66 Specifying Report Parameters and Values



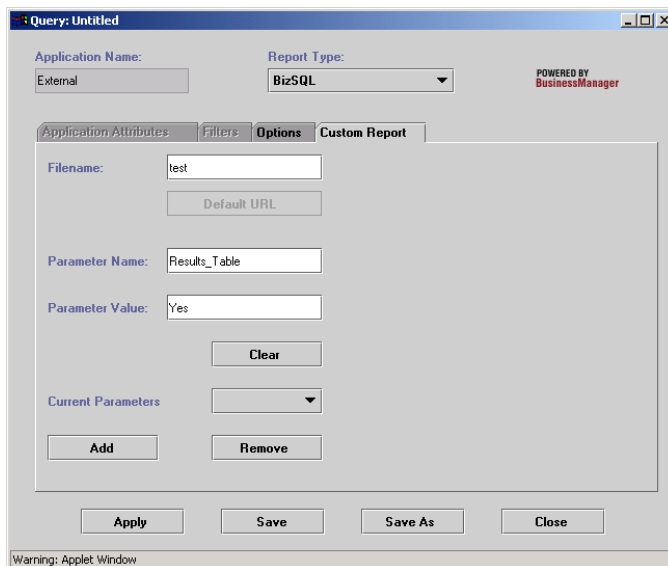
- c. To add more parameters, repeat the preceding steps.
- d. To remove a parameter, select it from the Current Parameters drop-down list and click **Remove**.

- When using BizSQL as the report generator, ITPC substitutes the parameters into the file containing SQL statements, enabling you to define parameterized SQL statements (see the following figure). When entering parameters and values, follow the SQL syntax. For example, in the Parameter Name box, use the following format to enter parameter names in the BizSQL query file:

parameter_name or 'parameter_name'

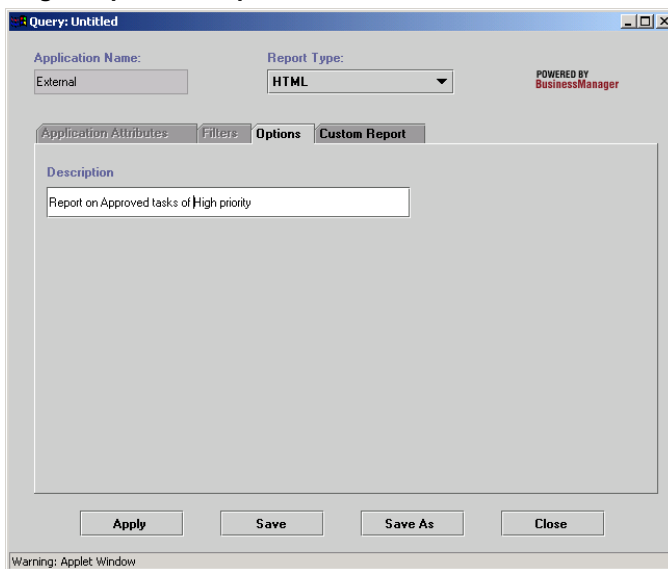
As shown in the example above, the parameter value may be given without single quotes or within single quotes, depending on the SQL syntax. For example, if the parameter's value is part of a Where clause, it is in single quotes.

Figure 67 Specifying Parameters for BizSQL



- Click the Options tab and enter a description of the new report in the Description text box, as shown in the following figure. This description will appear on the **Report List** page next to the report name (see [Figure 53](#) on page 80).

Figure 68 Adding a Report Description

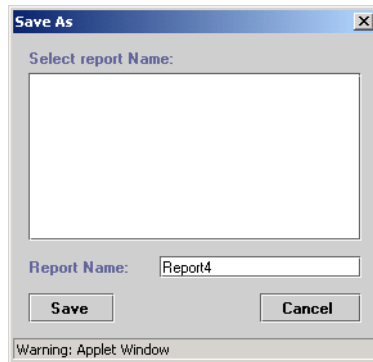


11. Click **Apply** to view the results, which ITPC displays in the Report Parameters window.
12. Refine the results, if necessary, and click **Submit** to view the new results in the View Report page.

In this page, you can click the instance name from the Name column to see the Chart View of the selected instance. Click **Cancel** to close the Chart View and go back to the View Report page. Click **Cancel** to close the View Report page and go back to the Query dialog window.

13. Click **Save As** to create a new external report, opening the **Save As** dialog box (see below).

Figure 69 Saving a Query to Define a Report




14. Enter a name for the new report in the Report Name box and click **Save**. Do not use the forward slash (/) character in a report name. ITPC cannot display a report that includes '/' in its name.
15. Click **Close** to exit the Report Builder.

ITPC displays all saved reports on the **Report List** page for the selected report generator (as shown in [Figure 64](#) on page 90).

Modifying an Existing Report

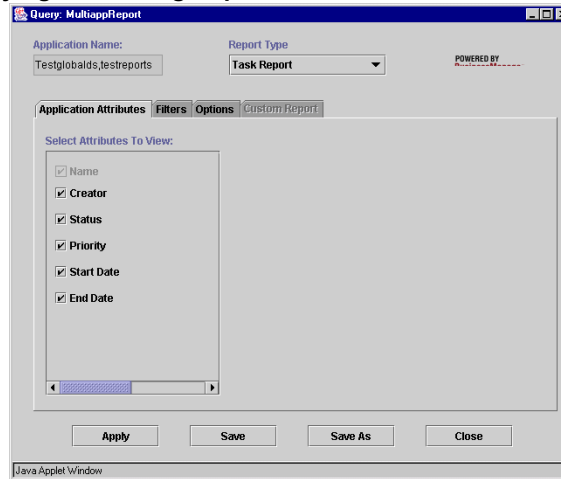
Many of the same procedures that were used to create a new Query (Application), Multiapplication or External report can be used to modify an existing report.

To modify an existing report:

1. In the Management module, click Reports > **My Reports**, to view the Report List page (see [Figure 54](#) on page 82), and then select a report from the Report Name column.
2. Click **Edit Report** () icon, displayed in the Report Name column, and a window displaying existing settings for the selected report opens.

3. Follow the procedures, as necessary, in steps 3 - 14 in *Creating Application (Query) Reports* on page 83 or in steps 4 - 16 in *Creating External Reports* on page 90.

Figure 70 Modifying an Existing Report



Removing an Existing Report

To delete an existing report, navigate to the **Report List** page. Select the report to be deleted from those listed on the page, and click **Delete** (See [Figure 53](#)).

Using Task Filtering for Reports

ITPC provides extended task filtering capabilities for more effective report building. Using task filtering, managers can create reports filtered on task attributes. Managers are able to define complex task reports through the existing BPM Portal interface, and don't need to navigate to the BizSQL report facility.

Note: The task filter cannot entirely replace the BizSQL report facility, which can manipulate any database table, not just the workstep and workitem tables.

For example, you can specify which tasks are to be displayed, and can choose from all the tasks of a particular instance to none of the tasks of a particular instance. The Report Builder supports the definition of filters on the following task items:

- Task name
- Task performer
- Task status
- Task priority
- Task start/end time

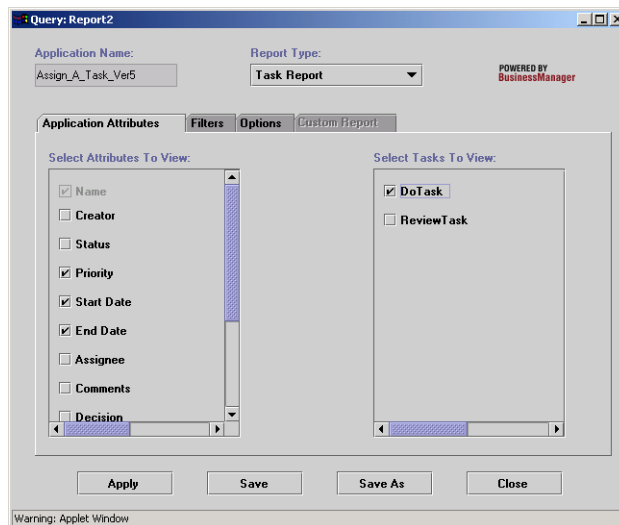
The task filtering feature is built into the Report Builder interface on the **Report List** page. With task filtering built into the interface, you can specify conditions of any task attribute and not lose the previous capabilities, such as filtering process instances based on the priority of a particular workstep.

For example, the manager of a Hiring application can list all the instances with an Evaluate Resume task that has an Active status and a High priority. Furthermore, if the report was defined as a task report, the list of worksteps that are *only* active will be displayed, as well as all tasks (active as well as completed, removed and suspended) related to the instances.

To use task filtering in reports:

1. For new reports, from the **Report List** page, click **Add Report**. For existing reports, select appropriate options from the Type and Applications panels, and click **Query**. For existing reports, select the report you want to revise and click **Modify**.
2. The **Query** dialog window appears, open to the Application Attributes tab. Select **Task Report** from the Report Type drop-down list in the **Query** dialog window (see the following figure).

Figure 71 Application Attributes for Task Reports



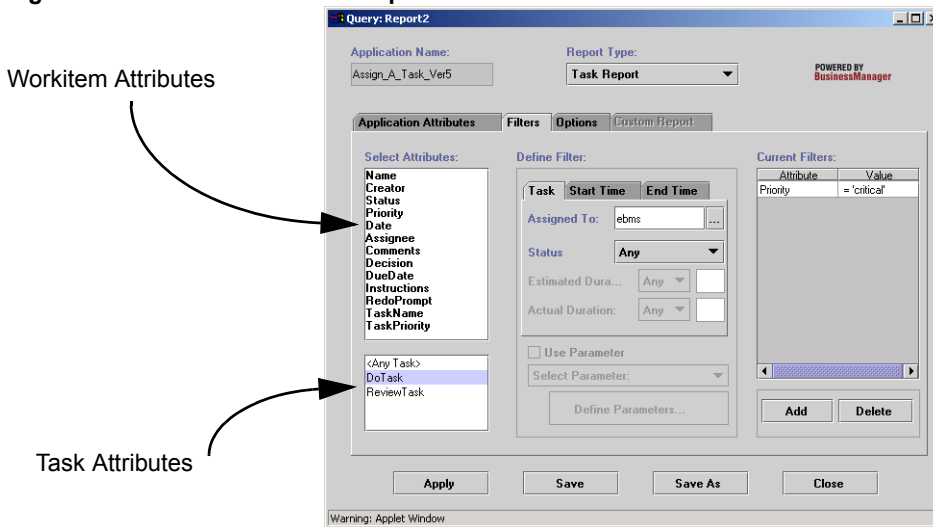
3. From the tasks listed in the right panel of the **Query** dialog window, select the tasks to be displayed in the report.
4. From the attributes listed in the left panel of the **Query** dialog window, select the workitem attributes to be displayed in the report.
5. Click the Filters tab (see [Figure 72](#)).

To define a filter for workitem attributes, select an attribute from the Select Attributes panel. Each time the user selects one of the attributes, the contents of the Define Filter panel changes. Type a reference value into the text box in the Define Filter panel, or click the **ellipsis** button to the right of the text box () to let the Report Builder display a list of available values. After defining the filter, click **Add**. ITPC adds the filter to the list in the Current Filters panel. Add additional workitem attribute filters as required.

To define a filter for task attributes, select an attribute from the Task Attributes panel in the lower left of the page (see [Figure 72](#)). Each time the user selects one of the task attributes, the contents of the Define Contents panel changes. Enter appropriate information in the Define Filter panel. After defining the filter, click **Add**. ITPC adds the task attribute filter to the list in the Current Filters panel. Add additional task attribute filters as required.

NOTE: In the case of task reports, you will find another option, <Any Task>, in the workitem sub-panel to define a filter on a task attribute independent of the workitem name.

Figure 72 Filters Tab for Task Reports



6. Click the **Options** tab. Enter a brief description of the report in the activated text box.
The description will appear on the **Reports** page next to the report name.
7. Click **Save As** when all task report filters have been defined.
8. Enter the name of the new report in the **Save As** dialog window, and click **Save**.
9. Click **Close** to exit the Report Builder.

ITPC displays all saved reports on the **Report List** page (refer to [Figure 53](#) on page 80).

Updating Previously Created Reports with Task Filtering

It is possible to open a report created in an earlier version of ITPC and add the task filtering functions to the report.

Defining Infopad Reports

BizPulse uses a data structure called an infopad to store:

- Application parameters (e.g., the list of product purchase limits for different departments)
- Rule parameters (e.g. the critical threshold for a resource load)
- Any other global data that the rules may require.

Infopads are stored in the ITPC repository. An infopad is a single- or two-dimension table, which is composed of cells. Each cell is a data structure that contains a cell slotname and a value. For more detailed information on infopads, see the *Infopads* chapter in the *BizPulse User's Guide*.

ITPC enables you to create a detailed analysis report of an infopad associated with one or more applications. These reports are called infopad reports.

In the Report List page, select Infopad Report from the list adjacent to the Add Report button. You can then perform the following actions on the infopad reports.

Table 19 Infopad Report Actions

Option	Action
Add Report button	Create a new infopad report.
Edit Report icon	Modify an existing infopad report.
Delete button	Delete the selected infopad report.
View button	Display the selected infopad report.

ITPC offers a highly visual set of charts for infopad reports, which can help you monitor ITPC applications at a higher level. Select from one of the following analysis formats:

- Table
- Graph
- Table & Graph
- Excel Spreadsheet

To create a detailed analysis report using infopads, complete the following steps:

1. In the Report List page, select **Infopad Report** from the drop-down list, and then click **Add Report**. The Add Application(Infopad) Report page opens.

Figure 73 Add Application(Infopad) Report Page

- Specify the information and format for the infopad report. The following table lists infopad report options:

Table 20 Infopad Report Options

Option	Description
Application	Select an application for which you want to create a report.
Report Name	Specify a name for the report.
Report title	Specify the title that will be displayed on the infopad report.
Report description	Specify the description that will be displayed on the infopad report.
Infopad	Select the infopad you want to analyze from the drop-down list.
Row and Column	ITPC automatically chooses a row and column for the report when you select the infopad, but you can change these default selections.
Slice on	ITPC automatically chooses the dataslot displayed in the infopad composer, but you can change the default selection.
Chart type	Choose from the following: Line Chart, Pie Chart, Area Chart, Multi-row Bar Chart, Multi-column Bar Chart, Stacked Bar Chart, or Stacked Area Chart.
Pie Chart On	Select Row or Column, if the Pie Chart option was selected in the Chart Type drop-down list.
Default view	Choose from the following: Table, Graph, Table & Graph, or Excel.
Layout	Choose either Horizontal or Vertical. The layout option applies only to Table & Graph views.
3D	Check to display the analysis in 3D charts. The three-dimensional effect does not apply to any area or stacked area chart types.
Value	ITPC automatically chooses the numerical value for the row or column if using the pie chart, but you can change the default selection.
Width and Height	ITPC automatically chooses the physical size of the infopad report, but you can change the default selection.

To show your data correctly in the selected Chart type, you must define more than one row or column in either the row dimension or the column dimension. For example, the predefined MyTaskReport_Ver2 infopad contains 4 row/columns in one dimension and one row/column in the other. To display the Area Chart and Stacked Area Chart types correctly for infopads, make sure that you select an option from the Column drop-down list that contains at least one row and more than one columns.

Note: You can use the Permission Create page in the Administration module to control the permissions to multiple infopads. For more information on BizSQL security, see the *BPM Portal Administrator's Guide*.

- Click **Preview**. A new window opens, displaying the Infopad Report based on the specified settings. Click the **Graphical View** tab, to verify whether your infopad report presents the data as required or not. Click **Close this window** to return to the Add Application (Infopad) Report page.
- Click **Save** to save the current report. Click **Save & Add New** to save the current report and reload the page to allow you to add another report.

Click **Reset** to delete your changes and display the original settings.

Click **Cancel** to delete your changes and return to the previous page.

Chapter 8

Using the Instance Manager

In today's business environment, a system may have hundreds of performers creating thousands of instances. As a user in this type of system, you may want to modify large numbers of instances, worksteps and tasks in batches, rather than on a more time-consuming, one-by-one basis. The Instance Manager enables you to efficiently manage existing instances and their tasks in batches, by performing the following procedures:

- **Search through all existing instances and their tasks.** Use the Instance Manager's Search function to filter through instances and tasks for date, name, creator, manager and priority attributes.
- **Update batches of process instances and worksteps.** All instances or worksteps, system attributes or dataslots retrieved by the Instance Manager's Search function can be updated with a single click.
- **Dynamically change instance properties at run-time.** Instance Manager enables you to change application properties at the instance level and the task level, even when the application is up and running. You can change instance and task properties or change attribute or dataslot values at run-time.

Note: Instance Manager only works with existing instances and their tasks. To change template-level properties at run-time, you must use other Management features.

- **Perform bulk updates of instances in Management reports.** You can quickly update selected groups of user defined dataslots.
- **Reassign tasks in batches.** In some systems, you, as ITPC Manager, can create hundreds of instances of an application, which are automatically assigned to you. You can then use the Instance Manager to reassign all or a selected batch of tasks to a specific performer. In cases of employees on vacation or leaving the company, you can also reassign batches of these tasks to a specific performer.
- **Assign "Available Status" tasks to specific performers.** In ITPC, if the performer of a task is a group and the role is "any", the status of this task will be "Available" to any member of the group until it is actually assigned to a specific performer. Using Instance Manager, you can conveniently retrieve such groups of tasks and assign a batch of them to a specific performer or to another group.

Launching the Instance Manager

The Instance Manager feature can be described as a BizSolo application running in the Management module. To launch the Instance Manager from the Management module of BPM Portal, in the Management module, click the **Instance Manager** menu and select one of the submenu options.

In order for the Instance Manager to function, BizLogic Server must be running. When you start Instance Manager, it first verifies that BizLogic Server is running. If it is not running, it displays a warning message. When this warning is displayed, you must log out of BPM Portal, launch BizLogic Server, and log in to BPM Portal, and then access Instance Manager again.

Instance Manager enables you to select the application that you want to monitor or manage. You can only select one application in the Instance Manager.

The Instance Manager enables you to manage at the following levels:

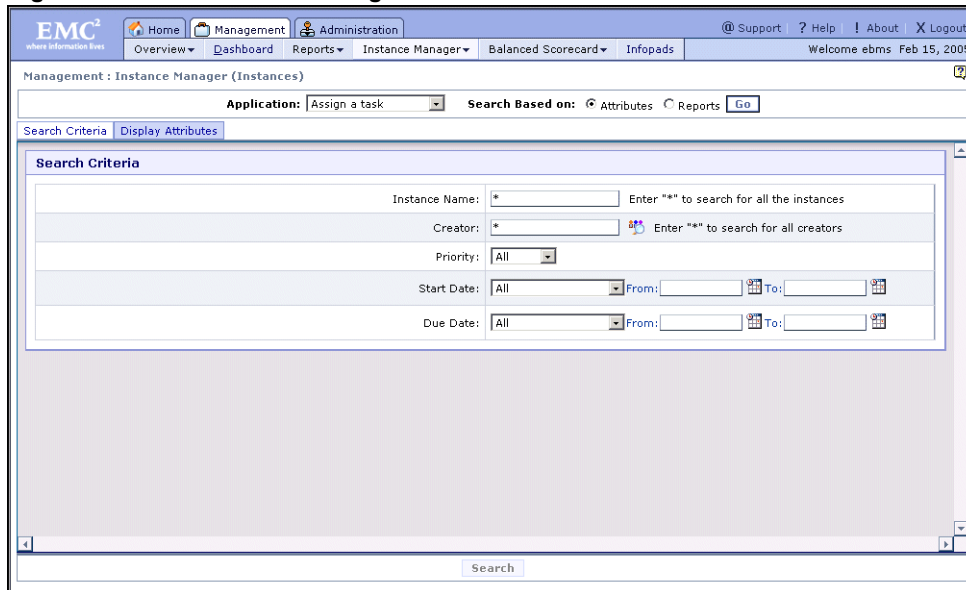
- **Instance Level**, where you can:
 - Click **Search Criteria** to search for and view a list of process instances, and change one, a selected batch, or all process instance properties in the selected application.
 - Click **Display Attributes** to modify dataslots in the selected application.
 - Click **Reports** to modify system attributes in BizManage reports in the selected application.
- **Task Level**, where you can:
 - View the tasks for all performers, or submit search criteria to find a specific performer.
 - Reassign one, a selected batch, or all assigned tasks of a performer, or reassign the available tasks of a performer.
- **Workstep Level**, where you can:
 - Click **Search Criteria** to search for a specific, or a selected group of, worksteps.
 - Click **Worksteps** to update all, or selected, worksteps.
 - Click **Display Attributes** to modify dataslots in the selected application.

Updating Process Instances

To update one process instance, a selected batch of process instances, or all process instances:

1. In the Management module, click Instance Manager > **Instances**, to view the Search Instances page, as shown in the following figure.

Figure 74 Search Instances Page



The screenshot displays the 'Search Instances' page within the EMC BPM Portal Manager. The page title is 'Management: Instance Manager (Instances)'. At the top, there is a navigation bar with 'Home', 'Management', and 'Administration' tabs. Below the navigation bar, there is a search bar with 'Application: Assign a task' and 'Search Based on: Attributes Reports' options. The main content area is divided into two tabs: 'Search Criteria' and 'Display Attributes'. The 'Search Criteria' tab is active and contains the following search criteria:


- Instance Name: * (with a note: Enter "*" to search for all the instances)
- Creator: * (with a note: Enter "*" to search for all creators)
- Priority: All
- Start Date: All (with From and To date pickers)
- Due Date: All (with From and To date pickers)

A 'Search' button is located at the bottom of the page.

2. Select an application from the **Application** drop-down list at the top of the Search Instances page. To further define your search on a specific attribute, select the **Attributes** option, and click **Go**.

The **Search Instances** page, contains the Search Criteria, and Display Attributes tabs. It enables you to refine your search.

3. Click the **Search Criteria** tab, and enter relevant data in the Instance Name, Creator, Priority, Start Date and Due Date boxes.
 - a. In the Instance Name box, enter the name of the Instance that you want to retrieve. Note that the search engine is case sensitive.

By default, an asterisk (*) is entered, which means that all instances will be displayed.
 - b. In the Creator box, enter the name of the Creator that you want to retrieve in the text box. Note that the search engine is case sensitive. By default, an asterisk (*) is entered, which means that all creators will be displayed. Alternatively, click the **Edit Creator** icon to open the Search Users page (for more information, see [Searching Users](#) on page 27).
 - c. In the Priority box, select an option from the drop down list. The option "All" is selected by default.
 - d. In Start Date and Due Date boxes, specify a time period from the options in the corresponding drop-down list. Alternatively, click the **Select Date** icon () to set the respective start date or due date. For more details, see [Specifying a Date](#) on page 26. By default, all dates are specified.

NOTE: If you use the defaults and make no entries on the Search Instances page, a list of **all** active instances for the selected application will be returned by default.

4. Click the **Display Attributes** tab. It displays a list of dataslot attributes and dataslots. Select the check boxes for the attributes and/or dataslots that you want to change.

NOTE: Dataslots of type Document, Object and XML are not displayed in the Display Attributes tab.

5. Click **Search** to retrieve all instances that meet the search criteria you have specified.
6. The search results are presented in the **Instance List** page (see [Figure 75](#)). This page contains two frames: the top frame displays all instances you had selected in step 3 and dataslots that you had selected for display in step 4; and the bottom frame allows you to apply common values to selected dataslots.

As seen in the top frame, instances are presented in a tabular format, with each row representing an instance. Instance name and dataslots are displayed in columns.

Figure 75 Instance List Page

The screenshot shows the 'Instance List Page' with the following components:

- Application:** Assign a task
- Table:** A table with columns: No., Instance, Assignee, Comments, Decision, Instructions, Task name, and Task priority. It contains three rows of data.
- Paging:** '< Previous 1 Next >' and 'Total: 3'
- Form:** 'Apply Common Value to Selected Instances on the top' with fields for Assignee, Decision, Comments, and Instructions.
- Buttons:** Save, Remove, Reset, Cancel, Update All, Remove All

No.	Instance	Assignee	Comments	Decision	Instructions	Task name	Task priority
01	Assignment#128	ebms					Low
02	Assignment#129	ebms				Hardware Review	Medium
03	Assignment#132	ebms				Monthly Status Report	High

If your search has retrieved many instances, they will be presented in multiple pages. To manage the contents of the list, you can sort them. To navigate through the pages, you can use the paging controls. For more details about these operations, see [Exploring BPM Portal](#) on page 21.

Note: You can customize the number of instances that are displayed on a single page by modifying the `bpmportal.conf` file.

7. To modify data for specific instances, click the link in the Instance column. The details of the selected instance are displayed in the bottom frame.
 - a. Enter new information about the displayed dataslots in the corresponding value boxes for the instance(s).
 - b. To apply common values to selected instances and/or clicked instance displayed in the top frame, make modifications to the dataslot values displayed in the bottom frame (see [Figure 75](#) on page 103), and click **Apply**. You can also apply common values to all instances displayed on the screen by selecting the check box in the heading of the table in the top frame.

- c. Click **Save** to save the new data after your confirmation.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

8. Click **Update All** to apply common values to all instances displayed on all pages. A Warning appears, stating that all instances for the selected application will be updated and asks if you want to continue. You cannot undo this operation, so make sure all information is correct. Click **OK** and a Confirmation message appears, indicating the update was successful. Click **OK** to return to the **Instance List** page.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

Updating Instances Using Reports

To perform a bulk update of user defined dataslots that are in an existing report (i.e., a report that you have previously defined):

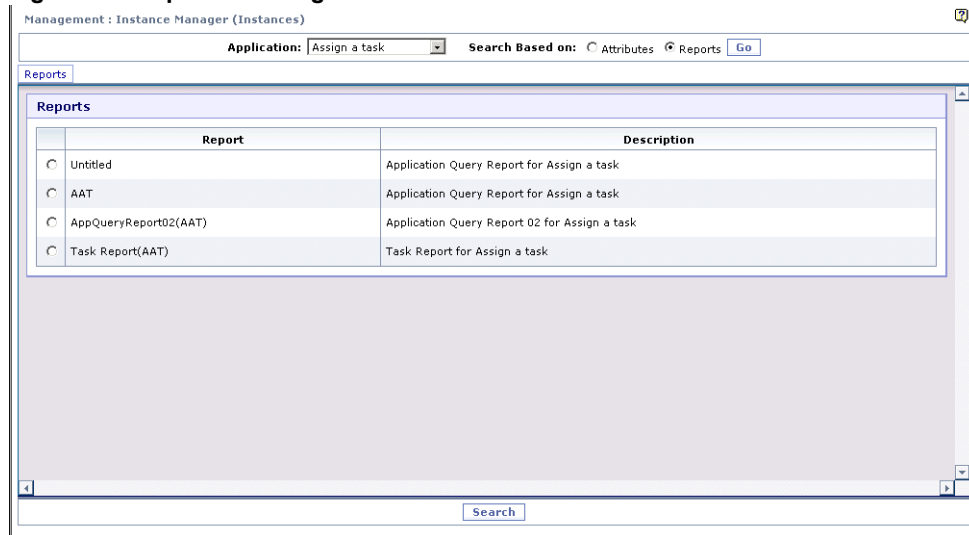
1. In the Management module, click Instance Manager > **Instances**, to view the Search Instances page.
2. Select an application from the **Application** drop-down list at the top of the Search Instances page. To further define your search on a specific report, select the **Reports** option, and click **Go**.

NOTE: Dataslots of type Document, Object and XML are not displayed.

3. BPM Portal displays a list of ‘Application’ reports for the selected application, as shown in the [Figure 76](#) on page 104. Select a report, and click **Search**, to open the **Instance List** page.

NOTE: Search does not list the reports designed in the JReport Designer.

Figure 76 Reports List Page



4. Follow procedures similar to those described in steps 6 - 8 in [Updating Process Instances](#) on page 102.

Removing Instances

As a ITPC Manager, you can remove instances created by you as well as by others.

1. Follow the procedure described in steps 1 - 6 in the *Updating Process Instances* on page 102 to locate the instances for removal.
2. If you want to remove only a few instances, select them from the top frame and then click **Remove**. To remove all instances, click **Remove All**.

Reassigning Assigned Tasks

To reassign one assigned task, a selected batch of assigned tasks, or all assigned tasks to specified performers:

1. In the Management module, click Instance Manager > **Tasks**, to view the Performer List page.
2. Select an application from the **Application** drop-down list.
3. Select Assigned from the **Task Type** drop-down list, and click **Go**. The Performer List page is displayed, as shown in the following figure.

Figure 77 Performer List Page

Management : Instance Manager (Tasks)

Application: Assign a task Task Type: Assigned Go

Select Performers to view their tasks

Search User - User Name: First Name: Last Name: Group: Go

Quick Search: All | A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Pages: < Previous 1 Next > Total: 1

No.	User Name	First Name	Last Name	Email	Phone
01	ebms	ebms	ebms	ebms@savvion.com	408-330-3400

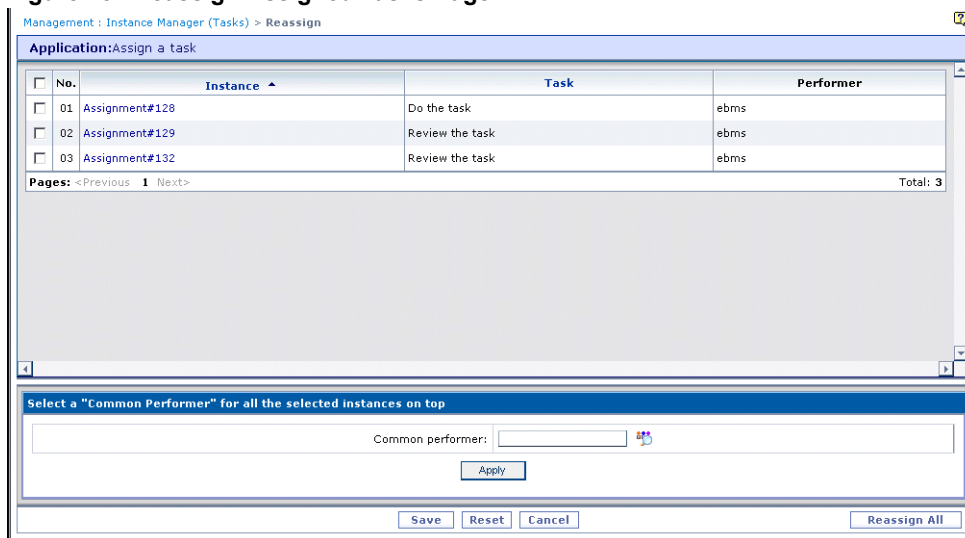
Pages: < Previous 1 Next > Total: 1

Submit

4. Before you reassign tasks, you need to select the performers whose tasks you want to reassign. To locate specific performers, use the search functions on the Performer List page.
 - a. To search for all performers for a specific search criteria, enter an asterisk (*) in that search field.


- b. The asterisk also serves as a wild card for the Performer box. For example, you can search for users named McPherson by entering any of the following:
 - Mc* locates all performers with a name beginning in Mc.
 - *pher* locates all performers with names containing “pher”.
 - *son locates all performers with a name ending in “son”.
 - M*n locates all performers with names starting with M and ending with n.
 - c. Click **Submit**. The Reassign Assigned Tasks page is displayed.
5. The **Reassign Assigned Tasks** page (see the following figure) enables you to reassign an assigned task (i.e., change the performer property of a task). This page contains two frames: the top frame lists the specified performers for the selected application; the bottom frame enables you to select a common performer for all the instances listed in the top frame.


Figure 78 Reassign Assigned Tasks Page



- 6. On this page you can perform the following functions:
 - a. To reassign the selected task(s) to a common performer:
 - i. Select one or more specific task check box(es) in the top frame.

Note: You can select the check box in the column header to select all the tasks on the current page.

- ii. Enter a performer’s name in the **Common Performer** box or use the **Edit Performer** icon () to open the Search Users page, where you can search for, then add, a specific performer.
- iii. Click **Apply**. The selected tasks are reassigned to the specified performers after your confirmation.
- iv. Click **Save**. ITPC saves the current settings.

- b. To reassign all task(s) across all pages to a common performer:
 - i. Enter a performer's name in the **Common Performer** box or use the **Edit Performer** icon () to open the Search Users page, where you can search for, then add, a specific performer.
 - ii. Click **Reassign All** to reassign, with one click, a batch of tasks to various performers. A warning appears, stating that all tasks for the selected application will be reassigned and asks if you want to continue. You cannot undo this operation, so make sure all information is correct. Click **OK**. All tasks are reassigned to the specified performers after your confirmation.

Reassigning Available Tasks

If the performer of a workstep is a list of names or a group with the role of “any”, then its tasks have an Available status when they are created, and remain in this status until you assign them to a specific performer. To reassign one available task, a selected batch of available tasks, or all available tasks to specified performers:

1. In the Management module, click Instance Manager > **Tasks**, to view the Performer List page.
2. Select an application from the **Application** drop-down list.
3. Select Available from the **Task Type** drop-down list, and click **Go**. The Performer List page is displayed.
4. Before you reassign tasks, you need to select the performers whose tasks you want to reassign. To locate specific performers, use the search functions on the Performer List page. After selecting a user, click **Submit**.
5. The **Reassign Available Tasks** page (similar to the [Figure 78](#), Reassign Assigned Tasks page) enables you to reassign an available task. This page contains two frames: the top frame lists the specified performers for the selected application; the bottom frame enables you to select a common performer for all the instances listed in the top frame.
6. The procedures for reassigning available tasks are very similar to procedures described in step 6 in [Reassigning Assigned Tasks](#) on page 105.

Updating Worksteps

You can now update data at the workstep level. The bulk update feature for worksteps allows you to enter search criteria for instances, select specific worksteps and choose which dataslot attributes will be displayed. To update one workstep, a selected batch of worksteps, or all worksteps:

1. In the Management module, click Instance Manager > **Worksteps**. The Search Worksteps page is displayed.

- The Search Worksteps page (see the following figure) contains three tabs: Search Criteria, where you can select one or more instances; Display Attributes, where you can choose which dataslot attributes will be displayed; and Worksteps, where you can select one or more worksteps.

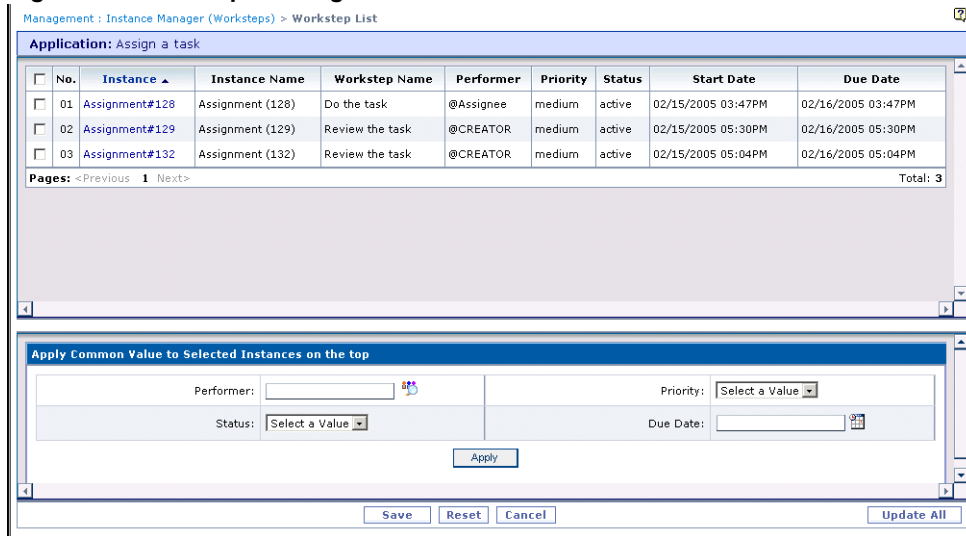
Figure 79 Search Worksteps Page

- Select an application from the **Application** drop-down list, and click **Go**.
- The **Search Worksteps** page has a format similar to the **Search Instances** page. Please refer to the procedures described in [Step 2 in Updating Process Instances](#) on page 102.
- Use the Search Criteria tab to specify search criteria that will locate and display worksteps of the selected application that meet the search criteria. Ensure that you have selected **Activity** from the Workstep Type drop-down list.
- Open the Display Attributes tab to display a list of dataslot attributes and dataslots. Select the check boxes for the attributes and/or dataslots that you want to change.
- Open the Worksteps tab to specify the worksteps you want to locate.
- Click **Search** to retrieve all workitems that meet the search criteria you have specified.

9. The search results are presented in the **Workstep List** page (see [Figure 80](#)). This page contains two frames: the top frame displays all worksteps selected in step 5, and identifies their associated instance as well as dataslots that you had selected for display in step 6. The bottom frame allows you to apply common values to selected dataslots.

As seen in the top frame, worksteps are presented in a tabular format, with each row representing a workstep. Workstep values are represented as columns.

Figure 80 Workstep List Page



If your search has retrieved many worksteps, they will be presented in multiple pages. To manage the contents of the list, you can sort them. To navigate through the pages, you can use the paging controls. For more details about these operations, see [Exploring BPM Portal](#) on page 21.

Note: You can customize the number of worksteps that are displayed on a single page by modifying the *bpmportal.conf* file.

10. To modify data for the selected worksteps, click the link in the Instance column. The details of the selected workstep are displayed in the bottom frame.
 - a. Enter new information about the displayed dataslots in the corresponding value boxes for the workstep(s).

NOTE: If you change the performer from the Workstep List page, this change will be effective only when that workstep is reactivated. Therefore, it is recommended not to change the performer from this page. You should do this change from the Performer List page. For more information, see [Reassigning Assigned Tasks](#) on page 105.

- b. To apply common values to selected instances and/or clicked instance displayed in the top frame, make modifications to the dataslot values displayed in the bottom frame (see [Figure 75](#) on page 103), and click **Apply**. You can also apply common values to all instances displayed on the screen by selecting the check box in the heading of the table in the top frame.
- c. Click **Save** to save the new data after your confirmation.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

11. Click **Update All** to apply common values to all instances displayed on all pages. A Warning appears, stating that all instances for the selected application will be updated and asks if you want to continue. You cannot undo this operation, so make sure all information is correct. Click **OK** and a Confirmation message appears, indicating the update was successful. Click **OK** to return to the **Workstep List** page.
12. To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

Resuming Suspended Worksteps

You can now resume the suspended workstep(s). To resume one workstep, a selected batch of worksteps, or all worksteps:

1. In the Management module, click Instance Manager > **Worksteps**. The Search Worksteps page is displayed.
2. The Search Worksteps page (see the following figure) contains three tabs: Search Criteria, where you can select one or more instances; Display Attributes, where you can choose which dataslot attributes will be displayed; and Worksteps, where you can select one or more worksteps.

Figure 81 Search Worksteps Page

3. Select an application from the **Application** drop-down list, and click **Go**.
4. The **Search Worksteps** page has a format similar to the **Search Instances** page. Please refer to the procedures described in [Step 2 in Updating Process Instances](#) on page 102.
5. Use the Search Criteria tab to specify search criteria that will locate and display worksteps of the selected application that meet the search criteria.

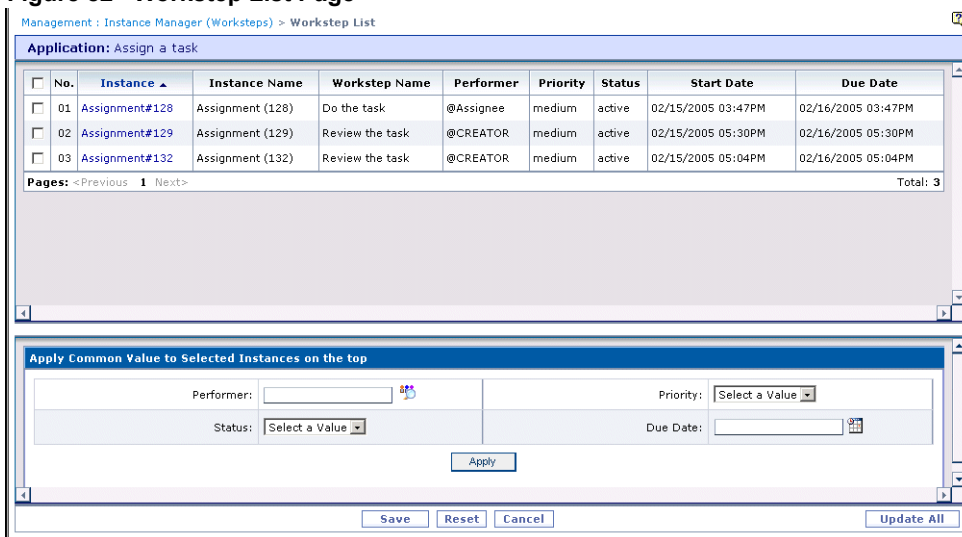
Depending on whether you want to resume worksteps to which human performers or adapters are assigned, select **Activity** or **Adapter/Agent** respectively from the Workstep Type drop-down list

6. Open the Display Attributes tab to display a list of attributes and dataslots. Select the check boxes for the attributes and/or dataslots that you want to change.

7. Open the Worksteps tab to specify the worksteps you want to locate.
8. Click **Search** to retrieve all workitems that meet the search criteria you have specified.
9. The search results are presented in the **Workstep List** page (see [Figure 82](#)). This page contains two frames: the top frame displays all worksteps selected in step 5, and identifies their associated instance as well as dataslots that you had selected for display in step 6. The bottom frame allows you to apply common values to selected dataslots.

As seen in the top frame, worksteps are presented in a tabular format, with each row representing a workstep. Workstep values are represented as columns.

Figure 82 Workstep List Page



If your search has retrieved many worksteps, they will be presented in multiple pages. To manage the contents of the list, you can sort them. To navigate through the pages, you can use the paging controls. For more details about these operations, see [Exploring BPM Portal](#) on page 21.

Note: You can customize the number of worksteps that are displayed on a single page by modifying the *bpmportal.conf* file.

10. In the top frame, select the worksteps whose status is to be changed to Resume.
11. In the bottom frame, select **Active** from the Status drop-down list, and then click **Apply**. You can also change the status of all instances displayed on the screen by selecting the check box in the heading of the table in the top frame.
12. Click **Save** to save the new data after your confirmation.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

13. Click **Update All** to apply common values to all instances displayed on all pages. A Warning appears, stating that all instances for the selected application will be updated and asks if you want to continue. You cannot undo this operation, so make sure all information is correct. Click **OK** and a Confirmation message appears, indicating the update was successful. Click **OK** to return to the **Workstep List** page.
14. To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current page, click **Cancel**.

Chapter 9

Using the Balanced Scorecard

Balanced Scorecard is a performance management system that enables senior management to measure how their organization's business activities are helping it meet its strategic goals. Balanced Scorecard provides you as a ITPC Manager with a method of statistically measuring your company's performance, using a scale of 0-10, resulting in a balanced, high-level view of all areas of your enterprise.

Using the Balanced Scorecard

Balanced Scorecard enables you to by look at your strategic goals from not just one, but a range of, perspectives that typically include:

- **Finance.** Presents data from the perspective "To succeed financially, how do we appear to our shareholders?"
- **Customer.** Presents data from the perspective "To achieve our strategic goals, how do we appear to our customers?"
- **Innovation.** Presents data from the perspective "To achieve our strategic goals, how are we sustaining our ability to change and improve?"
- **Internal.** Presents data from the perspective "To satisfy our shareholders and customers, what business processes must we excel at?"

Each of these Balanced Scorecard Perspectives are derived from key performance indicators (KPIs) that provide the data that translate enterprise goals into a set of measurable objectives. For example, the Finance Perspective can contain such KPIs as Product Revenue, Service Revenue, Product Revenues Growth, Service Revenues Growth, Profit Margin and Sales Pipeline. Each of these KPIs can be assigned a weight that indicates its comparative significance.

Combining ITPC and Balanced Scorecard

The Management module of BPM Portal provides business process management at the business unit or department level, and the Balanced Scorecard is also typically management focused, even though you can drill down through the organization. The combination of ITPC and Balanced Scorecard provides a unique business approach that enables you to compare ITPC's business process intelligence against the measurement of corporate strategy achievement supplied by Balanced Scorecard.

ITPC's Management module enables its users to perform such Balanced Scorecard management processes as:

- Establishing performance targets, either by using the predefined KPIs discussed above or by using the Balanced Scorecard Designer to create customized KPIs that more accurately reflect your organization's requirements.
- Integrating with external systems to collect relevant data, and effectively monitoring business processes through standard or customized KPIs.
- Measure the contribution business processes are making in achieving business objectives and strategic goals.

Each of the Balanced Scorecard Perspectives are derived from key performance indicators (KPIs). Each of these KPIs can be assigned a weight that indicates its comparative significance. In the Balance Scorecard console view, each KPI value is displayed as a dial. This dial displays the target score along with the actual score for each KPI. The target score divides the circumference of the dial into two parts; the first part, that is, the arc from 0.0 to target score is shown in red, whereas the second part, that is, the arc from target score to 10.0 is shown in green. The needle of the dial indicates rounded-off actual score. Optionally, the fields below the dial show the exact actual value and/or target score. This dial gives a visual indicator of achievements and help managers to track the progress.

Viewing Balanced Scorecard Applications

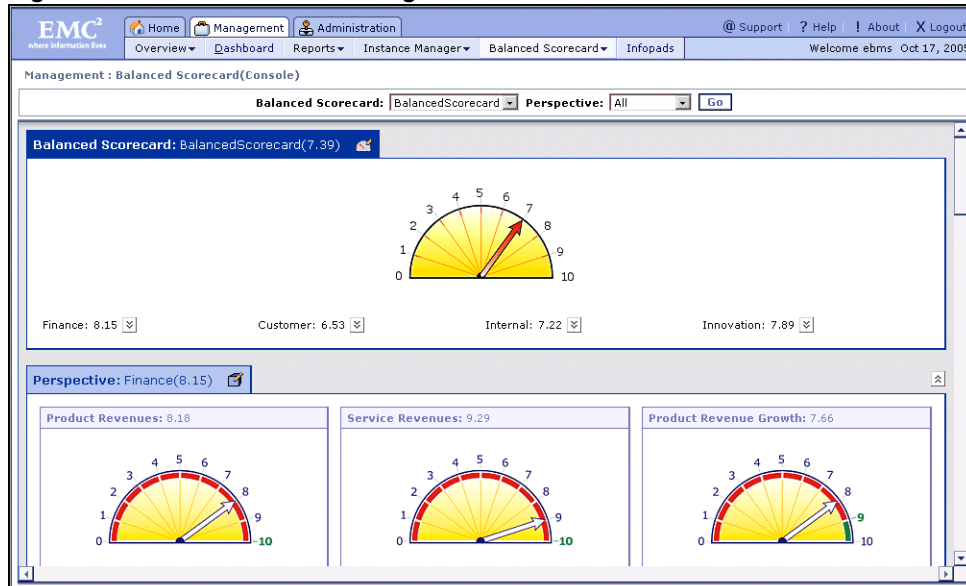
ITPC contains processes and rules that collate Business Scorecard data and it then inserts this data in infopads. ITPC enables you to view this data as a standard Balanced Scorecard application, or to design a customized Balanced Scorecard application.


The user must install the Balanced Scorecard sample application, and then select Balanced Scorecard from the drop-down list on the Balanced Scorecard page to display the standard view seen in [Figure 83](#) on page 115. By default, a view of all the perspective values is displayed.

To view your Balanced Scorecard application:

1. In the Management module, click **Balanced Scorecard > Console** and select **BalancedScorecard** from the Balanced Scorecard drop-down list to open the Balanced Scorecard page (see the figure below).

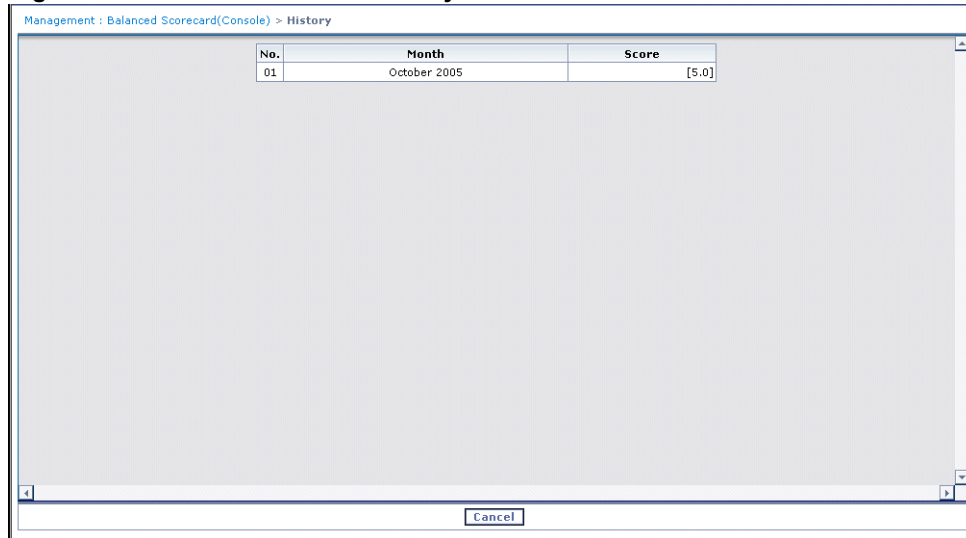
Figure 83 Balanced Scorecard Page



2. Select an option from the **Balanced Scorecard** drop-down list, select an option from the **Perspective** drop-down list, and then click **Go** to obtain information on a specific Balanced Scorecard Perspective. Options include All, Customer, Finance, Innovation and Internal.
3. Edit values for each perspective by clicking the **Edit** icon (). For more information, see [Editing Balanced Scorecard Perspectives](#) on page 116 .

4. In the console view, each KPI value is displayed as a dial. Each dial is associated with a hyperlink to infopad analysis reports that launch a history for the selected KPI. For example, clicking the Product Returns dial of the Customer perspective displays the report seen in the following figure. Click on any of the KPI links to execute a corresponding analysis report.

Figure 84 Balanced Scorecard History



No.	Month	Score
01	October 2005	[5.0]

Editing Balanced Scorecard Perspectives

ITPC provides a management application interface in which the user can edit the Relative Weights for a specific KPI, as well as modify other values and enter a description of each KPI in the selected perspective. This interface is seen in [Figure 85](#) on page 117.

For example, you can emphasize the importance of Profit Margin KPI in the Finance Perspective by increasing the original value of 0.2 (20%) to a value of 0.70 (70%) in the Weight column. Changing the relative weight of the Profit Margin KPI will change the score for the Finance Perspective, as well as the total Balanced Score.

Note: The sum of the numbers in the Edit (Perspective) Relative Weights dialog window (see [Figure 85](#)) must not exceed 1.0.

To edit a Balanced Scorecard value:


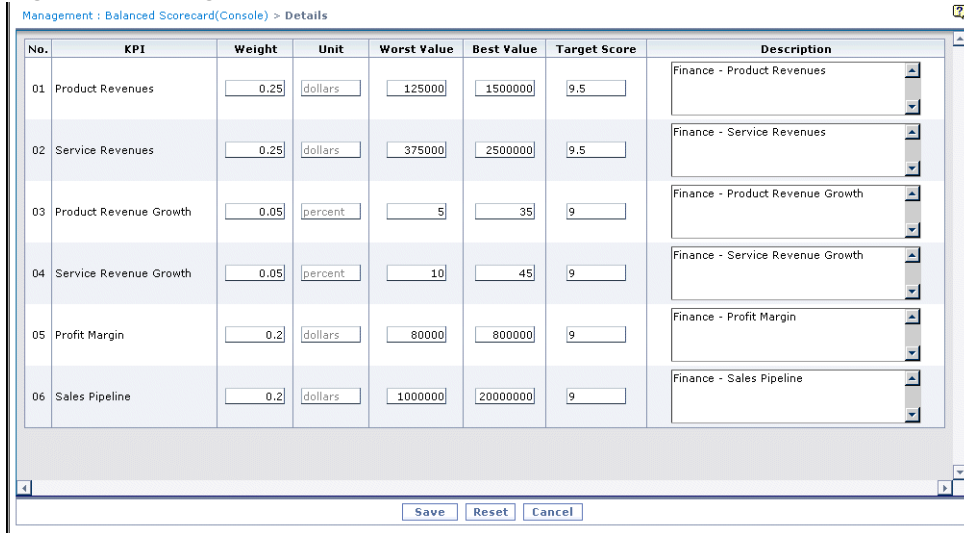
1. Click the **Edit** icon () displayed to the right of each Perspective (see [Figure 83](#) on page 115) to open the **Perspective Details** page, as shown in the following figure.

Figure 85 Editing Balanced Scorecard Perspectives



The screenshot shows a web interface for editing Balanced Scorecard perspectives. The page title is "Management : Balanced Scorecard(Console) > Details". Below the title is a table with the following columns: No., KPI, Weight, Unit, Worst Value, Best Value, Target Score, and Description. The table contains six rows of KPIs. At the bottom of the form are three buttons: Save, Reset, and Cancel.

No.	KPI	Weight	Unit	Worst Value	Best Value	Target Score	Description
01	Product Revenues	0.25	dollars	125000	1500000	9.5	Finance - Product Revenues
02	Service Revenues	0.25	dollars	375000	2500000	9.5	Finance - Service Revenues
03	Product Revenue Growth	0.05	percent	5	35	9	Finance - Product Revenue Growth
04	Service Revenue Growth	0.05	percent	10	45	9	Finance - Service Revenue Growth
05	Profit Margin	0.2	dollars	80000	800000	9	Finance - Profit Margin
06	Sales Pipeline	0.2	dollars	1000000	20000000	9	Finance - Sales Pipeline

2. Modify the data in any of the boxes.
3. Click **Save** to submit and save your changes. A Confirmation message appears, indicating the editing of the perspective values was successful. Click **OK**, and return to the **Balanced Scorecard** page.

Click **Reset** to delete your changes and display the original settings.

Click **Cancel** to delete your changes and return to the **Balanced Scorecard** page.

Using the Balanced Scorecard Designer

ITPC provides the Balanced Scorecard Designer, which presents a series of user interfaces where you can view your available Balanced Scorecard applications, modify existing Balanced Scorecards, and add a new Balanced Scorecard application that meets your specific requirements.

Designing a New Balanced Scorecard

To design a new Balanced Scorecard:

1. In the Management module, click Balanced Scorecard > **Designer**, to open the Balanced Scorecard List page (see the figure below).

Figure 86 Balanced Scorecard List Page

No.	Balanced Scorecard	Description
01	BSC(K01)	BalancedScorecard
02	BalancedScorecard	BalancedScorecard

All available Balanced Scorecard applications are listed, with a brief description for each of them.

2. To add a new Balanced Scorecard, click **Add Balanced Scorecard**, opening the **Add Balanced Scorecard** page (see the following figure).

Figure 87 Add Balanced Scorecard Page

Name:

Description:

- a. Enter the name of the new Balanced Scorecard and its description.
- b. Click **Next**, opening the **Perspectives List** page where you can create perspectives for the new Balanced Scorecard.

3. The **Perspectives List** page (see following figure) enables you to:

Figure 88 Add Perspective Page

<input type="checkbox"/>	No.	Perspective	Weight
<input type="checkbox"/>	1	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	2	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	3	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	4	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	5	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	6	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	7	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	8	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	9	<input type="text"/>	<input type="text" value="0.0"/>
<input type="checkbox"/>	10	<input type="text"/>	<input type="text" value="0.0"/>

- a. Enter a name in the Perspective box and assign the perspective a weight.

Note: The perspective name must not contain spaces.

- b. You may add more perspective(s), if required, by clicking **Add Perspective**, which opens **Add Perspective** window. Enter perspective and weight and click **Save** to add the perspective to the Perspective/Weight table.
- c. Click **Next**, opening the **Source List** page where you can define sources to be used by the KPIs of the new Balanced Scorecard.

4. The **Source List** page enables you to add sources of information that can be used to define KPIs and generate Balanced Scorecards. All KPIs must have at least one source, and Additive and Averaging KPIs can have multiple sources. This page displays two tables listing the Process Template Sources and the Infopad Sources.

Figure 89 Source List Page

Management : Balanced Scorecard (Design) > Add Balanced Scorecard > Perspectives List > Source List

Process Template Sources

<input type="checkbox"/>	No.	Source	Process Template	Workstep	Event	Dataslot
<input type="checkbox"/>	1	K02_PT_S01	Approval_Ver2	Make Request	Completed	approver

Infopad Sources

<input type="checkbox"/>	No.	Source	Application	Module	Infopad	Row	Column	Slot
<input type="checkbox"/>	1	K02_IP_S01	Assign a task	Assignment_rules	MyTaskReport	High	1	count

5. Click **Add Source** to open the **Add Source** window as shown in the following figure.

Figure 90 Add Source Page for New KPIs

Add Source

Balanced Scorecard: BSC(K02)

Source Information:

Source:

Application: <input type="text" value="Select One"/>	Process Template: <input type="text" value="Select One"/>
Module: <input type="text" value="Select One"/>	Workstep: <input type="text" value="Select One"/>
Infopad: <input type="text" value="Select One"/>	Event: <input type="text" value="Select One"/>
Row: <input type="text" value="Select One"/>	Dataslot: <input type="text" value="Select One"/>
Column: <input type="text" value="Select One"/>	
Slot: <input type="text" value="Select One"/>	

- a. Select an option from the Source Information list. Options include Process Templates or Infopads.
- b. Enter the name of the new Source in the Source box.
- c. If the Source information comes from a process template, select options from the Process Template, Workstep, Event and Dataslot lists to further define the source.

NOTE: The Dataslot drop-down list contains numeric and string type dataslots only.

- d. If the Source information comes from an infopad, specify the Application, Module, Infopad Name, Row, Column and Slot containing the updated value.

NOTE: The Slot drop-down list does not contain the slots of type "String".

- e. Click **Save** to save the new Source and go back to the **Source List** page to define additional sources. Depending upon whether the source information is specified as process template or infopad, the new source is added in the appropriate table in the Source List page.
 - f. Click **Next**, opening the **KPI List** page where you can define KPIs for the new Balanced Scorecard.
6. The **KPI List** page (see following figure) displays the list of KPI. You can select a perspective from the drop-down list beside Go, and click **Go**, to list KPIs of selected perspective only.

Figure 91 Add KPI Page

No.	Parameter	Value	Editable	Display
01	Weight	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02	Current Value	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
03	Best Value	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
04	Worst Value	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
05	Unit	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06	Score	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
07	Target Score	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
08	Description	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

7. From the **Perspective** drop-down list, select the perspective to which the new KPI is assigned, and click **Add KPI**. The Add KPI window is opened.
 - a. The KPI Details tab displays the name of the selected balanced scorecard and perspective in read only mode.
 - b. Enter the name of the KPI.

Note: The KPI Name must be unique.

- c. Select a KPI type from the Type list. Options include:
 - Additive, which updates the current value by adding on any updated values.
 - Average, which updates the current value by averaging in any updated values.
 - Replace, which replaces the current value with the updated one.
- d. Enter values for each of the displayed parameters. Assign a weight -- weight values must be in the 0-1 range. The Current Value and Score are generally used for initialization purposes only. The Best Value and Worst Value are used in calculating the score. Unit is used for summary descriptions; longer descriptions are entered in Description. You can specify the target score between 0.0 and 10.0 for each KPI in the Target Score. The Balanced Scorecard Console will display the target score along with the actual score for each key performance indicator. It will give a visual indicator of achievements and help managers to track the progress.

- e. Select the **Editable** check box to enable users to modify the value or the **Display** check box to create a read-only value.
 - f. Click **Attach Source** tab. This tab displays the list of available sources defined earlier and the list of sources attached to the KPI.
 - g. Select one or more available sources from the Select Sources list and click **Add** to add them in the Attached Sources list. You can click **Add All** to add all available sources simultaneously. You may use **Remove** or **Remove All** to remove the sources from the Attached Sources list and put them back in the Select Sources list.
 - h. Click **Save** to save the new KPI and go back to the KPI List page. The new KPI is listed in the table on this page.
8. Click **Finish** to create the new Balanced Scorecard.
 9. A Confirmation message appears, indicating that you have successfully added a new Balanced Scorecard. Click **OK** to save it and return to the **Balanced Scorecard List** page.

After you have designed and saved a new Balanced Scorecard, you (or someone like ITPC Administrator, who has requisite access permissions) must install it as a new application from the BPM Portal's Administration module for it to work properly.

Generating Rules in Balanced Scorecards

Balanced Scorecard Designer automatically generates one rule file for each Balanced Scorecard. This rule file contains the following sections.

- **Initialization.** This section creates an infopad containing the weights of the perspectives. The Perspective Weight infopad contains one row for each perspective in the scorecard. The lone slot in the cell provides the weight for that perspective, and each slot has an alarm that is triggered with the weight changes. This event triggers a rule that updates the overall score. Initialization creates a dynamic infopad for the overall score, with one row created for each month. The lone slot in the definition cell provides the score. Initialization also creates a dynamic infopad for each perspective, with one row for each month and one column for each KPI in that perspective. For more information, see Main Scorecard Group Rule.
- **Finalize.** This section contains an entry for each of the infopads created that will destroy them when the rules are unloaded.

The rule file also contains the following rule groups:

- **Update Values.** Updates the current values of the appropriate infopads. The Update Values rule vary depending on the KPI type and the number and type of data sources. If the KPI type is additive, the action adds the value of the data source to the KPI's current value slot. If the KPI type is averaging, the action averages the value of the data source to the KPI's current value slot. If the KPI type is replace, the action replaces the current value with the value of the data source.
- **Main Scorecard Group.** Contains the escalation rules for calculation, rules that update the infopads when the collection process completes; and a rule that adds a row to all the dynamic infopads on the last day of a month and schedules the next month's event. Cells in each infopad have an alarm that trigger a different update rule. Rules included in this group include:

- **Perspective BestValue Rule:** Each perspective contains one best value rule, which is triggered when a BestValue slot has changed in a cell. It recalculates the score for the relevant KPI.
- **Perspective WorstValue Rule:** Each perspective contains one worst value rule, which is triggered when a WorstValue slot has changed in a cell. It recalculates the score for the relevant KPI.
- **Perspective CurrentValue Greater Than Rule:** Each perspective contains one CurrentValue Greater Than rule, which is triggered when a CurrentValue slot has changed, and the NegativeRange for that cell is 'F', meaning that the BestValue is greater than the WorstValue. The rule checks that the CurrentValue is less than BestValue; or it sets BestValue to the CurrentValue and checks that the CurrentValue is greater than WorstValue; or it sets WorstValue to the CurrentValue. It then generates an event that will trigger a rule to recalculate the score.
- **Perspective CurrentValue Less Than Rule:** Each perspective contains one CurrentValue Less Than rule, which is triggered when a CurrentValue slot has changed, and the NegativeRange for that cell is 'T', meaning that the BestValue is less than the WorstValue. The rule checks that the CurrentValue is greater than the BestValue; or it sets BestValue to the CurrentValue and checks that the CurrentValue is less than the WorstValue; or it sets WorstValue to the CurrentValue. It then generates an event that will trigger a rule to recalculate the score.
- **Perspective CurrentValue Update Rule:** Each perspective contains one CurrentValue Update rule, which is triggered by the event generated by the CurrentValue Greater than rule or the CurrentValue Less than rule. It then recalculates the score of the affected cell.
- **Perspective RelativeWeight Rule:** Each perspective contains one RelativeWeight rule, which is triggered when the relative weight slot has changed in a cell and the affected cell is not in the last row of the infopad. It updates the sum of the weights in the last column. Then it issues an event for each KPI in the perspective that will recalculate the score for each cell, triggering the CurrentValue Update rule.
- **Perspective Score Rule:** Each perspective contains one Score rule, which is triggered when the score slot has changed in a cell. It then recalculates the perspective score.
- **Perspective BSCard Rule:** Each perspective contains one BSCard rule, which is triggered when the Perspective score slot has changed. It issues an event that triggers a rule to recalculate the main overall score.
- **Perspective BizLogicUpdate Rule:** Each perspective contains one BizLogicUpdate rule, which is triggered when the perspective subprocess W_COMPLETED event is sent. It then updates the CurrentValue for every KPI in the perspective.
- **Perspective Weight BSCard Rule:** Each perspective contains one Perspective Weight BSCard rule, which is triggered when the weight for a perspective has been updated. It then triggers a rule to recalculate the main overall score.
- **Overall UpdateMainBSC Rule:** Each perspective contains one UpdateMainBSC rule, which is triggered when perspective weights or scores change. It then updates the main overall score.
- **AddRowsToScorecardInfoads Rule:** Each perspective contains one AddRowsToScorecardInfoads rule, which is triggered when the scheduled event is sent. For each of the dynamic infopads (i.e., each of the perspective infopads and the main scorecard infopad), a row is added and the values from the previous row are copied into the new row. Finally, an event is scheduled to trigger the rule on the last day of the next month.

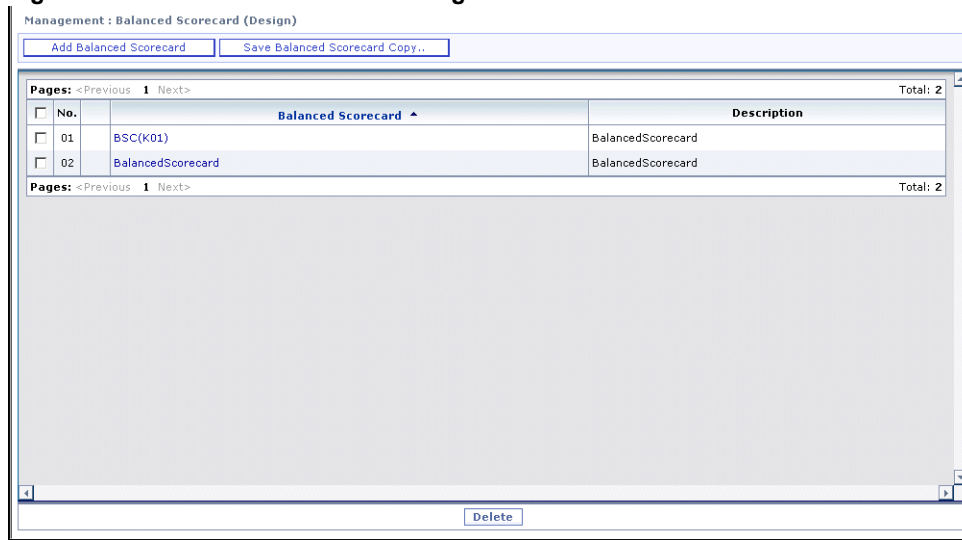
Viewing and Modifying Existing Balanced Scorecards

If you modify an existing Balanced Scorecard, to view the changes, you (or ITPC Administrator) must reinstall the modified Balanced Scorecard.

To access or modify existing Balanced Scorecard applications:

1. In the Management module, click Balanced Scorecard > **Designer**, to open the Balanced Scorecard List page (see the figure below), where all existing Balance Scorecards are listed.

Figure 92 Balanced Scorecard List Page



To delete a Balanced Scorecard from those listed on the Balanced Scorecard List page, select a Balanced Scorecard from the list and click **Delete**.

To copy a Balanced Scorecard and save it as a new Balanced Scorecard, click **Save Balanced Scorecard Copy...**

2. Click the name of the balanced scorecard in the Balanced Scorecard column to view or modify the corresponding Balanced Scorecard, opening the **Add Balanced Scorecard** page (see [Figure 87](#) on page 118).
 - Change the name of the new Balanced Scorecard and/or its description.
3. Click **Next**, opening the **Perspectives List** page (see [Figure 88](#) on page 119) where you can modify perspectives of the Balanced Scorecard.

To delete a Perspective from those listed on the **Perspectives List** page, select a Perspective from the list and click **Delete**. You can add new perspectives, and/or edit names/weights of the existing perspectives.

4. Click **Next**, opening the **Source List** page where you can modify sources used by the KPIs of a Balanced Scorecard.

To delete a Source from those listed on the **Source List** page, select a Source from the list and click **Delete**. You can add new sources, and/or edit details of the existing sources.

5. Click **Next**, opening the **KPI List** page (see [Figure 91](#) on page 121) where you can modify KPIs of the Balanced Scorecard.

To delete a KPI from those listed on the **KPI List** page, select a KPI from the list and click **Delete**. You can add new KPIs, and/or edit details of the existing KPI.

6. Click **Finish** to save the current scorecard.

Chapter 10

Using the Infopad Manager

An infopad is a table, composed of elements called cells, that store such global data as application parameters (e.g., a list of e-mail addresses of persons to notify) or rule parameters (e.g., the critical threshold for a resource load). Each cell is a data structure made up of slots, or attributes, that in turn contain slotnames and values. The Infopad Manager enables you to edit the information provided in an infopad.

Modifying Infopad Values

To use Infopad Manager to modify infopad values:

1. In the Management module, click **Infopads**, to view the Infopads page.
2. Select the application from the **Application** drop-down list, then select the infopad you want to edit from the **Infopad** drop-down, and click **Go**. Names of the selected Application and Infopad are displayed below the selection bar.
3. In case of multidimensional infopads, an infopad cell is located in a specific row and column. Specify whether the infopad is to be sliced on row or column by selecting appropriate option. Depending on this selection, select the row/column from the drop-down list and click **Go**.

After selecting a cell, the slotnames and their values within that cell appear below (see the following figure).

Figure 93 Infopads Page

The screenshot shows the BMC Infopads page. At the top, there is a navigation bar with 'EMC where information lives' logo and menu items: Home, Management, Administration, Overview, Dashboard, Reports, Instance Manager, Balanced Scorecard, Infopads. The user is logged in as 'ebms' on 'Oct 17, 2005'. Below the navigation bar, the page title is 'Management : Infopads'. There are two dropdown menus: 'Application: Assign_A_Task_Ver2' and 'Infopad: MyTaskReport_Ver2', with a 'Go' button. To the right, there is an 'Export Type: HTML' dropdown and an 'Export' button. Below this, there is a 'Slice On:' section with radio buttons for 'Row' (selected) and 'Column'. Underneath, there is a 'Select Row/Column:' section with 'Row: High' and 'Column: 1' dropdowns, and a 'Go' button. The main content area is a table with two columns: 'Slotnames' and 'Column'. The 'Column' header has a value of '1'. The table has two rows: 'comptime' with a value of '0' and 'count' with a value of '0'. At the bottom of the page, there are 'Save' and 'Reset' buttons.

Slotnames	Column
comptime	0
count	0

4. Edit the values in the cell by changing the values in the text boxes in the Column.
5. Click **Save** to save your changes. BPM Portal saves your changes after your confirmation.
To reset the form and remove the information you just entered, click **Reset**.

Note: For more information on infopads, see the *Infopads* chapter in the *BizPulse User's Guide*.

Exporting Infopads

You can export business metrics and Balanced Score Cards into different formats for creating reports and documentation. To do so, follow these steps:

1. In the Management module, click **Infopads**, to view the Infopads page.
2. Select the application from the **Application** drop-down list, then select the infopad you want to edit from the **Infopad** drop-down, and click **Go**.
3. Select the format in which you want to export this data from the **Export Type** drop-down list. You can choose one of the HTML, XML or XLS formats. Click **Export**.

BPM Portal displays the infopads and their values in the specified format.

Appendix A

Predefined Reports

ITPC enables you to run a series of predefined reports that are based on selections you make from the following criteria:

- **Report type.** In the submenu options under the Reports menu, choose from the Status Analysis, Time Analysis or Workload Analysis report types. The Time Analysis option, for example, enables you to run a report based on time factors.
- **Analysis type.** In the Analysis for: drop-down list, select whether you want to execute a report based on Instance, Performer or Workstep.
- **Application type.** In the Applications drop-down list, select All to run a report for all installed applications, or select a specific application.
- **Subcriteria** based on Report type.
 - If you selected a Status Analysis report type, and analyze it for an Instance, a Status drop-down list is displayed that contains the following Status options: All, Active, Completed, Removed and Suspended, whereas if you analyze it for a Workstep, the Status drop-down list contains the following Status options: All, Active, Completed and Suspended. In the **Date** drop-down list, select a predefined interval (e.g., All, Today, This Week, Last Month, etc.) or enter Start and End dates in the From: and To: boxes, respectively.
 - If you selected a Time Analysis report type, a Time Analysis drop-down list is displayed that contains the following options: Completion Time (time of actual or estimated completion), Elapsed Time (the interval between start and current time—when a workstep is not yet completed and not overdue), Overdue Time (the amount of delay from the scheduled end time up to the current time for a workstep which is not yet completed and is overdue) and Estimated vs Elapsed Time. In the **Date** drop-down list, select a predefined interval (e.g., All, Today, This Week, Last Month, etc.) or enter Start and End dates in the From: and To: boxes, respectively.
 - If you selected a Workload Analysis report type, a Workload Type drop-down list is displayed that contains the following options: Today's Tasks (i.e., all tasks due the present day and overdue) or Due Today.

NOTE: While filtering based on the date, only the starting date is considered.

The following section provides examples of reports that you can create based on criteria described above.

Creating Status Analysis Reports

To create a status analysis report that shows the total instances for each status (Active, Completed, Suspended, Removed) for the Assign_A_Task_Ver1 application:


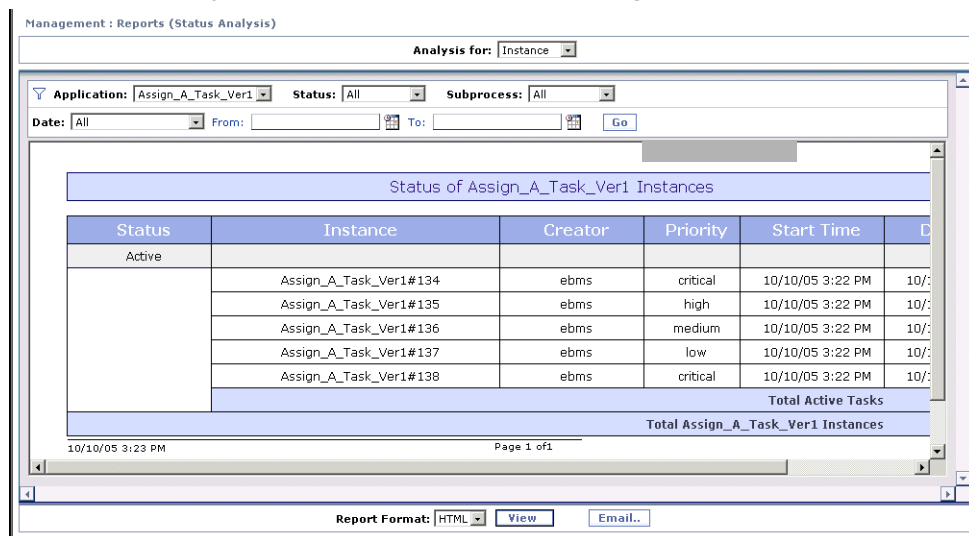
1. In the Management module, click Reports > **Status Analysis**, to view the Status Analysis page, as shown in the following figure.
2. Select:
 - **Instance** from the Analysis for: drop-down list.
 - **Assign_A_Task_Ver1** from the Applications list.
 - **All** from the Status list.
 - **All** from the Subprocess list.
3. Select a predefined interval from the **Date** drop-down list (e.g., All, Today, This Week, Last Month, etc.) or enter Start and End dates in the From: and To: boxes, respectively. Click the Select Date icon () to facilitate entering a date.
4. Click **Go**, and the report appears in the workspace, as seen in the figure below.

Figure 94 Status Analysis Report for All Instances for Assign_A_Task_Ver1 Application



Management : Reports (Status Analysis)

Analysis for: Instance

Application: Assign_A_Task_Ver1 Status: All Subprocess: All

Date: All From: To: Go

Status of Assign_A_Task_Ver1 Instances

Status	Instance	Creator	Priority	Start Time	D
Active	Assign_A_Task_Ver1#134	ebms	critical	10/10/05 3:22 PM	10/:
	Assign_A_Task_Ver1#135	ebms	high	10/10/05 3:22 PM	10/:
	Assign_A_Task_Ver1#136	ebms	medium	10/10/05 3:22 PM	10/:
	Assign_A_Task_Ver1#137	ebms	low	10/10/05 3:22 PM	10/:
	Assign_A_Task_Ver1#138	ebms	critical	10/10/05 3:22 PM	10/:
Total Active Tasks					
Total Assign_A_Task_Ver1 Instances					

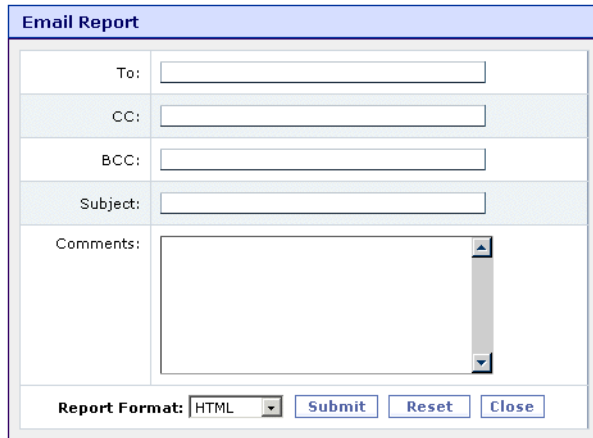
10/10/05 3:23 PM Page 1 of 1

Report Format: HTML View Email...

5. Select the preferred format from the Report Format drop-down list and click **View** to view the report in a specific format.
6. Click **Email...** to open the **Email Report** dialog box (see the following figure). Enter information in the relevant boxes and select a format from the Report Format drop-down list.

NOTE: If you select HTML, the report mail is sent as an HTML formatted email, whereas if you select HTMLFile, the report is sent as an attachment in HTML format. If your mail-tool supports mails in HTML format, you can view the HTML report in your mail-tool. But if your mail-tool supports mails only in text format, you cannot view the HTML report. However, you can view it as an attachment, if it is sent as an HTMLFile.

Figure 95 Email Report Dialog Box




7. Click **Submit** to email the report.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current dialog box, click **Close**.

Example

To create a report that shows the status of all completed worksteps for the Assign_A_Task_Ver1 application:

1. In the Management module, click Reports > **Status Analysis**, to view the Status Analysis page, as shown in the following figure.
2. Select:
 - **Workstep** from the Analysis for: drop-down list.
 - **Assign_A_Task_Ver1** from the Applications list.
 - **Completed** from the Status list.
 - **All** from the Subprocess list.
3. Select a predefined interval from the **Date** drop-down list (e.g., Today, This Week, Last Month, etc.) or enter Start and End dates in the From: and To: boxes, respectively. Click the **Select Date** icon () to facilitate entering a date.

- Click **Go**, and the report appears in the workspace, as seen in the figure below.

Figure 96 Status Analysis Report for Completed Worksteps for Assign_A_Task_Version1

Management : Reports (Status Analysis)

Analysis for: Workstep

Application: Assign_A_Task_Ver1 Status: Completed Subprocess: All

Date: All From: To: Go

Completed Workstep for Assign_A_Task_Ver1

Workstep	Performer	Instance	Start Time	End Time
DoTask	ebms	Assign_A_Task_Ver1#134	10/10/05 3:22 PM	10/10/05 3:24 PM
		Assign_A_Task_Ver1#135	10/10/05 3:22 PM	10/10/05 3:24 PM
		Assign_A_Task_Ver1#136	10/10/05 3:22 PM	10/10/05 3:24 PM
		Assign_A_Task_Ver1#137	10/10/05 3:22 PM	10/10/05 3:24 PM
		Assign_A_Task_Ver1#138	10/10/05 3:22 PM	10/10/05 3:24 PM

Total Completed Tasks for DoTask Workstep

Page 1 of 1

Report Format: HTML View Email...

- Select the preferred format from the Report Format drop-down list and click **View** to view the report in a specific format.
- Click **Email...** to open the **Email Report** dialog box (see [Figure 95](#)). Enter information in the relevant boxes and select a format from the Report Format drop-down list.
- Click **Submit** to email the report.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current dialog box, click **Close**.

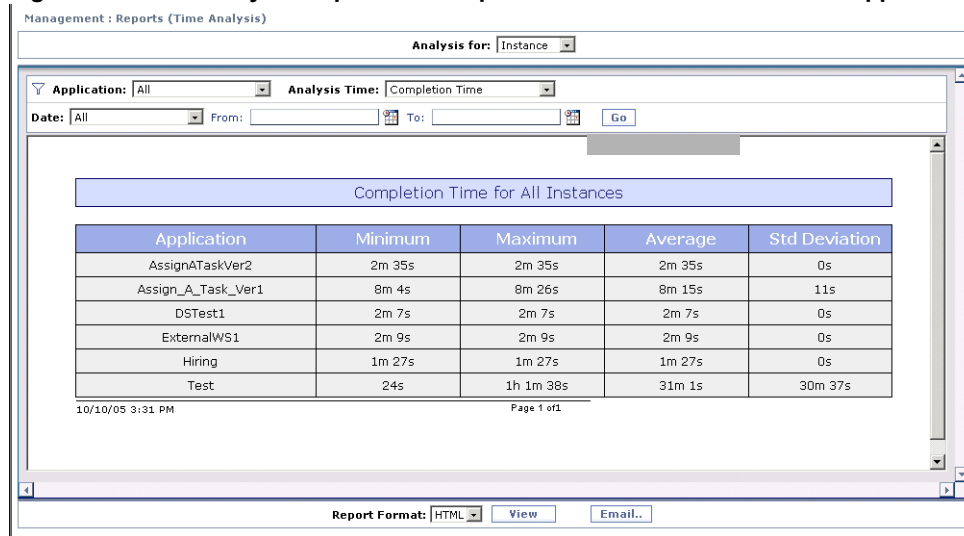
Creating Time Analysis Reports

To create a time analysis report that shows the completion time for all instances of all applications:

- In the Management module, click Reports > **Time Analysis**, to view the Time Analysis page, as shown in the following figure.
- Select:
 - Instance** from the Analysis for: drop-down list.
 - All** from the Applications list.
 - Completion Time** from the Analysis Time list.
- Select a predefined interval from the **Date** drop-down list (e.g., All, Today, This Week, Last Month, etc.) or enter Start and End dates in the From: and To: boxes, respectively. Click the **Select Date** icon (📅) to facilitate entering a date.

- Click **Go**, and the report appears in the workspace, as seen in the figure below.

Figure 97 Time Analysis Report for Completion Time of Instances for All Application




- Select the preferred format from the Report Format drop-down list and click **View** to view the report in a specific format.
- Click **Email...** to open the **Email Report** dialog box (see [Figure 95](#)). Enter information in the relevant boxes and select a format from the Report Format drop-down list.
- Click **Submit** to email the report.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current dialog box, click **Close**.

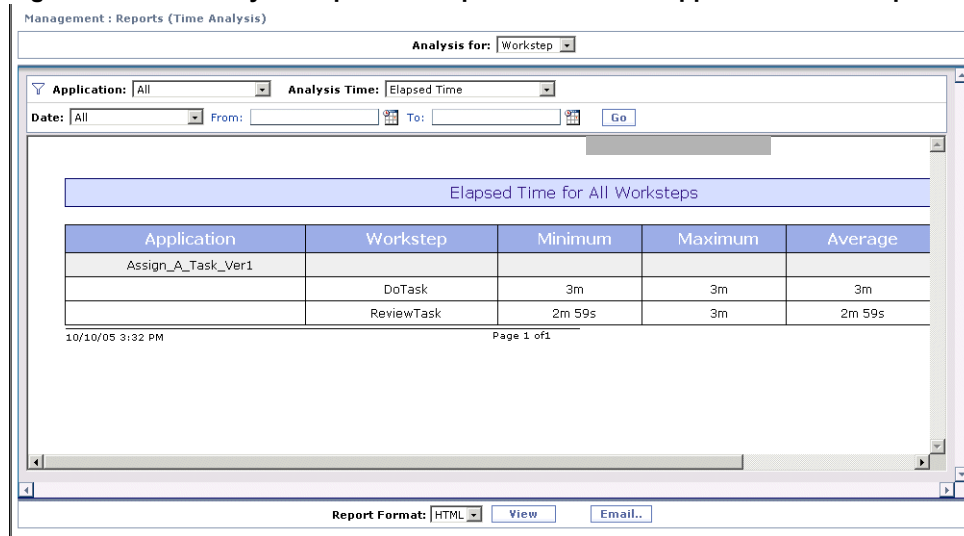
Example

To create a report that shows the elapsed time (i.e., the interval between start and current time—when a workstep is not yet completed and not overdue) for all active worksteps of all applications:

- In the Management module, click Reports > **Time Analysis**, to view the Time Analysis page, as shown in the following figure.
- Select:
 - Workstep** from the Analysis for: drop-down list.
 - All** from the Applications list.
 - Elapsed Time** from the Analysis Time list.
- Select a predefined interval from the **Date** drop-down list (e.g., All, Today, This Week, Last Month, etc.) or enter Start and End dates in the From: and To: boxes, respectively. Click the **Select Date** icon () to facilitate entering a date.

- Click **Go**, and the report appears in the workspace, as seen in the figure below.

Figure 98 Time Analysis Report for Elapsed Time for All Application Worksteps



- Select the preferred format from the Report Format drop-down list and click **View** to view the report in a specific format.
- Click **Email...** to open the **Email Report** dialog box (see [Figure 95](#)). Enter information in the relevant boxes and select a format from the Report Format drop-down list.
- Click **Submit** to email the report.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current dialog box, click **Close**.

Creating Workload Analysis Reports

To create a workload analysis report that lists all instances of all applications that are overdue or due on the current day:

- In the Management module, click Reports > **Workload Analysis**, to view the Workload Analysis page, as shown in the following figure.
- Select:
 - Instance** from the Analysis for: drop-down list.
 - All** from the Applications list.
 - Today's Tasks** from the Workload Type list.

3. Click **Go**, and the report appears in the workspace, as seen in the figure below.

Figure 99 Workload Analysis Report for All Due or Overdue Application Instances

The screenshot shows a web-based interface for generating a workload analysis report. At the top, there is a title bar 'Management : Reports (Workload Analysis)' and a dropdown menu 'Analysis for: Instance'. Below this, there are filters for 'Application: All' and 'Workload Type: Today's Tasks', with a 'Go' button. The main content area displays a table titled 'All Instances Due or Overdue Today'. The table has columns for Application, Instance, Creator, Start Time, and End Time. The data includes one instance for 'Amit' and a group of instances for 'testreports'. At the bottom, there is a 'Report Format: HTML' dropdown and 'View' and 'Email..' buttons.

Application	Instance	Creator	Start Time	End Time
Amit	Amit#180	ebms	10/10/04 2:53 PM	10/11/04
Total Today's				
testreports	tpLYC#173	ebms	1/1/04 1:29 PM	1/1/04 2
	tpLQC#169	ebms	7/1/05 1:29 PM	7/1/05 2
	tpLMC#165	ebms	9/1/05 1:28 PM	9/1/05 2
	tpLWC#161	pejman	10/2/05 1:28 PM	10/2/05 2
	tpYC#157	ebms	10/9/05 1:28 PM	10/9/05 2
	testReport1#124	pejman	10/10/05 1:27 PM	10/10/05 2
	testReport2#125	pejman	10/10/05 1:27 PM	10/10/05 2

4. Select the preferred format from the Report Format drop-down list and click **View** to view the report in a specific format.
5. Click **Email...** to open the **Email Report** dialog box (see [Figure 95](#)). Enter information in the relevant boxes and select a format from the Report Format drop-down list.
6. Click **Submit** to email the report.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current dialog box, click **Close**.

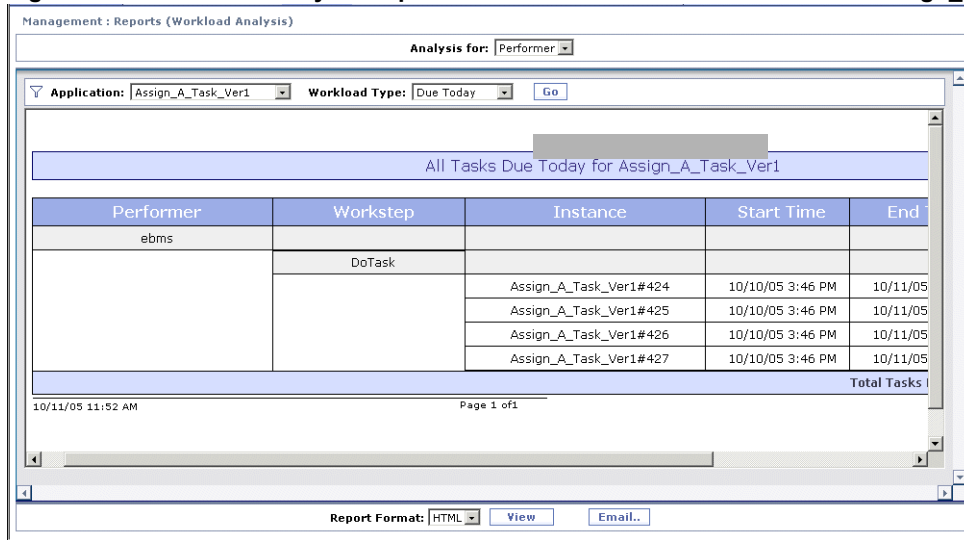
Example

To create a workload analysis report that lists all performers that are responsible for tasks for the Approval_Ver2 application that are due on the current day:

1. In the Management module, click Reports > **Workload Analysis**, to view the Workload Analysis page, as shown in the following figure.
2. Select:
 - **Performer** from the Analysis for: drop-down list.
 - **Assign_A_Task_Ver1** from the Applications list.
 - **Due Today** from the Workload Type list.

- Click **Go**, and the report appears in the workspace, as seen in the figure below.

Figure 100 Workload Analysis Report for All Performers with Tasks Due in Assign_A_Task_Ver1



- Select the preferred format from the Report Format drop-down list and click **View** to view the report in a specific format.
- Click **Email...** to open the **Email Report** dialog box (see [Figure 95](#)). Enter information in the relevant boxes and select a format from the Report Format drop-down list.
- Click **Submit** to email the report.

To reset the form and remove the information you just entered, click **Reset**. To cancel the action and exit the current dialog box, click **Close**.

Report Examples

Examples of other reports that you can create in the Reports menu in the Management module are listed in the following table.

Table 21 Report Examples

Report Name	Report Criteria	Description
Status of Instances for All Applications	Status Analysis report type, with: <ul style="list-style-type: none"> Analysis for: Instance Application: All Status: All 	This report shows the total instances for each status (Active, Completed, Suspended, Removed) for all applications.
Active Status of Instances for All Applications	Status Analysis report type, with: <ul style="list-style-type: none"> Analysis for: Instance Application: All Status: Active 	This report shows the total Active instances for all applications, and a summary of total specific status instances.

Table 21 Report Examples

Report Name	Report Criteria	Description
Status of Instances for (<i>a specific</i>) Application	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: Hiring • Status: All 	This report shows the total instances for each status (Active, Completed, Suspended, and Removed) for a specific application—in this case, Hiring.
Active Status of Instances for (<i>a specific</i>) Application	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: Hiring • Status: Active 	This report shows the total instances for a specific status (Active, Completed, Suspended, or Removed) for a specific application—in this case, Hiring, and a summary of total specific status instances.
Instance Completion Time Report for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Analysis Time: Completion Time 	This report shows the minimum, maximum, average and standard deviation of the completion time for all instances for all applications.
Instance Completion Time Report for (<i>a specific</i>) Application	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: Hiring • Analysis Time: Completion Time 	This report shows the minimum, maximum, average and standard deviation of the completion time for all instances for a specific application—in this case, Hiring.
Instance Elapsed Time Report for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Analysis Time: Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the elapsed time (duration) for all instances for all applications.
Instance Elapsed Time Report for (<i>a selected</i>) Application	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: Hiring • Analysis Time: Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the elapsed time (duration) for all instances for a specific application—in this case, Hiring.
Instance Overdue Time Report for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Analysis Time: Overdue Time 	This report shows the minimum, maximum, average and standard deviation of the overdue time for all overdue instances for all applications.
Workstep Completion Time Report for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: All • Analysis Time: Completion Time 	This report shows the minimum, maximum, average and standard deviation of the completion time for all worksteps for all applications.
Workstep Completion Time Report for (<i>a specific</i>) Instance	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: Hiring • Analysis Time: Completion Time 	This report shows the minimum, maximum, average and standard deviation of the completion time for all worksteps for a specific application—in this case, Hiring.

Table 21 Report Examples

Report Name	Report Criteria	Description
Workstep Elapsed Time Report for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: All • Analysis Time: Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the elapsed time (duration) for all worksteps for all applications.
Workstep Overdue Time Report for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: All • Analysis Time: Overdue Time 	This report shows the minimum, maximum, average and standard deviation of the overdue time for all overdue worksteps for all applications.
Workstep Overdue Time Report for (<i>a specific</i>) Application	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: Hiring • Analysis Time: Overdue Time 	This report shows the minimum, maximum, average and standard deviation of the overdue time for all overdue worksteps for a specific application—in this case, Hiring.
Performer Completion Time for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Analysis Time: Completion Time 	This report shows the minimum, maximum, average and standard deviation of the completion time for all performers for all applications.
Performer Completion Time for (<i>a specific</i>) Application	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: Hiring • Analysis Time: Completion Time 	This report shows the minimum, maximum, average and standard deviation of the completion time for all performers for a specific application—in this case, Hiring.
Performer Elapsed Time Summary for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Analysis Time: Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the elapsed time for all performers for all applications.
Performer Elapsed Time Summary for (<i>a specific</i>) Application	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: Hiring • Analysis Time: Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the elapsed time for all performers for a specific application—in this case, Hiring.
Estimated vs Elapsed Time for All Instances	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Analysis Time: Estimated vs Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the estimated vs elapsed time for all instances for all applications.
Estimated vs Elapsed Time for All Tasks	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Analysis Time: Estimated vs Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the estimated vs elapsed time for all performers for all applications.

Table 21 Report Examples

Report Name	Report Criteria	Description
Estimated vs Elapsed Time for All Worksteps	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: All • Analysis Time: Estimated vs Elapsed Time 	This report shows the minimum, maximum, average and standard deviation of the estimated vs elapsed time for all worksteps for all applications.
Performer Overdue Time for All Applications	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Analysis Time: Overdue Time 	This report shows the minimum, maximum, average and standard deviation of the overdue time for all performers for all applications.
Performer Overdue Time for (<i>a specific</i>) Application	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: Hiring • Analysis Time: Overdue Time 	This report shows the minimum, maximum, average and standard deviation of the overdue time for all performers for a specific application—in this case, Hiring.
Overdue Time for All Active Instances	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Analysis Time: Overdue Time 	This report shows the minimum, maximum, average and standard deviation time for all overdue instances for all applications.
Completion Time for (<i>a specific</i>) Application Instances	Time Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: Approval • Analysis Time: Completion Time • Date: This week to date 	This report shows the minimum, maximum, average and standard deviation time for all instances of a specific application completed in the past week.
Assigned Performers for All Applications	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Status: Active 	This report shows all the active tasks from all applications for each performer.
Tasks Completed by a Performer in the Current Week	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Status: Completed • <i>Date: This week to date</i> 	This report shows all the tasks from all applications completed in the current week by a specific performer.
Suspended Performers for All Applications	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Status: Suspended 	This report shows the total suspended instances for all applications for a specific performer for the selected time period.

Table 21 Report Examples

Report Name	Report Criteria	Description
Suspended Performers for (<i>a specific</i>) Application	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: Approval • Status: Suspended 	This report shows the total suspended instances for a specific application for a specific performer for the selected time period.
Total Elapsed Time of All Active Instances	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Status: Active 	This report shows the total elapsed time of all the active instances from all applications.
All Completed Instances for Today	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Status: Completed 	This report shows all the instances completed today from all applications .
<i>Active</i> Instances of (<i>a specific</i>) Application in each Workstep	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: Approval • Status: Active 	This report shows all <i>active</i> instances in each workstep of a specific application (in this case, Approval).
Time taken by (<i>a specific</i>) Application to complete each worksteps	Status Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Workstep • Application: Approval • Status: Completed 	This report shows the time taken by all instances of a specific application to complete each workstep.
All Tasks for All Performers Due Today	Workload Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Workload Type: Due Today 	This report shows all today's tasks from all applications for all performers .
All Instances Due or Overdue Today	Workload Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Instance • Application: All • Workload Type: Today's Tasks 	This report shows all the instances of all applications for all performers for today.
Tasks for Each Performer Due or Overdue Today	Workload Analysis report type, with: <ul style="list-style-type: none"> • Analysis for: Performer • Application: All • Workload Type: Today's Tasks 	This report shows all the instances for each performer for today.

Glossary

This is a listing of common ITPC terminology. For a full version of terms used in IT Process Centre (ITPC) documentation, refer to the *Terminology Guide* in the *ITPC_HOME\docs* folder.

[A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [G](#) | [H](#) | [I](#) | [K](#) | [M](#) | [P](#) | [R](#) | [S](#) | [T](#) | [U](#) | [W](#)

A

[Go to Top](#)

ACL Manager

In EMC BusinessManager (EBM), Access Control List Manager provides a finer, more precise control over user access rights for resources and actions.

Activity Workstep

In ITPC, the basic unit of work; must be performed by one or more human performers (valid individual user, multiple users or user group).

Adapter

A Java class that integrates remote, third party classes and actions with ITPC. An adapter can automate certain functions and tasks performed by a remote server or other external systems.

Administration

A module in BPM Portal enabling the administrator to perform such tasks as installing/uninstalling applications, modifying configuration parameters controlling ITPC operations, and manage ITPC users, groups and access control. The Administration module is visible only to ITPC users who have permissions to access it.

Application

In ITPC, an application is an installed, executable business process that automates a business flow.

Balanced Scorecard

A management application in the Management module that measures performance by analyzing how an organization's business activities help it achieve its strategic goals. The Balanced Scorecard provides an analysis from a range of perspectives.

BAM

Business Activity Management combines *Business Process Management* with strategic and analytical information on specific business performance indicators, providing real-time status information and identifying critical events to assist senior management in making informed business decisions.

BizLogic

An ITPC component that provides a flexible, lightweight, scalable workflow process engine for intranets, extranets, and the Internet.

BizPulse

an ITPC component that provides an open event-driven rule engine to formulate and enforce policies in business applications.

BizSolo

an ITPC component that enables users to develop customizable, sophisticated presentation flows for business processes, install them as Web applications, and execute them on their Web browsers.

BizStore

An open repository of rich e-business information collected from different ITPC modules.

BPEL

BPEL (Business Process Execution Language) for Web services is an XML-based language designed to enable task-sharing for a distributed computing or grid computing environment - including across multiple organizations - using a combination of Web services.

BPMN

BPMN (Business Process Modelling Notation) provides businesses with the capability of defining and understanding their internal and external business procedures through a Business Process Diagram giving organizations the ability to communicate these procedures in a standard manner.

BPM Portal

an ITPC component that offers users, managers, administrators and developers a unified, customizable portal for single sign-on access to all ITPC functionalities to which they are granted permission.

BPM Studio

an ITPC component that is an Integrated Development Environment for ITPC and enables ITPC users to develop and deploy an ITPC application without leaving the development environment.

Business Calendar

an ITPC feature that accurately calculates the Due Date of tasks, and provides support for multiple business calendars across different time zones.

Business Flow

The logical sequence of process activities, related to one another by a triggering activity, to achieve an outcome. It represents a business process that begins with a commitment and ends with the termination of that commitment. In ITPC, business flow includes workflow (the flow of all human-performed activities), integration flow (the flow of activities performed by systems) and presentation flow (from a user's viewpoint, the flow of data from one Web page to the next).

Business Logic

The control flow and information flow among worksteps that define a business process.

Business Object

A representation of an activity in the business domain, including its name, definition, attributes, behavior, relationships and constraints.

Business Process

A process involving multiple worksteps in the form of operations, interactions and notifications performed by a user, group of users, an external adapter, or a script. Examples of internal business processes are purchasing, expense reporting, help desk, and time card. External processes may include order processing, sales, and customer service.

Business Process Management

The concept of guiding work activities through a multi-step business process in order to improve performance and reduce costs within and across functional business units.

Business Rule

A combination of elements, including validation edits, logon verifications, database lookups, policies and transformations, that represent an enterprise's way of doing business.

C

[Go to Top](#)

Cluster

In ITPC, an integrated set of multiple, electronically connected but physically separated servers. This loosely coupled group of nodes collaborate to provide shared access to the services that each node hosts. To other systems, the cluster appears as a single system.

Control Flow

The sequences of worksteps and workstep conditions, as defined in a process template in BPM Studio or Process Modeler.

D

[Go to Top](#)

Dashboard

an ITPC feature that provides a graphic overview of the status of several business processes on a single Web page, enabling users to monitor the progress of each process. Users can view business processes across all applications or for a selected application.

Dataslot

A data placeholder that persists through the entire process and defines the information flow of the business process. Dataslots are associated with processes, where they can add information into (Input type) or out of (Output type) worksteps, and appear as editable or read-only fields on a user's interface.

E

[Go to Top](#)

Expression Editor

an ITPC tool that enables users to define complex conditional expressions within a Decision workstep to support their business requirements.

G

[Go to Top](#)

Group

In ITPC, an entity that has as members valid users or other groups who perform related work and have authorized access to specific components.

H

[Go to Top](#)

Heatmap

an ITPC feature that provides a convenient, graphical tool for managers to visually locate the bottlenecks in the process execution. It helps managers to get an overview of the status of the currently active instances, identify suspended instances, and analyze the history of the completed instances.

Home

A module in BPM Portal through which users interact with ITPC. Using the Home module, users complete entries to various tasks and applications, update profile, set preferences, and link to the support infrastructure required to achieve these tasks. The Home module is the primary interface for ITPC application users.

I

[Go to Top](#)

Infopad

In ITPC, a data structure used to capture business metrics, typically displayed as a table with one or two dimensions.

Instance

An individual object within a specific class. In ITPC, a self-contained unit that is created each time you use a process template to run an ITPC application.

ITPC Application

An application is an implementation of a business process. It can contain one or more process templates, performers, adapters, customized forms or rules. An application can be deployed, installed and run on BizLogic servers.

In ITPC, an application is an installed, executable business process that automates a workflow.

ITPC Web Services

an ITPC component that allows ITPC application developers to; a) publish their applications as Web Services, and b) find and convert other available Web Services on the Internet into ITPC applications.

K

[Go to Top](#)

KPI

Key Performance Indicator, used in the Balanced Scorecard system, that provides the data translating enterprise goals into a set of measurable objectives.

M

[Go to Top](#)

Management

A module in BPM Portal enabling the managers to query, report, and control processes and resources for users of ITPC. The Management module is visible only to ITPC users who have permissions to access it.

Managed Adapter

In ITPC, a Managed Adapter is an implementation of an adapter interface that facilitates data exchange between ITPC processes and external applications.

Migration

The process of moving from the use of one operating environment to another operating environment that is typically seen as improvement. Migration can involve moving to new hardware, new software, or both. It may involve a new application, another type of database, or a redesigned network. Migration is also used to refer simply to the process of moving data from one storage device to another. ITPC supports data migration as well as application migration.

P

[Go to Top](#)

PAM

Process Asset Management recognizes that a company's processes are a unique asset and provides a structure that organizes, stores, and secures process data, enabling users to retrieve information on any of the company's processes.

Performer

An entity that executes a workstep. Depending on the workstep type, the performer can be a human user, a group of users, an adapter or other external performer, or a script.

Presentation Flow

The flow of information and user input from one interface to the next. Typically related to a single Activity workstep in the process and generated in a BizSolo environment.

Process Engine

Orchestrates the execution of business processes and also coordinates conversations among process engines based on public processes, which forms the backbone of global business collaboration.

Process Modeler

A stand-alone component that enables users to design templates for basic business processes and store or retrieve them from the EMC central process repository, and to design and run simulations of processes.

Process Refresh

an ITPC feature for replacing the installed process without versioning, facilitating the running process instances to refresh and seamlessly adapt to the new workflow.

Process Repository

A central place (can contain several databases) in which a group of processes is stored and maintained in an organized way, and can be accessed to retrieve information.

Process Template

In ITPC, a model of business flow that includes worksteps, connectors and dataslots. After users deploy and install it as an application in the ITPC directory structure, they can use the application to create process instances.

R

[Go to Top](#)

Rollback

In ITPC, a feature that restarts the workflow from a workstep previously selected as the rollback point in the process, performed automatically in the event of a failure.

Role

The actions and activities assigned to a valid ITPC user who is a member of a group. In ITPC, only members of a group can be assigned a role. A role indicates the relationships of the user in a group context.

Rule Wizard

An interactive utility that enables ITPC users to quickly develop rules that can be applied to a business process.

S

[Go to Top](#)

Swim Lanes

Used in workflow diagrams to organize complex processes across functional boundaries. For example, seen as horizontal lines on a process map, swim lanes can be used to place individual task steps into different categories that depend on task ownership.

T

[Go to Top](#)

Task

In ITPC, a performer is assigned one or more workitems that the performer sees as tasks. There are two types of tasks: Assigned, which are assigned specifically to you; and Available, which are available to be performed by you or other members of your user group.

U

[Go to Top](#)

User

In ITPC, a valid human performer with authorized access to specific modules.

W

[Go to Top](#)

Workflow

The logical sequence of activities performed by human performers, typically in a BPM Studio or Process Modeler environment. Workflow includes the tasks, procedural steps, organizations or people involved, required input and output information, and tools needed for each activity in a business process.

Index

Numerics

3D effect in Infopad reports [99](#)

A

Access Control Manager [41](#)

accessing

 Balanced Scorecard [115, 118, 124](#)

 Infopad Manager [126, 127](#)

 Management Dashboard [63](#)

Add File(s) [30](#)

Add Report button [80](#)

Analysis for

 drop-down list [128](#)

API for BizManage [40](#)

Application Attributes tab [83, 88](#)

Application Information feature [60](#)

Application Overview page [56](#)

Application reports

 creating [83](#)

 defining parameters for [88](#)

Application Status View page

 printing [55](#)

Application view in the Management Dashboard [62, 64](#)

applications

 status [56](#)

attached documents

 adding [29](#)

 removing [32, 35](#)

 updating [31](#)

attaching a document [29](#)

attributes

 application [84](#)

 in Instance Manager [103, 108, 110](#)

 report [82](#)

 task [84](#)

available tasks [107](#)

B

Balanced Scorecard [40](#)

 about [113](#)

 deleting [124](#)

 designing a new [118](#)

 editing perspectives in [116](#)

 history [116](#)

 KPIs [113, 114](#)

 perspectives [113](#)

 standard view [114](#)

 viewing [114](#)

balanced scorecard

 modifying [124](#)

Balanced Scorecard Designer

 rules in [122](#)

Balanced Scorecard Perspective [115](#)

Basic Operations

 accessing help [25](#)

 drilling down [24](#)

 getting support [25](#)

- logging out [25](#)
- navigating through the list [24](#)
- printing [25](#)
- searching users [27](#)
- selecting rows [25](#)
- sorting a column [23](#)
- specifying a date [26](#)
- using filter bars [23](#)
- working with attachments [29](#)
- batch updates
 - of available tasks [107](#)
 - of instances in BizManage reports [104](#)
 - of process instances [102](#)
 - of reassigned tasks [105](#)
 - of worksteps [107, 110](#)
- BizManage
 - API [40](#)
 - reports, updating instances in [104](#)
- BizManage Reports [40](#)
- BizSQL reports [42](#)
 - about [81](#)
 - creating [91](#)
 - entering parameters [93](#)
 - syntax for [91](#)
 - using to filter tasks [95](#)
- BPM Portal [16](#)
 - Administration module [16](#)
 - Home module [19, 23](#)
 - Logging in [18](#)
 - logging in [39](#)
 - logging out [43](#)
 - Management module [16](#)
 - Page Layout [21](#)
- BPM Studio [52](#)
- bpmportal.conf file [109](#)
- bpmportal.properties file [37](#)
- Broadcast option for reports [79](#)
- browser [18](#)
- browser cache setting [37](#)
- business processes
 - reports on [80](#)

C

- cache setting [37](#)
- Chart View in Report [82, 86, 91, 94](#)
- checking

- the status of an application [56](#)
- the status of an instance [46, 47](#)
- color coding for worksteps [50](#)
- common values [103](#)
- complete worksteps [55](#)
- configuring interface styles [29](#)
- Conventions in ITPC documentation [9](#)
- creating
 - external reports [90](#)
 - filters [85](#)
 - infopad reports [98](#)
- creator, searching by [102](#)
- Crystal reports [81, 91](#)
- Customer support [9](#)
- customizing
 - date format [37](#)
 - Instance Manager [109, 111](#)
 - Management Dashboard [63](#)

D

- Dashboard [40](#)
- dataslots
 - Global [59](#)
 - in Instance Manager [103, 108, 110](#)
 - view [51](#)
- date format [37, 46, 47, 48](#)
- Default URL button [91](#)
- defining
 - external reports [90](#)
 - filters [85](#)
 - infopad reports [97](#)
 - parameters for Application/Multiapps reports [88](#)
 - parameters for report filters [89](#)
 - user access/permissions [41](#)
- deleting
 - existing reports [95](#)
- documents
 - attaching [29](#)
 - attachment size [29](#)
- due date
 - search criteria [102](#)

E

- editing
 - Balance Scorecard perspectives [116](#)
 - existing reports [94](#)

elemental data [41](#)
external reports [81, 82, 90](#)
 creating [90](#)

F

filter
 defining [85](#)
filters
 for instances [46, 47](#)
 for task attributes [96](#)
 for workitem attributes [96](#)
 parameters for [89](#)
 task filtering [95](#)
 to define reports [84](#)
Flow icon [48, 49, 57, 58](#)
Flow View [49, 57](#)
flowchart [49](#)

G

Global dataslots [59](#)
Global view in the Management Dashboard [62](#)
global view in the Management Dashboard [63](#)

H

Heatmap [58](#)
HTML reports [81, 90](#)

I

Infopad Analysis Report [99](#)
Infopad Manager [40](#)
 using [126](#)
infopads
 3D effect in reports [99](#)
 about [126](#)
 creating reports from [98](#)
 report actions [98](#)
 report options [99](#)
 using in BizManage [97](#)
Instance Level [101](#)
Instance List page [103](#)
Instance Manager [40](#)
 about [100](#)
 dynamically change properties [100](#)
 Instance Level [101](#)
 performers in [105](#)
 reassigning assigned tasks in [105, 107](#)

Task Level [101](#)
 updating instances in [102](#)
 updating instances in BizManage reports [104](#)
 updating worksteps [107](#)
 user interface [101](#)
 Worksteps level [101](#)

instances
 changing status [51](#)
 reporting on [82](#)
 searching by Creator [102](#)
 searching by name [102](#)
 searching for [46, 47](#)
 status [46, 47](#)

Instances Overview [45](#)

Instances Overview page [46, 47](#)

interface styles [29](#)

ITPC

 conventions in documentation [9](#)
 documentation list [8](#)
 user types [7](#)

J

JasperReport
 accessing reports through BPM Portal [78](#)
 creating reports [66](#)
Java applet interfaces [29](#)
JavaScript [34](#)
JavaScript interfaces [29](#)
JDK [37](#)

K

key performance indicators (KPIs) [113, 114](#)
KPI
 about [113, 114](#)
 creating [121](#)
 deleting [125](#)
 relative weight of [116](#)

L

languages [37](#)
logging in
 BPM Portal [39](#)
logging out
 BPM Portal [43](#)

M

Management

- about 36
- interactions with Home 60
- logging in 39
- overview 44

Management Dashboard

- about 62
- accessing 63
- Application view 62
- customizing 63
- Global view 62

Management Dashboard page 63

Microsoft Virtual Machine 39

Multiapplication reports

- about 81
- creating 87

Multiapps reports

- creating 82
- defining parameters for 88

multiple users 32

N

navigating multipage reports 103

O

options

- for advanced task filtering 97
- for creating an external report 93
- for defining an application/Multiapps report 86

Overview 40

P

parameters for

- Application/Multiapps reports 88
- reports 92

password 19, 39

performers

- in Instance Manager 105

permissions

- for Management features 42
- process-level 41
- reports 42

permissions, defining user 41

perspectives

- about 113

creating 119

deleting 124

predefined reports 128

printing the Application Status View page 55

priority

of process instance 47, 48

Process-Level Permissions 41

Product Support Team 9

Q

Query reports

creating 83

Query window 83, 88, 90, 96

R

read/write

attached document 29

document 35

read-only

attached document 29

attachment 35

Reassign Assigned Tasks page 106

Reassign Available Tasks page 107

reassigning

assigned tasks in batches 105, 107

relative weights of a KPI 116

removing

existing reports 95

removing attached documents 35

Report Builder 83, 90, 95

Report List page 79

ReportBuilder 42

Reports 40

reports

Application 83

BizSQL 42

broadcast (or email) to an address 79

creating (single) application 83

creating Multiapplication 87

creating Multiapps 83

creating reports from predefined 128

defining external 90

deleting 95

display scenarios 79

examples 135

- external [81, 82, 90](#)
- external report types [81](#)
- modifying existing [94](#)
- Multiapplication [81](#)
- Multiapps [82](#)
- permissions for [42](#)
- running existing [81](#)
- scheduling distribution of [79](#)
- Status Analysis [129](#)
- task filtering for [95](#)
- Time Analysis [131](#)
- types of (single/multi) application reports [84](#)
- updating instances [104](#)
- Workload Analysis [133](#)

rollback [55](#)

Rollback Point [55](#)

rules in Balanced Scorecard [122](#)

running existing reports [81](#)

S

Schedule option for reports [79](#)

Search Instances page [102](#)

Search Worksteps function [108, 110](#)

searching

- for specific instances [46, 47](#)
- for specific instances [102](#)
- for specific performers [106](#)
- for specific worksteps [108, 110](#)

source

- creating [120](#)
- deleting [124](#)

start date

- search criteria [102](#)

status

- changing for a process instance [51](#)

status analysis report [129](#)

Status drop-down list [128](#)

status of an application [56](#)

status of an instance [46, 47](#)

suspend worksteps [55](#)

suspended status [46, 48](#)

syntax for, BizSQL reports [91](#)

T

Tabular icon [48, 49, 57](#)

Tabular View [57](#)

task filtering [95](#)

Task Level [101](#)

task report option [96](#)

tasks

- assigning Available status [107](#)
- attributes [84, 96](#)
- filtering [95](#)
- reassigning batches of [105](#)
- reassigning batches of available [107](#)

Themes [19](#)

Time Analysis drop-down list [128](#)

time analysis report [131](#)

U

UNIX [18](#)

Update All Instances [104](#)

Update All instances [110, 112](#)

updating

- attached documents [35](#)
- batches of process instances [102](#)
- batches of worksteps [107](#)
- instances in BizManage reports [104](#)
- worksteps [54](#)

URL for Crystal reports [91](#)

user name [19](#)

User types [15](#)

users

- defining access/permissions [41](#)
- entering user name [39](#)

Using heatmap [58](#)

V

View Dataslots [51](#)

viewing

- Balanced Scorecard [114](#)

W

warning message, in Instance Manager [101](#)

weight of a KPI [116](#)

widgets

- about [62](#)
- in application view [64](#)
- in global view [63](#)

wild cards, in Instance Manager [106](#)

- Windows 2000/XP [18](#)
- workitems
 - attributes [96](#)
 - updating [54](#)
- workload analysis report [133](#)
- Workload Type drop-down list [128](#)
- workspace, in BPM Studio [52](#)
- Workstep List page [109](#), [111](#)
- worksteps
 - color coding [50](#)
 - completing [55](#)
 - suspending [55](#)
 - updating [54](#)
 - updating batches of [107](#)
- Worksteps level [101](#)