

webMethods Task Engine User's Guide

Version 9.6

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This document applies to webMethods Task Engine Version 9.6 and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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About this Guide

This guide provides conceptual and procedural instructions for users of My webMethods who are working with tasks in the My webMethods environment. Both user-oriented and administrator-oriented procedures are documented here; however, role based access enables any procedure to be assigned to any user by way of the user's role.

To use this guide effectively, you should be familiar with the general terminology and usage of My webMethods. For more information, see the PDF publication *Working with My webMethods*.

For information about creating task types and publishing them to My webMethods Server, see the Software AG Designer online help module, *webMethods BPM Task Development Help*.

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Narrowfont	Identifies storage locations for services on webMethods Integration Server, using the convention <i>folder.subfolder:service</i> .
UPPERCASE	Identifies keyboard keys. Keys you must press simultaneously are joined with a plus sign (+).
<i>Italic</i>	Identifies variables for which you must supply values specific to your own situation or environment. Identifies new terms the first time they occur in the text.
Monospace font	Identifies text you must type or messages displayed by the system.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the symbol.

Convention	Description
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Documentation Installation

You can download the product documentation using the Software AG Installer. The documentation is downloaded to a central directory named `_documentation` in the main installation directory (SoftwareAG by default).

Online Information

You can find additional information about Software AG products at the locations listed below.

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1 Understanding webMethods Tasks

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Task Overview

My webMethods is an HTML-based graphical user interface that allows you to carry out your business processing and management activities from a central location, using various webMethods components running on multiple servers. Part of these activities is the completion of ongoing business processes that support the day-to-day business operations of your organization.

The webMethods product suite enables your organization to automate these business process activities. Business analysts and developers work together using Software AG Designer to create the automated processes that address your organization's business needs.

Many business processes require human actions, such as approving a purchase order, assigning a telephone number to a new employee, or investigating a problem with an insurance claim. These actions are typically implemented within a business process as *tasks*, and they can be started as part of a running business process or manually. When started, each task invokes an instance of a pre-defined task that exists in My webMethods Server and executes in the webMethods Task Engine.

Software AG Designer enables a task developer to design any kind of custom task required by a process, as part of a task application. The task developer designs these task templates (known as *task types*) and publishes the task application containing them to My webMethods Server, where the task types are available to a process at run time. When a task is invoked, it starts an instance of the specified task type in the Task Engine.

Tasks are assigned to a My webMethods Server user, role, or group; these assignments can be static (that is, defined at design time), or they can be determined dynamically at run time based on data in the process. It is possible to design a task so that when a task is started, a notification e-mail is sent to the assignee, who can then log on to My webMethods and open the task from their task inbox.

Business data required by the task is passed from the process and is presented to the assignee through the task interface. For example, in a new employee setup process, this business data could include the employee's first and last names, the department the employee works in, employee number, start date, whether they are to have an office or a cubicle, and any comments or instructions from the hiring manager or HR reviewer. If your company works across several different campuses, it might also specify which campus or building the new employee is to work in.

After opening the task, the assignee carries out whatever actions are required—for example, determining an office space for the new employee. As part of this task, the task developer can require that the assignee must enter the office number in the task before the task can be marked as complete. When the assignee marks the task as completed, the Task Engine notifies the process of the outcome of the task, along with any new business data (such as the office number).

The task developer can add custom logic to the task to carry out other actions as part of the task activities. For example, suppose your organization maintains a simple database

of office assignments. It is possible to configure the task to obtain a list of available offices from the database and provide them (through the task interface) to the task assignee for selection. When the assignee marks the task as completed, the task can check the database of office assignments to ensure the selected office was not already assigned by another worker in the time since the list was obtained. If it was, a message to that effect can be returned to the task assignee, prompting them to select another office. If the selected office is available, the task can update the office assignment database accordingly.

Relationship with Software AG Designer

Business analysts and developers create business process models and *task types* in Software AG Designer. When these process models and task types are ready for deployment, they are published to the run-time environment in My webMethods Server, establishing a publisher/consumer relationship between Software AG Designer and My webMethods Server.

My webMethods Server uses the published process models and task types to create individual instances of a process or task, as business operations require. Each time a task type is republished, the current task type in My webMethods Server is overwritten with the modified portlets of the republished task type. The properties of the republished task type are also propagated to all running tasks started from that task type. For more information about this behavior, see ["About Optimized Task Type Publishing" on page 115](#).

About Tasks and Task Types

It is important to understand the difference between *tasks* and *task types*. Analysts and developers use Software AG Designer to create *task types*. Each task type serves as a template that addresses a particular kind of human activity that must be carried out to complete a business requirement— for example, approving an order or configuring a new employee's computer.

These task types can be used within an automated *process* developed in Designer and can also be used on a stand-alone basis outside of an automated process.

A *task* (sometimes referred to as a *task instance*) represents human interaction in a business process, a unit of work that a My webMethods user must complete before the business process can proceed. Tasks are started from task types that are published to My webMethods Server from Software AG Designer. My webMethods users interact with task types and tasks in the following ways:

- Users with administrator privileges can manage, modify, and delete task types using the Task Engine Administration portions of My webMethods.
- Users who interact with individual tasks do so in the task inboxes that are available in My webMethods. Regardless of whether a task is started by an automated process or manually by a My webMethods administrator or other user, the task is assigned

to one or more My webMethods users, groups, or roles for completion. Each user views and interacts with the tasks assigned to them in one or more task inboxes.

Task types (and tasks) consist of the following elements:

- User interface panels (also called *task views*) that present information to My webMethods users; these panels also enable users to enter data and interact with the task in many other ways, such as attaching documents, setting status, and providing comments.
- Event and assignment definitions that define how the Task Engine processes the task.
- The information (custom task business data) contained within the task.

When creating a task type, the task type developer creates a user interface containing task views that represent the business logic within a process (for example, the criteria used to approve an insurance claim and the actions to take after the claim is approved). These task views are presented in a started task in My webMethods as tabs and panels that enable you to:

- View information in text fields or tables, or in attached documents
- Supply information by selecting items from drop-down lists, selecting options, selecting check boxes, typing data in text fields, attaching documents, or by clicking standard buttons (for example, **Submit** or **Approve**).

Each task type can present differing sets of user interface elements or actions based on criteria specified by the task developer, such as the role of the My webMethods user. For example, a task type can be designed to display all account information to a user in manager role, but to display only a limited set of account information to a user in a subordinate role. Similarly, a senior customer service representative role may be enabled to attach and read documents, but a junior customer service representative role may be enabled only to read attachments.

After a user accepts and completes a task, one of two things happens:

- If the task was started as part of an automated process, the process takes the task results and continues on to the next process step.
- If the task was started manually outside of a process, the completion of the task effectively ends the task.

In both cases, the task is marked with a status of Completed.

Task Interaction with Users, Groups, and Roles

The tasks that are assigned to you may be directed to you based on your individual user account or your membership in one or more groups or roles.

My webMethods administrators can assign membership for individual users to one or more My webMethods groups or roles. Roles typically help categorize users by job focus (for example, Customer Service Representative or Information Services), or by level of responsibility (for example, Order Approval, or Order Approval Manager). The primary

advantage of a role is that it can be associated with the access privileges and functional privileges available in My webMethods.

Roles can then be used to establish a hierarchy of task access and functional capabilities, based on attributes such as decision making authority. For example, your business model may limit approval of all loan applications over a specified amount to Senior Managers only. In this case, the task can be designed to send applications over that amount directly to the Senior Manager role, and access to those tasks can be limited to that role only. For more information about role-based access and functions, see ["How Permission-Based Access Affects Tasks" on page 21](#).

Groups are typically used to create logical groupings of users, perhaps by geographical location or product specialty.

For more information about creating and configuring users, groups, and roles, see the PDF publication *Administering My webMethods Server*.

Task Assignments, Events, and Rules

Business analysts and developers can define the behavior of a task by specifying logic that controls task assignment and that detects certain task events. In My webMethods, these components are presented as rules within a task type. These rules provide the following functions:

- *Assignments* assign a task to a specified user, group, or role depending on the occurrence of a defined condition. For example, when a task's status is marked for escalation, assign the task to a manager; or, assign the task to a specific user, group, or role when the task is activated. These are configured as Assignments in Designer.
- *Events* trigger a defined action at a designated point in a task's life cycle (such as Accepted, Assigned, Canceled, Suspended). These are configured as Events in Designer.
- *Filters* filter the tasks viewed by users in their task inbox in My webMethods. For example, do not display any task that has been accepted by another user. This is useful when tasks are assigned to a role containing many members. These are configured as filter Event Types in Designer.
- *Change rules* apply an action when a specified change occurs in the task's status or business data; for example, if the task status changes to Expired, delete the task. An e-mail task notification can be sent to an assigned user or role as a change rule result. These are configured as change-related Event Types in Designer.
- *Schedules* apply an action when specified scheduling conditions are met. These rules are used to apply some time-based conditions to the task; for example, send a task e-mail notification if a loan application has not been accepted for processing within a certain period of time. Or, you might reassign, escalate, or change the priority of tasks based on the passing of a specific date or an interval of time. An e-mail notification can be sent to an assigned user or role as a schedule rule result. These are configured as time or date-related Event Types in Designer.

Although rule conditions and actions are initially defined when the task type is created, you can modify the rule definitions for task types that have been created for stand-alone use. For more information, see ["Managing Rules for a Task Type \(Deprecated\)" on page 128](#).

Task Assignment

Business analysts and developers can control the distribution of tasks based upon both static and dynamic information associated with the task type. For example:

- One example of a static task attribute is the task type itself; suppose a task type is named `Setup_Computer`, and is used to ensure that a computer is set up and ready for a new employee. In this case, all tasks started from this task type can be assigned to the IT Support group.
- An example of a dynamic task attribute is an order amount. Each time an order approval task is triggered in an automated process, the order amount is likely to be different. In this case, orders over a certain amount can be assigned to a specific role.

A task type can also be designed to enable a My webMethods user to assign a task to another user, group, or role, or to delegate a task to another user. Some other key points about task assignment:

- Each task instance contains a list of assigned principals (users, groups, or roles). The task may be assigned to more than one principal at a time or not assigned to anyone at all.
- Conditional assignments (assignment rules) associated with the task type can control when and to whom a task is assigned. Also, a task instance can be assigned or re-assigned manually from the Task List Management page.
- The owner of the task is the user who started (queued) the task. The task owner is always implicitly assigned to the task
- Tasks can also be delegated to users with automatic scheduled delegations or manually from the My Inbox or Task List Management pages. Each task instance tracks who tasks are delegated from and to whom they have been delegated.

Task Status and Life Cycle

After a task is started, it can transition through several states. The task status can be set manually by a user, or automatically by the Task Engine as a result of processing rules. The following states are available:

- **New**—This status is not displayed in the inbox and Task List Management status display; tasks are in New status only momentarily; immediately after the task starts it transitions from New to Active status. New status can be used when defining a task event, for example, to detect newly started tasks.
- **Active**—The task is running normally and is available for user interaction. A task is placed in Active status when it is started, and can be returned to Active status as a

result of a manual status change by a user or as a result of a task event evaluation. Only Active tasks appear in the user inboxes.

- **Completed**—The task is complete as a result of manual completion by a user or as a result of a task event evaluation. No further work can be done on a task that is completed, other than deleting it.
- **Error**—The task has transitioned to an error condition as identified operationally by the Task Engine or as a result of a task event evaluation. No further work can be done on a task that is in Error status, other than deleting it.
- **Cancelled**—The task is cancelled as a result of manual cancellation by a user or as a result of a task event evaluation. No further work can be done on a task that is cancelled, other than deleting it.
- **Suspended**—The task is suspended as a result of manual suspension by a user or as a result of a task event evaluation. A suspended task is no longer available to users and can be viewed only on the Task List Management page, and no events or assignments are evaluated for a suspended task. A suspended task can be resumed (placed back into Active status) by a manual user action or as the result of a task event evaluation.
- **Expired**—The task has expired as a result of a manual action by a user or as a result of a task event evaluation.

After a task is started, it remains in the system (regardless of its state) until it is deleted. A task can be deleted manually, or global task rules can be created to automatically delete tasks. For example, My webMethods is installed with a global Delete Task schedule rule. This rule deletes any task in Completed, Cancelled, Expired, or Error status after the task has been in that state for a specified period of time (set to seven days by default). This rule is evaluated once per day. For more information, see ["Managing Global Schedule Rules" on page 134](#).

How Permission-Based Access Affects Tasks

My webMethods provides an extremely flexible framework for granting or restricting user access to many aspects of the My webMethods interface. This framework is referred to as *permission-based access control*, because access and functional privileges are provided by granting permissions to users, groups, and roles defined in My webMethods. The permissions you have as an individual user depend on the permissions granted to you by an administrator, either as an individual user, or as a role or group member.

By default, members of the My webMethods Administrator role are granted all available permissions. To implement a secure and well-managed business environment, your organization will likely want to define a number of roles or groups that have limited access and functionality—usually tailored to provide just enough access and functionality to carry out the work that is assigned to the role or group.

Task monitoring, management, and administration procedures are all subject to permission-based access control. This guide describes all task-related pages, panels, and the controls available on them. However, as you are working with My webMethods task

procedures, you may not see all of these features, depending on the permissions granted to you. You may see all of these features, or only a subset of them. You may not see some task features at all.

For example, an administrator has the ability to delete tasks, but you may not find a **Delete** button enabled on the page or panel you are viewing, even though the button is described in this guide. This is because you have not been granted the Delete Task permission, either as a user, or through any roles or groups you are a member of.

If that permissions is granted to you, the **Delete** button will become enabled if you refresh or leave and return to the page. If you have any questions about your permissions, talk to your My webMethods administrator.

About Collaboration Tasks

Both Software AG Designer and My webMethods Server provide a set of design-time and run-time functions that allow you to create, modify, assign, and complete spontaneous collaborative, task-based workflows on an "as-needed" basis.

A key portion of the collaborative workflow feature enables you to quickly create one or more *collaboration tasks* that can be assigned to others users, so that those users can collaborate in completing the parent task. These collaboration tasks exist within a unique collaboration process model that is created when the first collaboration task is created. It is also possible to create tasks for business processes that will dynamically generate and assign one or more collaboration tasks automatically, based on task business data.

A number of general task capabilities are also available to enhance the collaborative work environment, including:

- **Comments**—By default, tasks provide the ability for users to enter, modify, and view free-form comments within the task they are working on.
- **Attachments**—By default, tasks provide the ability for users to add or delete attachments.
- **Data sharing**—You can specify if business data and other task information is to be shared among collaborative users.

For more information about developing collaboration tasks, see the DesignerTask Development online help.

How Collaboration Tasks Differ from Standard Tasks

Collaboration tasks are essentially identical to standard tasks; the key distinctions are:

- The manner in which they are started.
- Their unique child relationship with the parent task from which they were started.
- Their operation within a unique collaboration process associated with the parent task.

Enabling a collaborative workflow environment requires a defined parent/child relationship between two or more task types. When a run-time process (or user) is working with a task that is designated as a parent task, new child collaboration tasks can be created dynamically and assigned to other users.

This can be done automatically (within a process) or manually, by a user who is working with the task.

Using Collaboration Tasks in a Process

When you include a task representing human activity in a business process, the potential type and number of activities required to complete the task can be quite numerous. While it is possible to construct detailed logic within a task to anticipate all of these possible outcomes, that approach can be very labor intensive and error prone. In addition, if the business use case around the task changes, updating the logic can be difficult.

You can create and configure a parent task type in Designer, and associate it with one or more collaboration tasks. You can then configure the parent task so that when specific business data is received by the parent task, one or more collaboration tasks are created and assigned to specific roles, groups, or users.

Then, when you include the parent task in a business process, the required collaboration tasks will be queued depending on the business data passed to the task in the process pipeline.

For example:

Suppose a satellite television company runs a new order business process containing a task with the nominal activity of installing a dish and receiver. However, different equipment and installation teams are required depending on the service ordered by the customer. In addition, different parts of the country require different kinds of equipment for each type of service. The business data for the process can be configured to contain a field that defines the type of service and a zip code or other designator describing the service area.

Depending on the specified service type and location contained in the pipeline for each individual order, the business process task can queue one child task to the required installation team, and another collaboration task to the inventory team to prepare the correct type of equipment for the installers. The parent task can be configured to complete automatically when all of the collaboration tasks are completed.

For more information about configuring collaboration tasks, see the DesignerTask Development online help.

Using Collaboration Tasks Manually

You can configure a task so that an individual user (with the proper permissions) can create collaboration tasks from the task after opening it in an inbox. The user can assign these collaboration tasks to other users to help complete the parent task. For example:

Suppose a customer service representative (CSR) receives a task to investigate and resolve a customer's complaint that issues of a magazine subscription are no longer arriving.

To determine the cause, the CSR needs information from a database administrator and the circulation manager. The CSR can create and assign collaboration tasks to both these individuals requesting the information needed to evaluate the problem. In this case, the circulation manager returns confirmation that the subscription is active and issues are being mailed as scheduled. When returning this information, the circulation manager marks the collaboration task assigned to him as complete.

The database administrator completes his collaboration task by providing the customer's account information—where the CSR finds that the address is incorrect. The CSR then creates a new collaboration task for the database administrator, asking for the customer's record to be updated with the correct information. The database administrator in turn delegates this collaboration task to one of his team members, who enters the correct information and marks the collaboration task as completed. The CSR now marks the parent task as completed.

About Collaboration Processes

A collaboration process is a unique type of process in the My webMethods Server environment and must not be confused with a standard webMethods business process.

A unique collaboration process is created any time a task user creates a collaboration task on the **Collaboration** tab of a parent task (the task must be enabled for collaboration). The collaboration process remains running until the parent task is completed, and any additional collaboration tasks that are created are added to the collaboration process. The collaboration process is owned by the user who created the first collaboration task, and the collaboration process owner has full access and privileges to the collaboration process and the collaboration tasks in it.

The key consideration concerning the collaboration process within Designer is the ability to specify sharing of comments and attachments among all child tasks in a collaboration process by setting the comments and attachments scope. For more information about setting task scope, see ["About Task Comments and Attachments Sharing" on page 26](#).

About the Relationship Between Parent Tasks and Collaboration Tasks

There are two opportunities to define this task parent-child relationship between two or more task types:

- In **Software AG Designer**—You can specify a parent task on the Overview tab of the task editor; this automatically designates the task you are working with as a collaboration task and makes collaboration-specific event actions available within both the collaboration and the parent tasks. A parent task can have one or more child collaboration tasks, but a collaboration task can have only one parent task. If you

do not want to designate another task as the parent, you can specify the name of the task you are working with as the parent; this keeps the event actions limited to the current task.

Typically, both the parent and child task are contained in the same task application project, for ease of maintenance and so they can be published to the runtime at the same time. This type of parent task is best suited for use in an automated business process, where it can queue its child task(s) as described in ["Using Collaboration Tasks in a Process" on page 23](#).

- **In My webMethods**—On the Task Administration page of My webMethods, you can specify one or more of the task types available in the runtime environment as a child collaboration task for a task type. This enables the user to be able to select from the specified collaboration task types when creating a new collaboration task on the Collaboration tab of the task they are working with (with proper permissions, and assuming the task is enabled for collaboration).

This type of parent-child relationship is best suited for use in an manual situation, where the user can queue collaboration task(s) as described in ["Using Collaboration Tasks Manually" on page 23](#).

When the task developer defines a parent-child relationship in Designer, both the parent and child tasks are created and configured with a specific relationship and specialized parent-child behavior.

The parent-child mechanism in My webMethods is more informal and enables you to define a parent-child relationship between any two task types available in the runtime environment. As these tasks have already been configured in Designer, the amount of functionality shared by the two tasks will be limited.

In both cases, the parent and child tasks run within a single collaboration process and task comments and attachments can be shared, as described in ["About Task Comments and Attachments Sharing" on page 26](#).

Note that it is possible for a single task type to be both a parent task and a child collaboration task at the same time. For example, suppose you have three task types, Task1, Task2, and Task3. Task2 can be a collaboration task for parent task Task1, and Task2 can also be a parent task for collaboration task Task3.


About Collaboration Tasks and Task Business Data

Task business data can be shared between tasks queued from different task types, as long as they have identical business data (for example, they have been created from the same IS document type).

On the Task Engine Administration tab of My webMethods, you can enable or disable data sharing for each task type. When the user queues a new collaboration task from a task type where data sharing is enabled, the new collaboration task will contain a copy of the business data from the parent task. For more information, see ["Disabling and Enabling Task Data Sharing" on page 119](#).

Key Points About Collaboration Tasks

If you plan to implement collaboration tasks, keep the following key points in mind:

- Collaboration tasks appear in My Inbox, task type inboxes, and Task List Management as a regular task, and all standard task behavior applies.
- If the Collaboration Task column is in the results display, a collaboration icon  identifies each collaboration task. This column is not present by default; you can add it by clicking **Properties** in the Tasks window menu.
- A task must be specifically enabled to allow collaboration. For more information, see ["Disabling and Enabling Task Collaboration" on page 119](#).
- A task must have usable collaboration tasks specified. For more information, see ["Specifying Allowed Collaboration Tasks" on page 120](#).
- You can view the details of a collaboration process. For more information, see ["Viewing Collaboration Process Details" on page 84](#).

About Task Comments and Attachments Sharing

As part of a collaborative workflow environment, the task developer can specify a scope that defines how comments and attachments are shared among other tasks. The following scope selections are available for comments and attachments in all tasks:

- **Task Instance**—This is the default scope. Each individual task instance has its own unique attachments and comments (that is, they are not shared).
- **Process Instance**—All tasks within the same business process model instance share their comments or attachments. This applies even when different task types are in use within the process model. When this scope is specified, you will see comments and attachments for all tasks started within that process model when you view the task comments or attachments of any task instance started from within the process model.
- **Process Instance AND Task Control Set**—All tasks within the same business process model instance that use the same control set share their comments or attachments. This applies even when different task types are in use within the process model. When this scope is specified, tasks started within that process model must share a task control set to enable sharing of task comments or attachments. For more information about control sets, see the DesignerTask Development online help.
- **Collaboration Process**—All tasks within a single collaboration process instance share comments or attachments. This applies even when different task types are in use within the collaboration process. For more information about collaboration processes, see ["About Collaboration Processes" on page 24](#).

About Content Management with webMethods Content Service Platform

Organizations create and consume reports, pictures, spreadsheets, e-forms, and other documents of all types in the course of daily business. Many of these files are critical to the business processes of the organization, and as such must be managed and readily available for use with business process execution. Typically these files are stored and managed in one or more content management (CM) systems throughout the organization.

webMethods Content Service Platform (CSP) not only serves as a content management system, but it also provides you with the ability to connect to, write to, and read from many supported third-party content management products, such as instances of Microsoft Sharepoint or EMC Documentum. In Software AG Designer, a task developer can create task types that allow users to access CSP content, to add content to the task and the repository, to manage attachments to content document types stored in the repository, and to upload and download e-forms stored in webMethods Content Service Platform.

These CSP-enabled tasks are typically integrated into business process models created in Software AG Designer. A user task step in a process model can start a task type instance, which is assigned to an appropriate user, role, or group, with the appropriate content document types available to the task user from the task interface.

For example, for an auto insurance company, suppose a new accident claim report is created and stored in webMethods Content Service Platform or an integrated CM system. The arrival of this new claim report in the CM system triggers the start of a new claim business process instance, with the claim report as part of the process. A user task in the process is started and assigned to a claims adjuster, arriving in her task inbox with the claim report as part of the task data.

While working on the task and investigating the claim, the adjuster takes several digital photos of the damage. These digital photo files can be attached to the claim form content document type, and are added to the repository, where they are available for access by others. The adjuster can also edit the information in the claim form while working on the task.

When the adjuster finishes investigating the claim and completes the task, the business process instance receives the updated information resulting from the investigation and continues to the next step.

A task developer can also implement interaction with e-forms stored in webMethods Content Service Platform or an integrated CM system. In an interface that is separate from the content management interface, a user can download and upload e-forms stored in the repository.

For more information about webMethods Content Service Platform, see the PDF publication *Implementing webMethods Content Service Platform for BPM*. For information about integrating task types with CSP, see *webMethods BPM Task Development Help*.

About E-form Integration with Tasks

The webMethods product suite provides electronic forms integration to enable the use of e-forms with your tasks. There are two ways of enabling e-form support for tasks:

- Basic e-form support can be implemented by storing e-form templates and instances in or in a file system or web server. For more information and a list of the supported e-form types, see the PDF publication *Implementing E-form Support for BPM*.
- Fully featured e-form support can be enabled with webMethods Content Service Platform; for more information, see the PDF publication *Implementing webMethods Content Service Platform for BPM*.

To be able to work with e-forms in tasks, the following preliminary actions are necessary:

- Create a repository for your e-form instances and templates.
- Configure a webMethods e-form environment in My webMethods and deploy that environment to the Integration Server host(s) where you will be creating your IS document types.
- Ensure that you have network connectivity between all of the host servers.
- Review various implementation issues for the supported e-form types.

All of these procedures, as well as conceptual information about the use of e-forms in the webMethods product suite, are available in the PDF publications *Implementing E-form Support for BPM* and *Implementing webMethods Content Service Platform for BPM*, depending on which e-form solution you choose to implement.

For more information about interacting with e-forms in tasks, see ["Working with E-form Data in Tasks" on page 76](#). For information about integrating task types with e-forms stored in a webMethods Content Service Platform repository, see *webMethods BPM Task Development Help*.

About Task E-mail Notifications

At design time, the task type developer can create a notification event within a task that publishes a notification e-mail when the conditions defining the event are matched. You can subscribe to these notifications for the tasks that are assigned to you (assuming the task type contains notifications).

To receive an e-mail notification, you must satisfy both of the following requirements:

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- You must be directly assigned to the task, or be a member of a group or role that is directly assigned to a task. When a task is delegated to another user, the delegation is equivalent to assignment for the purpose of task notification.
 - You must be subscribed to the task notification. You can be granted permission to self-subscribe to a task type notification, or a task administrator can subscribe you.

Note: It is possible for the task developer to override the “assigned to” requirement for individual task types. In this case, all subscribed users receive the notification, not just those who are assigned to the task. For more information, see the topic “Sending Task Notifications to Non-Assigned Users” in the *webMethods BPM Task Development Help*.

Important: A special condition applies to My webMethods administrators, or any user who is assigned the **Task Administration** permission. Any user who has the **Task Administration** permission *and* is subscribed to a task notification will *always* receive task notifications from the task, whether the user is assigned to the task or not.

By default, the e-mail notification contains a link to the associated task instance. When you click on this link, you are taken to the My webMethods log-in page, and from there to the task instance. To do so, you must have a network connection to the My webMethods Server instance that originated the message.

Note: Some e-mail service providers may configure their server to remove, alter, or otherwise disable the URL contained in the “Click here to open task” link to comply with security requirements. In this case, you will not be able to open the task.

Basic examples of notification messages include:

- You have been assigned a new task.
- A task has been delegated to you.
- A task has been cancelled.

In addition, notifications can be published based on business data associated with a task. For example, notifications can be generated for orders over a particular amount, or orders submitted by a specific customer. With proper permissions, you can subscribe to notifications for yourself, and you can subscribe other users. Notifications are sent to the e-mail address specified in the subscribed user's My Profile page in My webMethods.

If a task type does not contain any notifications and you would like to have notifications made available, ask the task type developer to add a notification to a task type in Software AG Designer and then publish the modified task type to My webMethods Server.

For more information about working with task notifications and task notification e-mail replies, see ["Working with Notifications" on page 72](#).

Replying to a Notification without a My webMethods Connection

The task type developer can enable a My webMethods user to remotely execute a pre-defined action on the task that issued the notification by configuring the e-mail notification to contain a Task Action Link. This link enables you to respond to the task without having a connection to My webMethods Server. These task notification reply e-mail actions are logged and displayed on the task's Audit tab.

For example, suppose a business process contains a task that determines if an order is approved or denied, based on a simple maximum order amount. The task type developer can create a task notification that is triggered by an automated denial of the order (for example, the order amount exceeds the limit authorized for the customer). The developer can also craft the logic of the task type so that upon denial, the task is assigned to the appropriate account manager.

Upon denial, the task notification is e-mailed to the account manager for that customer, who is now assigned to the task and who is already subscribed to the notification. The task type developer includes basic task business data in the task notification (for example, the order amount and reason for denial) and includes a Task Action Link in the notification e-mail.

In this case, the developer crafts the link so that it triggers a service that overrides the denial and approves the order. The link appears in the account manager's e-mail as "Override this denial and approve the order." The task type developer can add additional links for other responses.

When the account manager receives the e-mail and decides to override the denial, he clicks the "Override this denial and approve the order" link. A reply e-mail is automatically created and sent (by way of the account manager's e-mail client) to an e-mail account specified in the link.

A Task Engine e-mail listener monitoring this account downloads the account manager's reply, deletes the e-mail from the monitored account, and executes the action included by the task developer (in this case, execute the service that overrides the denial and approves the order).

This is a one-time occurrence; if the subscriber clicks the link again, the resulting e-mail will be downloaded by the e-mail listener, but will be ignored. Security measures are in place to prevent e-mail spoofing and the substitution of non-defined actions.

Note: Task notifications are sent to the e-mail address recorded in the user's My webMethods Server profile. Some e-mail service providers may configure their server to remove, alter, or otherwise disable the URL contained in the "Click here to open task" link to comply with security requirements. In this case the link may be missing or inoperative in the delivered e-mail message.

Permissions Required to Work with Task Notifications

For more information about granting task permissions to user, roles, and groups, see:

- ["Configuring Task Access Permissions" on page 105](#)
- ["About Task Type Functional Permissions" on page 110](#)
- ["Configuring Task Type Functional Permissions" on page 111](#)

A My webMethods user requires the following permissions to work with task notifications:

- The user must be a member of a role or group with the **Access Privileges > Monitoring > Business > Tasks > My Inbox** access permission. For information about the results of not granting this permission, see ["Limitations When Denying Access to My Inbox" on page 107](#).
- The user must be granted the task type functional privilege **Tasks Application Root Page**.
- The user must be granted the task type functional privilege **Subscribe to Task** if the user is to be able to self-subscribe to the task type notifications.
- At a minimum, the task type functional permissions for **View Task Data**, **View Task Info**, **View Task Audit**, and other View task type must be granted to the user to enable the user to see the task contents.
- If the user is to interact with the task instance, additional task type functional permissions, such as **Accept Task**, **Modify Task Data**, and **Complete Task** must be granted.
- If the user is to have access subscriptions from the task type inbox, the **task type functional permission Tasks Application Root Page > Task Inbox Page** must be granted.

About Mobile Task Integration

webMethods Task Engine provides support for Mobile Task Integration (MTI), which enables a user to interact with MTI-enabled tasks running in the Task Engine from an iOS or Android mobile device. A separate PDF publication, *Software AG Designer Mobile Task Integration Supplemental Documentation*, is available from the documentation web site and with the documentation installation.

This publication describes the procedures required to create a mobile task application in Software AG Designer, how to publish the application to Mobile Administrator, and how to connect to and interact with the mobile task application from a mobile device.

Where to Find Tasks in My webMethods

My webMethods provides two primary navigation paths on the **Navigate** tab for working with tasks:

- **Applications > Administration**, which allows you access to the pages that you use for administering task types
- **Applications > Monitoring**, which allows you access to the pages you use for monitoring and interacting with tasks

You must have appropriate permissions to access either the **Administration** or the **Monitoring** navigation paths to carry out task-related activities in My webMethods. In addition, you must have permissions for specific task activities.

For more information about configuring permissions, see ["Configuring Task Permissions" on page 104](#). For more information about using these navigation paths and working with My webMethods in general, see *Working with My webMethods*.

Monitoring Tasks in My webMethods

From the **Monitoring > Business > Tasks** navigation path, you have access to the following navigation selections:

- **My Inbox** to view your task inbox. This inbox displays all of the tasks assigned to you.
- **Task List Management** to monitor and manage all tasks in My webMethods that you have permission to view, regardless of assignment. With proper user, role, or group permissions, you can use the task list to suspend, resume, assign, delegate, and resubmit tasks, among other activities.
- **Task Type Inboxes** to view all of the tasks of a specific task type that are assigned to you (there is a separate task type inbox for each type of task assigned to you). A task type inbox may not be available if the task type developer has not created one for the task type.
- **Task Charts** to view two default task charts, one displaying the number of all tasks, and one displaying the number of critical tasks. You can modify these default charts, and you can create additional chart portlets for deployment on the Task Charts page or in any other location of My webMethods.

Monitoring Collaboration Processes

In addition to viewing collaboration process details as described in ["Viewing Collaboration Process Details" on page 84](#), you can monitor collaboration processes using webMethods Monitor. For more information, see ["Viewing Collaboration Processes in webMethods Monitor" on page 85](#).

About My Inbox

By default, the My Inbox page in My webMethods displays all of the tasks that have been assigned to you, either directly to your user account, or indirectly, through a role or group that you are a member of. The My Inbox page consists of two panels:

- The Search panel—use this panel to search for tasks by specific keyword or parameter; the results are displayed in the Inbox panel. By default, it is set to search for all tasks assigned to you. For more information, see ["Filtering and Searching in My Inbox" on page 48](#).
- The Inbox panel—use this panel to view the results of the most recent search, as defined by the settings in the Inbox Search panel. You can apply the following actions to selected tasks:
 - Delegate
 - Remove Delegation

For more information on these actions, see ["Delegating Tasks" on page 56](#).

The Inbox panel also allows you to perform the following task-related actions:

- Subscribe to task notifications. For more information on these actions, see ["Working with Notifications" on page 72](#).
- Define and manage scheduled delegations. For more information, see ["Scheduling Task Delegation" on page 59](#).
- Export the contents of the Inbox in table format as a comma-separated value (CSV) file. For more information, see ["Exporting the Contents of a Task Inbox or Task List" on page 77](#).

The operation of the Search panel and Inbox panel conform to the general My webMethods search framework; for detailed information about searching in My webMethods, see Chapter 10 in *Working with My webMethods*.

For more information about My Inbox, and task inboxes in general, see ["About Task Inboxes" on page 38](#).

About Task Actions

Because of the high degree of task customization possible with Software AG Designer, the task type developer can provide virtually any means of interacting with a task. However, various task action buttons are configured by default in Software AG Designer and may be found in the tasks you work with.

The following default buttons are available for individual tasks:

- **Accept**—Accepts the task for the current user.
- **Submit**—For My webMethods users, this updates all task information from the data fields on the page but does not complete the task (that is, the status is not changed).

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- **Complete**—Updates all task information from the data fields on the page and applies a status of Completed to the task.
 - **Return**—Discards any user changes and returns the user to the previous page.
 - **Release**—Releases an accepted task, indicating it is no longer accepted by the current user.(visible only if the task is not marked for auto-acceptance and is accepted).
 - **Assign to Users**—Enables the user to assign the task to one or more a selected users, groups, or roles.

About Task List Management

The Task List Management page displays all of the tasks that you have privileges to view, regardless of assignment or status. The Task List Management page is primarily administrative in nature, and enables you to apply a number of management actions to selected tasks. The Task List Management page consists of two panels:

- The Search panel—use this panel to search for tasks by specific parameter; the results are displayed in the Task List Management Tasks panel. By default, it is set to search for all tasks that you have privileges to view, regardless of assignment. For more information, see ["Filtering and Searching the Task Management List" on page 91](#).
- The Tasks panel—use this panel to view the results of the most recent search, as defined by the settings in the Search panel. Click **Properties** in the Tasks panel menu to modify the column display.

The following task management buttons are available:

- **Resume**—use this button to resume a suspended task.
- **Suspend**—use this button to suspend an active (running) task.
- **Assign To**—use this button to assign a task to one or more users, groups, or roles. The task will appear on the user's My Inbox page.
- **Accept For**—use this button to force acceptance of a task for one or more users or roles. The task will appear in each individual user's inbox as an accepted task.
- **Resubmit**—use this button to resubmit an active task. This forces the task data to be re-evaluated regardless of whether or not any of the data has been modified. Note that resubmitting a task can have an effect on task assignments, which can be configured to be evaluated for each task change. In this case, resubmittal will cause these assignments to be re-evaluated, possibly resulting in a re-assignment of the task.
- **Set Status**—use this task to change the status of the task. Available settings are Active, Completed, Error, Cancelled, and Expired.
- **Delete**—use this button to delete a task from the current process list.
- **Delegate**—enables the user to delegate a task to another user.
- **Remove Delegations**—enables the user to remove all delegations applied to the task.

For specific information about these actions, see ["Managing Tasks" on page 92](#).

The Tasks panel also allows you to perform the following actions:

- Subscribe to task notifications for other users; for more information, see ["Subscribing to a Notification Rule for Other Users" on page 73](#).
- Define and manage scheduled delegations; for more information, see ["Scheduling Task Delegation" on page 59](#).
- Export the contents of the task list in table format as a comma-separated value (CSV) file. For more information, see ["Exporting the Contents of a Task Inbox or Task List" on page 77](#).

About Task Type Inboxes

A separate task type inbox is available for each type of task assigned to you, if the task type developer has created one and you have been assigned access privileges to it. These appear on the Tasks page as individual tabs for each type of task—for example, if you are assigned a task of the task type "Order Approval," an Order Approval task type inbox is available.

These task type inboxes display only those tasks started from that particular task type. These inboxes can be customized by the task type developer as required, and so may differ from task type to task type as to the layout and components that are available.

A task type inbox tab consists of two panels:

- Search For panel—use this panel to search for tasks by specific parameters; the results are displayed in the Tasks List panel. By default, it is set to search for all instances of that tab's specific task type assigned to you. For more information, see ["Searching in a Task Type Inbox" on page 49](#).
- The Tasks Results panel—use this panel to view the results of the most recent search, as defined by the settings in the Search For panel. You can apply the following actions to selected tasks:
 - Delegate
 - Remove Delegation

For more information on these actions, see ["Delegating Tasks" on page 56](#).

The Task Results panel also allows you to perform the following task-related actions:

- Subscribe to task notifications. For more information on these actions, see ["Working with Notifications" on page 72](#).
- Define and manage scheduled delegations. For more information, see ["Scheduling Task Delegation" on page 59](#).
- Export the contents of the Inbox in table format as a comma-separated value (CSV) file. For more information, see ["Exporting the Contents of a Task Inbox or Task List" on page 77](#).

The operation of the Search For panel and Task Results panel conform to the general My webMethods search framework; for detailed information about searching in My webMethods, see Chapter 10 in *Working with My webMethods*.

For more information about task type inboxes, and task inboxes in general, see ["About Task Inboxes" on page 38](#).

About Task Charts

webMethods Task Engine provide basic task charting on the Task Charts page. This page contains two default task chart portlets; you can modify these default charts, and you can create additional chart portlets.

Chart results are determined by selecting from the available saved searches. For more information about task charts, see ["Working with Task Charts" on page 135](#).

2 Working with Tasks in My webMethods

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About Task Inboxes

My webMethods provides you with two kinds of task inbox:

- **My Inbox**—this is a standardized inbox that is available to My webMethods users who have been granted permissions to work with it. Its layout and components remain the same regardless of the type of tasks you are viewing. For a general description of the My Inbox page, see ["About My Inbox" on page 33](#). The My Inbox page provides you with searchable access to all tasks assigned to you (or to a role or group you are a member of), regardless of task type.

To access My Inbox, navigate to **Navigate > Applications > Monitoring > Business >Tasks > My Inbox**.

- **Task type inboxes**—task type inboxes (also referred to as *custom task inboxes*) display only the task instances associated with that task type inbox; these inboxes are available to My webMethods users who have been granted permissions to work with them. For example, if you are working with tasks that have been started from task types "Order Approval" and "Shipment Approval," you will find a separate inbox for each of those task types. These inboxes can be customized by the task type developer as required, and so may differ from task type to task type as to the layout and components that are available.

By default, searches in the task type inbox are limited to the task type associated with the inbox. However, the task developer can configure the task type to search all task types, or a specific list of task types. Check with the task developer if you are not sure which search pattern is applied to a task type inbox.

To access a task type inbox, navigate to **Navigate > Applications > Monitoring > Business > Tasks > [TaskType]**

After you open various inboxes, you can switch among inboxes by clicking the tab for the inbox, or by clicking the inbox in the **Navigate** tab. Both kinds of task inbox provide you with the ability to search for tasks and to open tasks to work on them.

Viewing Tasks in the Task Inboxes

You can view the list of tasks assigned to you either in My Inbox or in a task type inbox, as described in ["About Task Inboxes" on page 38](#) above. For additional information about viewing tasks, see ["About Duplicate Task Type Names in the My Inbox Results" on page 40](#). For information about working with tasks on the Task List Management page, see ["Viewing Tasks on the Task List Management Page" on page 88](#).

To work within an individual task, you must open it, as follows:

To open a task in an inbox results list

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**

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2. Click **My Inbox** or a task type inbox. By default, all of the tasks assigned to you (or to a role or group you are a member of) are displayed in the My Inbox results, and all of the tasks of a particular name are displayed in the task type inbox results.

Important: You must have the **Task ID** column displayed in the results list to be able to open a task. If this column is not displayed, add it to the list as described in ["Customizing the My Inbox and Task Type Inbox Results List" on page 50](#). You can also open a task from the **Custom ID** column, but this value may not be populated for every task.

3. Click the Task ID link for the task you want to open.

The Details page opens with the **Data View** tab automatically selected the first time you open it. Thereafter it will open to the last tab you viewed.

Selecting Tasks in Task Inboxes

In the task results list, each task row features a selection check box column at the left side of the table by default. To carry out certain actions (for example, delegating a task), one or more tasks must be selected, either by clicking one or more check boxes, or by clicking the select icon at the top of the column. Two select actions are available, depending on the inbox:

- **Select All on Page**—this action is available in My Inbox. Clicking the icon selects all of the tasks displayed in the results list, but does not select any tasks that are not displayed.
- **Select All**—this action is available in a task type inbox. Clicking the icon selects all of tasks contained in the inbox, not just the tasks displayed in the results list. Note that if the number of tasks is very large, this operation can result in slower response.

You can adjust the number of rows and columns displayed in the task results list by modifying the user Preference settings for My Inbox or for a task type inbox. For more information, see ["Customizing the My Inbox and Task Type Inbox Results List" on page 50](#).

Sorting Tasks in the Task Inboxes

You can sort the tasks displayed in the task list results by any of the available columns. By default, the results list is sorted by the **Task ID** column. You can specify a different default sorting column, for more information, see ["Customizing the My Inbox and Task Type Inbox Results List" on page 50](#).

Note that when sorting by the **Assigned To** and **Accepted By** columns in a custom task inbox, the column is sorted by the first user, role, or group name in the list of principals (these columns are not available in My Inbox). The list of principals is sorted alphabetically and the order of the list cannot be modified.

About Duplicate Task Type Names in the My Inbox Results

In some instances, it may be necessary to create two or more task types with the same task type name. The appearance of duplicate task type names in the My Inbox results can be potentially confusing. When searching or filtering tasks, the **Advanced** tab of the My Inbox enables you to filter the task results by task type name. In the event of task types with duplicate names, the task list will contain an entry for each duplicate name, potentially making it difficult to select the desired task.

To alleviate this problem, the **Value** field on the **Advanced** tab displays the task type ID in parenthesis so you can differentiate the tasks. In addition, you can hover the cursor over the **Value** field or a task name entry in the results list; this displays a tooltip that contains the unique task type ID.

Viewing Task Details

The task Details page provides three tabs that enable you to view information about the task:

- **Data View**
- **Details View**
- **Audit View**

About the Data View

The **Data View** tab appears by default when the task is first opened. Because of the high degree of customization available to the task type developer, the information displayed on this tab can vary widely, as can the buttons, links, and other controls provided. Although the contents of this tab are determined by the task type developer, it would typically include the most important elements of the task, generally referred to as *business data*.

For example, for a Computer Setup task type, this tab might display the computer user's name, office number, phone number, e-mail address, and any special instructions pertaining to how the computer should be set up. In addition, it might display a due date and the task priority, as well as **Complete**, **Submit**, and **Cancel** buttons.

About the Details View

The **Details View** tab contents include task information of a secondary nature—that is, information that is not necessarily required to complete a task. The following information appears in the default task configuration:

- **Task Type**—The task type name.
- **Task ID**—The task identification number assigned to the task by the Task Engine.

- **Name**—The name of the task as entered by the user or defined by a process. This value can be modified by the user.
- **Description**—A description of the task as entered by the user or defined by a process. This value can be modified by the user.
- **Priority**—The priority of the task (None, Low, Medium, High, Critical). This value can be modified by the user.
- **Status**—The status of the task (Active, Completed, Error, Cancelled, Suspended, or Expired)
- **Accepted By**—Name of any users who have accepted the task.
- **Accepted Date**—Date and time when the task was last accepted.
- **Assigned To**—Name of any users, groups, or roles to whom the task is assigned.
- **Delegation**—Displays how the task has been delegated by showing the From and To user names.
- **Created Date**—The date the task was created.
- **Created By**—The user that created the task.
- **Last Updated Date**—The date the task was last modified.
- **Last Updated By**—The user that last modified the task.
- **Expiration Date**—The expiration date of the task (if specified).
- **Custom ID**—The custom ID of the task as entered by the user or defined by a process.

The tab also provides an **Apply** button to apply a change to the **Name**, **Description**, or **Priority** values, and a **Return** button to take the user back to the previous page.

About the Audit View

The **Audit View** tab provides a tabular audit log of all of the operations performed on a task. The following information is available:

Column	Description
Operation	The type of operation performed on the task, such as "Task Updated" or "Routing Rule Fired." Some operations appear as a link that enable you to view additional information about the operation.
Created Date	The date and time the operation was applied to the task.
Source	The actor that applied the operation to the task; this can be a user, or a mechanism, such as a routing rule. Some entries

Column	Description
	appear as a link that enable you to view additional information about the source.
Delegated By	Displays the name of any user that delegates a task. Applies only to delegation operations.
Roll Back	When enabled, click this icon to roll back, or "undo" the associated operation. If roll back is not possible, the icon is disabled. For more information, see "Rolling Back a Task" on page 99 .

The tab also provides a **Return** button to take the user back to the previous page.

You can limit the amount of audit log information shown here, or turn off audit logging entirely. For more information, see ["Specifying Task Audit View Logging Levels" on page 134](#).

About the Task Comments View

The **Comments** tab provides the ability for you to view, add, and manage comments within a particular task. Two conditions apply for the display of this tab:

- The task must be enabled for commenting; for more information, see ["Disabling and Enabling Comments and Attachments" on page 118](#).
- You must have the proper permissions to view, add, and manage comments. For more information, see ["About Task Type Functional Permissions" on page 110](#).

For more information about working with comments, see ["Working with Comments and Attachments in the Comments Tab" on page 61](#). The **Comments** tab provides the following controls:

- **Add Comment**—Opens the New Comment panel.
- **Refresh**—Updates the contents of the **Comments** tab.
- **Return**—Returns the user to the previous page.

In addition, the **Comments** tab includes a table that contains the following:

- Comments entered by task users, including the user name, comment text, a time and date stamp.
- Attachments added by task users. Each attachment is represented by a link to the file.

An Update link opens the Edit Comment panel.

A Delete link removes the associated comment and attachment (if present). No confirmation prompt is provided.

About the New Comments/Edit Comments Panel

These two comment panels are very similar:

- Open the New Comment panel with the **Add Comment** button.
- Open the Edit Comment panel with the Update link.

These panels contain the following boxes:

- **Comment Text**—Free form text area for entering comments.
- **Attachments**—Display box showing the name of the file selected for attachment by using the associated **Browse** button.

As well as the following buttons:

- **Browse** button—Opens a standard file system browsing dialog box, enabling the user to select any file available through the local operating system.
- **Clear**—Removes text from the attachment browse results box.
- **Attach**—Marks the selected file for attachment to the task.
- **Create**—Available on the New Comment panel only. Adds any comment or attachment to the task.
- **Update**—Available on the Edit Comment panel only. Applies any changes to the comment or attachment.
- **Cancel**—Closes the New Comments panel without saving any changes.

About the Collaboration Tab

The **Collaboration** tab enables users to add, modify, and delete comments and attachments in a task. For more information about working with collaboration tasks, see "[Working with Collaboration Tasks](#)" on page 79. The following controls are available:

- A formatted message panel for displaying any JSF context messages.
- A Process Information panel that displays the following information about the collaboration process associated with the task (the collaboration process is not created until the first collaboration task is completed):
 - **Name**—name of the collaboration process (editable).
 - **Created By**—name of the user that created the first collaboration task, thereby creating the collaboration process.
 - **Last Modified By**—name of the user who last modified the process or any of its contents.
 - **Created Date**—date and time the collaboration process was created.

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- **Last Modified Date**—date and time the collaboration process was last modified. This field also displays a duration value showing the total time the collaboration process has been running.
 - **Status**—status of the collaboration process.

The following buttons are provided on the Process Information panel:

- **Open Details**—opens the Process Detail page which displays a graphic representation of the collaboration process, as well as tabbed information displays of Process Info, Step Info, Task Info, Task Audit, and Task Comments.
- **Update**—refreshes the process information display.
- **Delete**—enables the user to delete the collaboration process and all of its collaboration tasks.
- A search results tree that displays information about the parent task and all active collaboration tasks, arranged in row and column format.

The following buttons are provided:

- **Create Child Task**—Opens the New Collaboration Task dialog box.
- **Assign To**—enables the collaboration process owner to assign a selected collaboration task to one or more users, groups, or roles.
- **Set Status**—enables the collaboration process owner to set the status of a selected collaboration task.
- **Delete**—enables the collaboration process owner to delete a selected collaboration task.
- **Return**—returns the user to the previous page.

About the New Collaboration Task Panel

When you click **Create Child Task**, the New Collaboration Task panel appears, providing the following controls:

- A formatted message panel for displaying any JSF context messages.
- **Collaboration Task Type**—a list of all the available task types that can be used to create a collaboration task, as assigned on the Task Engine Administration page.
- **Name**—The name you want to assign to the collaboration task.
- **Description**—The description you want to assign to the task.
- **Priority**—The priority you want to assign to the task.
- **Expiration Date**—The date on which the task will be placed in expired status, as selected by an included calendar control.
- **Time**—A specific time of day on which the expiration will take place.

-
- **Assignees**—A list of the user, group, and role names to which the collaboration task has been assigned.
 - **Queue Task Immediately**—A check box option that controls whether the task is started immediately upon creation or is deferred for later starting. If this check box is cleared, the collaboration task is created with a status of New, and it appears in the collaboration task list and in the Task List Management results, but will not appear in the assigned user's inbox or the task type inbox. To queue the collaboration task (causing it to appear in the assignee's inbox), set the status for the collaboration task to Active from the collaboration task list or from the Task List Management results.

The following buttons are also included

- **Pick**—Opens the included modal Select Users dialog box for selecting assignees.
- **Create New**—Creates the new collaboration task with the specified values.
- **Cancel**—Discards all information and returns the user to the **Collaboration** tab.

About the Content Tab

The task **Content** tab enables you to attach, view, and remove existing content from the webMethods Content Service Platform, as well as to add, update, and delete content objects. To use the features of the **Content** tab, your system administrators must configure a complete webMethods Content Service Platform environment; for more information, see the PDF publication *Implementing webMethods Content Service Platform for BPM*. Task attachments from other locations can be managed from:

- The **Comments** tab (see ["Working with Comments and Attachments in the Comments Tab" on page 61](#)).
- Anywhere the task developer has added an attachments panel (see ["Working with Attachments in an Attachments Panel" on page 66](#)).

The **Content** tab contains the following:

- A formatted message panel for displaying any JSF context messages.
- A table containing the following components:
 - **Content Id**—The identification value of the content. This value may or may not be presented, depending on the settings implemented by the task developer.
 - **Last Modified Date**—date when the content was last modified.
 - **Last Modified By**—name of the user who last modified the task content.
 - **Attachments**—contains a list of all attached document types with support for drag and drop as well as **Add**, **View All**, and **Remove** buttons. For more information about the **View All** button see ["Viewing Attachments to a Content Document Type" on page 71](#). The **View All** button is disabled if no attachments exist.

The following buttons are also provided:

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- **Attach Existing Content**— opens the Search and Attach Existing Content dialog box which enables you to search for and attach existing content to a task.
 - **Detach Selected**— enables you to detach an existing document type from a task. This button is disabled when no content is attached.
 - **New Content**— opens the New Content dialog, enabling you to create new content and attach it to the task. This dialog box contains the following buttons:
 - **Submit** — enables you to submit the newly created content.
 - **Cancel** — closes the New Content dialog box without saving any changes.
 - **Edit Content** —opens the Edit Content dialog box, enabling you to edit the metadata of the attached content.
 - **Refresh**— refreshes the content.
 - A Search and Attach Existing Content dialog box for searching for and attaching existing content.

This dialog box contains the following components:

- CSP search query builder — enables you to create a search query by specifying one or more content index values and matching operators.
- Search Result list— enables you to select existing content from webMethods Content Service Platform and attach it to the task.

Customizing the Task Inbox Search Options

You can customize your search preferences with the **Options** tab on the Search panel in both My Inbox and the task type inboxes.

To customize the task inbox search options

1. In My Inbox or in a task type inbox, click the Options tab.
2. Do any or all of the following:
 - Specify which search tab appears by default (Basic, Saved, or Saved with Details).
 - Specify the default saved search.
 - Specify if the default saved search is to be run automatically when the inbox is opened.

The following additional options are available on task type inboxes only:

- Enter a value in the **Max Results** field to limit the number of tasks returned as search results, or:
- Click the **No Maximum** check box to return all search results, subject to the following conditions:

- When selected, the maximum is subject to the `task.max.results` option (default = 1000 tasks); for more information, see ["Limit the Number of Tasks Returned to a Results List" on page 172](#).
- If the task type associated with the task type inbox is configured with an indexed search provider, clearing or selecting the **No Maximum** check box has no effect; all search results are always returned, and the value defined in the `task.max.results` option is ignored.
- Use care when selecting this option. For task type inboxes containing a large amount of tasks, response times may be slowed appreciably.

3. Click **Save**.

Searching and Filtering the Task List

You can search for and filter tasks in both My Inbox and the task type inboxes. By default, searches are case-sensitive, but the task developer has the ability to make individual custom search fields case-insensitive.

You can create a filtered view of the task list, showing only those results that match the search or filter criteria. For information about searching the task list in the Task List Management page, see ["Filtering and Searching the Task Management List" on page 91](#).

Note: Searches in My Inbox apply to all tasks assigned to you, and that you have permission to access. By default, searches in the task type inbox are limited to the task type associated with the inbox. However, the task developer can configure the task type to search all task types, or a specific list of task types. Check with the task developer if you are not sure which search pattern is applied to a task type inbox.

For the My Inbox and the task type inboxes, the default Search window provides the following tabs:

- **Advanced (My Inbox only)**—Enables you to create, execute, and save a filtered set of tasks with a user-defined set of filter terms.
- **Basic (Task type inboxes only)**—Enables you to create, execute, and save a search with a user-defined set of search terms.
- **Saved**—Enables you to execute a search by selecting from a list of saved searches. A **Details** button displays or hides controls that enable you to create, execute, and save a new search configuration, or to update, execute, and save the current search configuration.
- **Options**—Enables you to define options for search behavior. See ["Customizing the Task Inbox Search Options" on page 46](#) for details.

Filtering and Searching in My Inbox



On the **Advanced** tab of My Inbox, you can filter the task list using any or all of the following values provided in the Filter panel in the Search window. Select a filter term in the **Field Name** list, then specify a value for the selected term in the **Value** field. For example:

Accepted = Yes

Created Date = This month

Priority = Critical

Task Name = MyTask

creates a filter that displays all Critical priority tasks with the name MyTask that were created this month, and have been accepted. You can add or remove filter terms by clicking the   icons to the right of the **Value** field.

- **Accepted**—Apply the filter to tasks that have been accepted. Click the **Value** list to select Yes or No.
- **Collaboration Task**—Apply the filter to collaborations tasks. Click the **Value** list to select Yes or No.
- **Created By**—Apply the filter to tasks created by a particular user. Click **Browse** to select a user.
- **Created Date**—Apply the filter to tasks created within a selected time range. Click the **Value** list to select a time range.
- **Custom ID**—Apply the filter to tasks with a specific custom ID (that is, the custom identification that was created for the task when it was started). Enter the text you want to search for in the **Value** box.
- **Expiration Date**—Apply the filter to tasks that expire within a selected time range. Click the **Value** list to select a time range.
- **Last Accepted By**—Apply the filter to tasks that were last accepted by a particular user. Click **Browse** to select a user.
- **Last Updated Date**—Apply the filter to tasks that were last updated within a selected time range. Click the **Value** list to select a time range.
- **Modified By**—Apply the filter to tasks modified by a particular user. Click **Browse** to select a user.
- **Priority**—Filter by task priority. Click the **Value** list to select a priority level (None, Low, Medium, High, Critical).
- **Process ID**—Filter by the process ID assigned to the task by the Task Engine. Enter the text you want to search for in the **Value** box.
- **Task**—Filter by task type.

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- **Task ID**—Filter by the task ID number assigned to the task by the Task Engine.
 - **Task Name**—Filter by the task name assigned to the task. Enter the text you want to search for in the **Value** box.

In addition, you can search My Inbox using any of the following default saved searches on the **Saved** tab:

- All My Tasks
- My Accepted Tasks
- My Critical Tasks
- New Tasks This Week
- Tasks That Expire Today

You can also create and save your own custom searches. For additional information about searching in My webMethods, see Chapter 10 in *Working with My webMethods*.

Searching in a Task Type Inbox

On the **Basic** tab of a task type inbox, you can search the task list using any or all of the following values provided in the default Search panel:

- **Task ID**—Search by the task ID number assigned to the task by the Task Engine.
- **Priority**—Search by task priority (None, Low, Medium, High, Critical).
- **Accepted Only**—Apply the search only to tasks that have been accepted.
- **Created**—Search for tasks created within a selected time range. Click the arrow button to the left of the label to specify a time range.
- **Expiration**—Search for tasks that expire within a selected time range. Click the arrow button to the left of the label to specify a time range.
- **Last Updated**—Search for tasks that were last modified within a selected time range. Click the arrow button to the left of the label to specify a time range.

Note: By default, searches in the task type inbox are limited to the task type associated with the inbox. However, the task developer can configure the task type to search all task types, or a specific list of task types. Check with the task developer if you are not sure which search pattern is applied to a task type inbox.

These fields may be added to or replaced by custom fields provided by the task developer. By default, searches are case-sensitive, but the task developer has the ability to make individual custom search fields case-insensitive.

Initially, a task type inbox does not contain any saved searches. However, you can define and save searches for future use. For additional information about searching in My webMethods, see Chapter 10 in *Working with My webMethods*.

Customizing the My Inbox and Task Type Inbox Results List

You can customize the results list in My Inbox and in a task type inbox to suit your needs. Note that the default results display for a task type inbox (as well as the available columns and other preferences) can be customized at design time by the task type developer. Therefore, the available preferences may vary from one task type inbox to another.

To customize the task results list

1. Do one of the following:
 - To customize the My Inbox task results list, click **Properties** in the Inbox window menu.
 - To customize a task type inbox task results list, click **Properties** in the Task Results window menu.
2. Click the **Preferences** tab to specify:
 - **Number of Rows to Display**—select from 10, 20, 50, 100, or Show all. Note that larger numbers of rows (and especially Show All) may cause slower response times when accessing the inbox.
 - **Sort by**—select from any of the available display columns to set the default column for sorting the results list. Although it is not required, verify that the selected column is selected for display in the **Selected Columns** list. For more information about sorting the results list, see ["Sorting Tasks in the Task Inboxes" on page 39](#).
 - **Sort Order**—Ascending or Descending.
 - **Column Display**—Move the columns you want to view into the **Selected Columns** list, or remove columns by moving them to the **Available Columns** list. Use the up and down arrows to reposition the columns in the **Selected Columns** list.

Important: You must have the **Task ID** column displayed in the results list to be able to open a task. You can also open a task from the **Custom ID** column, but this value may not be populated for every task.

3. Click **Save**.

Directing a Task to a User

Within My webMethods, a task can be assigned and *delegated*. Although the actions are similar, it is important to understand the differences between them.

About Task Assignment

Task assignment results from manual assignment of a task by a My webMethods user or as a result of a task's assignment rule evaluation applied by the Task Engine. In the latter case, the conditions that trigger the task assignment and the results of the assignment action are defined within the task. When a task type developer creates a task type, the designer typically configures the task type for automatic assignment when the task is started.

Assignment simply means the task appears in a user's task inbox results list. A task can be assigned to more than one user, group, or role. Although a task can be assigned to a user, group, or role, assignment of the task does not result in acceptance of the task.

For example, your business model may call for each customer service request to be reviewed by a manager and then assigned by the manager to an available customer service representative. This can be accomplished by creating the task type with an assignment rule that assigns the task to the CS Manager role when the task is started. The customer service manager can then manually assign the task to an available customer service representative.

Note: This is a very basic example. It would be more efficient for the task developer to include logic in the task to monitor the task for an approval by a member of the CS Manager role and then use the task distribution capability of the Task Engine to automatically assign the task to the next available customer service representative.

Similarly, an incoming customer service request can trigger a customer service task, which can then be assigned to the Customer Service role. In this case, the new task appears in the My Inbox list of every member user of the Customer Service role. From this location, the new task can be accepted by any role member.

After a task is assigned to a role, group, or user, it remains assigned to that role, group, or user until it is manually or programmatically reassigned, deleted by a user, or otherwise removed from the task inbox results list. With proper permissions, you can set a task assignment to an empty value to make an assigned task into an unassigned task.

In addition to automated assignment by Task Engine evaluation, tasks can be manually assigned from the following locations, with appropriate permissions:

- **Task List Management Page**—The **Assign To** button on this page enables you to assign the task to any available user, group, or role in My webMethods. When modified, this assignment list replaces any and all assignments made from My Inbox or a task type inbox.
- **Details Page**—If the task type developer has configured the task type to include task assignment, the **Assign to Users** button on the **Data View** tab of the Details page enables you to assign a task to any available user, group, or role in My webMethods. Assignments made here are added to the existing assignment list.

Additional rules can be contained in a task type to assign it to a different role, group, or user when a particular condition is matched, such as a change in the task status. You

can modify the assignment rules contained in a task type; for more information, see ["Managing Rules for a Task Type \(Deprecated\)" on page 128](#).

Differences in Task Assignment and Delegation

There are two basic differences between assigning a task and delegating a task:

- Tasks can be assigned to users, groups, and roles; tasks can be delegated only to individual users.
- Assignment and delegation information is displayed separately in the task's **Details View** tab. When a task is assigned, only the current user, group, and role assignments appear in the **Assigned To** field; there is no display of who applied the assignment action. When a task is delegated, the complete "delegation trail" appears in the **Delegation** field. That is, it displays the user delegating the task and the user to whom the task was delegated, for all delegations actions. For example:

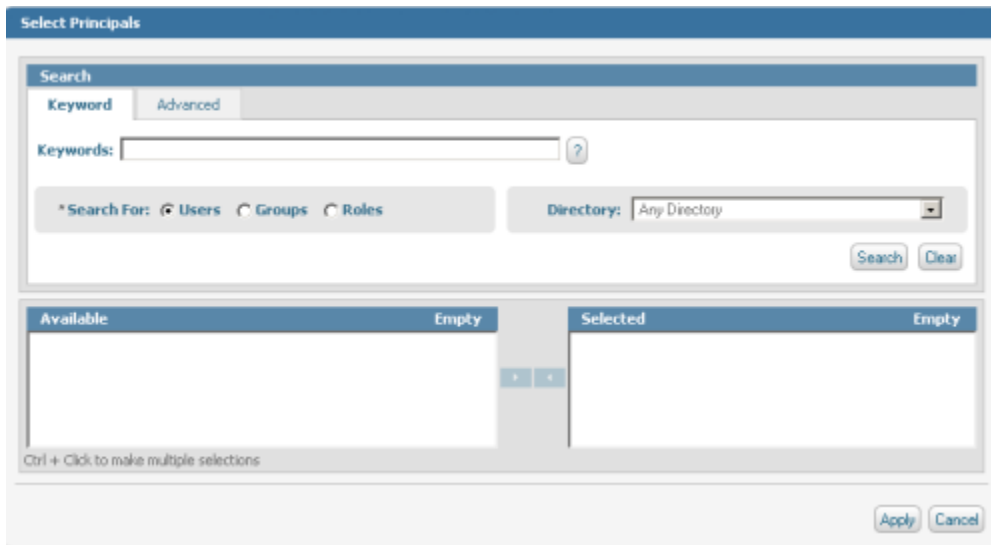
Delegation: user1 -> user2
 user2 -> user3

indicates that the task was initially delegated from user1 to user2, and then delegated from user2 to user3. Both delegation and assignment information is also available as details of chronological Task Updated operations on the **Audit View** tab. For more information about task delegation, see ["Delegating Tasks" on page 56](#).

Essentially, task assignment can be viewed as an administrative or managerial function, whereas task delegation can be viewed as a user-oriented (or peer-to-peer) activity. The task assignment and task delegation actions each have a separate permission, and can be granted jointly or independently of one another. For more information about providing permissions, see ["Configuring Task Access Permissions" on page 105](#).

Working with the Select Principals and Select Users Dialog Boxes

Depending on where you are working, you use the Select Principals or Select Users dialog boxes to assign or delegate a task, accept a task for another user, or subscribe to a task notification. These dialog boxes have a standard set of controls for finding the users, groups, and roles that you want to work with. A typical instance of the dialog box looks like this:



Depending on the area you are working in, you may be able to select from users, groups, and roles, as shown above; for example, when assigning a task or subscribing to a task notification on the Task List Management page. In other cases, such as delegating a task or assigning a collaboration task, the Select Users dialog box appears and you can only select from users (groups and roles are not available).

Regardless of which dialog box is in use, you have two methods of creating a filter for displaying principals or users in the **Available** list:

- **Keyword.** This tab enables you to search by typing text keywords; matching entries for existing users (or groups and roles, depending on the selected options) appear in the **Available** list when you click **Search**. A **Save** button enables you to save the search for future use from the **Saved** tab. The following behavior applies to text in the **Keywords** field:
 - For internal directories - The search matches only principal names that contain the keyword text. For example, `nor` will match `norbert` and `norman`. Wildcards and multiple words are not supported.
 - For LDAP directories - The search matches principal names that contain the keyword text. Wildcard (*) characters are allowed inside the keyword. For example, `nor` will match `norbert` and `norman`, `t*m` will match `tim` and `tom`. Multiple words are not supported.
 - For DB directories - Behavior varies depending on the SQL implementation.
- **Advanced.** This tab enables you to construct advanced filter conditions for locating principals and users by specifying one or more field name = value pairs; additional pairs can be added or removed by clicking **+** **-**. Matching entries for existing users (or groups and roles, depending on the selected options) appear in the **Available** list when you click **Search**. A **Save** button enables you to save the search for future use from the **Saved** tab. You can select the field to match from a drop-down list; the available fields include:

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- E-mail address
 - First name
 - Last name
 - Name
 - Various user preferences
 - Many user profile values, including address, phone number, area code, country code, postal code, state/province, and title.

Assigning a Task from a Task Inbox

Important: When assigning a task, the users, groups, or roles you assign the task to must be granted the access and functional privileges required to work with the task type you are assigning. Otherwise, the task will not appear in the user's inbox, or the user may not be able to work with the task. For more information, see ["Configuring Task Access Permissions" on page 105](#).

For information about assigning a task from the Task List Management page, see ["Assigning a Task from the Task List Management Page" on page 94](#).


To assign a task from the Data View tab in My Inbox or a task type inbox

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Select **My Inbox** or a task type inbox.
3. Open the task you want to assign.

Note: In the following step, the **Assign to Users** button is available only if the task type developer has selected the Enable User Routing option for the task type.

4. On the **Data View** tab, click **Assign To Users**. The Select Principals dialog box appears. Note that the **Selected** list is empty. Any users, groups, or roles you specify here will be added to the assignment list.


Note: If you click **Apply** with an empty **Selected** list, the task will be unassigned.

5. Use the controls in the **Search** panel to search for the users, groups, or roles you want to assign the task to; for more information, see ["Working with the Select Principals and Select Users Dialog Boxes" on page 52](#). The result of the search appears in the **Available** list.
6. In the **Available** list, select the user, group, or role names you want to work with, then click  to move your selection to the **Selected** list.
7. Click **Apply** to add the selected users, groups, or roles to the existing assignment list.

The selected task appears in the task inboxes of the selected users, groups, and roles. The assignment action is recorded in the task's audit log displayed on the **Audit View** tab of the task's Details page.

Viewing Task Assignments

You can view the current assignment of tasks in the following ways:

- From any task results list, open the task and click the **Details View** tab. Task assignments are listed in the **Assigned To** field.
- In the Task List Management page and the Task Inbox page, the **Assigned To** column is displayed by default in the Tasks list. To display the **Assigned To** column if it is not visible on either of these pages:
 1. In the Task window menu, click **Properties**, then click the **Preferences** tab.
 2. In the **Column Display** panel, select **ASSIGNED TO** in the **Available Columns** list then click  to move your selection to the **Selected Columns** list.
 3. Click **Apply**. The assignments for all tasks now appear in the task list.

Unassigning a Task

After you have assigned a task to a user, group, or role, you may want to withdraw that assignment. You cannot remove a task assignment from My Inbox or from a task type inbox. Task assignments can only be removed on the Task List Management page. For more information, see ["Unassigning a Task from a User, Group, or Role" on page 94](#).

Delegating a Task

Task delegation is similar to assignment, but the main difference is that there is a complete audit trail for all users involved in the delegation. When a task is delegated, the task appears in the inbox of the user to whom it was delegated. For more information, see ["Delegating Tasks" on page 56](#).


Accepting a Task

After a task is assigned to you, you must first accept the task to work on it. Task acceptance can be carried out in the following ways:

- Manually, by clicking an **Accept** button on the task **Data View** (if available).
- Automatically, as determined by the task type developer. A task type can be configured to be automatically accepted when:
 - You open a task from a task type inbox.
 - You modify a task.

In these cases, an **Accept** button is not displayed.

Tasks may be assigned directly to your user name, or to a group or role that you are a member of. When a task is assigned specifically to you, it appears in your inbox only. When a task is assigned to a group or role, it will appear in the inbox of every user who is a member of that group or role.

After you have accepted a task, the  Accepted icon appears in the Accepted column of the results display in your inbox (you must have the Accepted column selected for display in the display options page).

By default, a task can be accepted by only one user at a time; however, the task type developer can configure a particular task type to be accepted by two or more users. In addition, the task type developer can define task filter rules that can prevent you from seeing tasks accepted by other users.

If you attempt to accept a task that has already been accepted by another user, you will receive a message that you cannot accept the task. Click the **Details View** tab on the Details page to see who has accepted the task.


If you have been granted Task Management permissions, you can accept a task for other users. If the task is not yet assigned, it is assigned and accepted at the same time. For more information, see ["Accepting a Task for a User" on page 95](#).

Releasing a Task

After you accept a task, the task becomes your responsibility. In most cases, the task cannot be accepted by other users (however, it is possible for a task type developer to configure a particular task type to be accepted by two or more users). If the task contains a **Release** button, you can release an accepted task, enabling another user to accept the task.

To release a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to release.
4. On the **Data View** tab of the Details page, click **Release**.

The task is released for acceptance by another user, and the  Accepted icon is removed from the task entry in your task inboxes. The release action is recorded in the task's audit log displayed on the **Audit View** tab of the task's Details page.

Delegating Tasks

Task delegation enables you to forward a task that is in your inbox to another user, with a complete audit log of who the task was delegated from, who it was delegated to, and

who did the delegating. The delegated task continues to be visible in your inbox. If you want to assign a task instead, see ["Assigning a Task from a Task Inbox" on page 54](#).

Delegation has no effect on the task's acceptance:

- If you delegate an accepted task, the task continues to be accepted by the initial user. The initial user must release the task to enable the delegated user to accept it, as described in ["Releasing a Task" on page 56](#).
- A delegated task is automatically accepted by the delegated user—the delegated user must accept the task as described in ["Accepting a Task" on page 55](#).


By default, the **Delegate** button is available in My Inbox and in the task type inboxes, making it more accessible than the **Assign To** button, which is on the Task List Management page only (a **Delegate** button is also available on the Task List Management page).



Delegating a Task from Your Inbox

You can delegate any task in My Inbox or in any of your task type inboxes to another user. For information about delegating a task from the Task List Management page, see ["Delegating a Task from One User to Another" on page 97](#).

Important: When delegating a task, the users you delegate the task to must be granted the access and functional privileges required to work with the task type you are delegating. Otherwise, the task will not appear in the user's inbox, or the user may not be able to work with the task. For more information, see ["Configuring Task Access Permissions" on page 105](#).

To delegate a task in your inbox

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click the tab for My Inbox or for a task type inbox.
3. Select the task or tasks you want to delegate.
4. Click **Delegate**. The Select Users dialog box appears.
5. Use the controls in the **Search** panel to search for the user you want to forward the task to; for more information, see ["Working with the Select Principals and Select Users Dialog Boxes" on page 52](#). The result of the search appears in the **Available** list.
6. In the **Available** list, select the user name you want to work with, then click  to move your selection to the **Selected** list. Only one user name can be selected.
7. Click **Apply** to delegate the task to the selected user.

The delegated from  icon appears next to the task in your task inbox. The task appears in the delegated user's inbox with a delegated to  icon.

On the task's **Detail View** tab, and anywhere the delegation information appears, the delegated from and delegated to users are shown, for example: User1 ->User2. This

information is also presented in a different form on the **Audit View** tab, along with the name of the user who applied the delegate action (in the **Source** column).


Removing a Delegation

You can remove a task delegation from tasks that you have delegated to another user in My Inbox or in any of your task type inboxes. Removing the task delegation effectively cancels the last delegation action.



For more information about removing all delegations of a task from the Task List Management page, see ["Removing All Task Delegations" on page 98](#).

Note: The ability to remove a delegation does not apply to tasks that have been delegated to you; you can only remove the delegation from tasks you have delegated to another user.

To remove a task delegation

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click the tab for My Inbox or for a task type inbox.
3. Select the task or tasks you want to remove the delegation from. The tasks must be marked with the delegated from  icon.
4. Click **Remove Delegation**. A confirmation dialog box appears.
5. Click **Remove Delegation**.

Viewing Task Delegations

To identify delegated tasks, look for the delegated to  and delegated from  columns in the task results list.

Note: You must have the Delegated To Icon and Delegated From Icon columns selected for display on the display options page for the results list. For more information, see ["Customizing the My Inbox and Task Type Inbox Results List" on page 50](#).

You can view the delegation information for tasks in your inbox in the following ways:

- From any task results list, open the task and click the **Details View** tab. Task assignments are listed in the **Delegation** field.
- In the Task List Management page:
 1. Click **Properties** in the Tasks window menu, then click the **Preferences** tab.
 2. On the display options panel, select **DELEGATIONS** in the **Column Display** list.
 3. Click the single right arrow button to move the selection to the **Selected Columns** list.

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4. Click **Save**.

The delegation information for all tasks are now displayed in the Task List Management Tasks panel.

Scheduling Task Delegation

There may be times when you want to schedule delegation of tasks from your own user account to another user, or from one user to another. You can create a scheduled delegation for each type of task in your task inboxes, and define a time period during which all tasks of that type are delegated to a specified user.

The most common example is to accommodate known leaves of absence—during the time when one user is out of the office, you want to delegate those tasks to a second user for processing.

- To schedule delegations from your own user account to another user, you access the delegation scheduling feature from any of your task inboxes.
- To schedule delegations from one user to another, you access the feature from the Task List Management page.

Scheduling a Task Delegation

Important: When delegating a task, the users you delegate the task to must be granted the access and functional privileges required to work with the task type you are delegating. Otherwise, the task will not appear in the user's inbox, or the user may not be able to work with task. For more information, see "[Configuring Task Access Permissions](#)" on [page 105](#).

To schedule a task delegation

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Do one of the following:
 - To create a scheduled task delegation for another user, click **Task List Management**.
 - To create a scheduled task delegation for your account, click **My Inbox** or one of the task type inbox tabs.
3. In the results list panel, click the **Scheduled Delegations** link. The Scheduled Delegations page opens.
4. Click **Add Delegation**.
5. In the Add Delegation dialog box, select the type of task you want to delegate in the **Task** list.
6. Do one of the following:
 - If you are creating a scheduled task delegation for another user on the Task List Management page, use both **Browse** buttons to specify the user you want to delegate from and the user you want to delegate to.

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- If you are creating a scheduled task delegation for your account, use the **Browse** button to specify the user you want to delegate to.
7. To specify the period during which tasks are delegated, select one of the following in the **Scheduled Delegation Dates** list:
 - **Custom**—This selection enables you to define a custom time period with the start and end date and time controls.
 - **All**—this selection causes all tasks of the specified type to be delegated beginning immediately and continuing until the delegation is removed. The start and end date controls are set to 01-Jan-1970 and 31-Dec-9999, respectively.
 - **Time period**—select a time period (for example, **This Day**, **This Week**, **Coming Seven Days**). The selected values are displayed in the start and end date and time controls.
 8. Click **Save**.
 9. The new scheduled delegation appears as follows:
 - If you are creating a scheduled task delegation for another user, the new scheduled delegation appears in the list of scheduled delegations on the Scheduled Delegations page accessed from the Task List Management page. It also appears on the Scheduled Delegations page accessed from the user's My Inbox or task type pages. The user can delete or modify the delegation from that location when the user's role has been granted permissions to do so.
 - If you are creating a scheduled task delegation for your account, the new scheduled delegation appears in the list of scheduled delegations on the Scheduled Delegations page accessed from the **My Inbox** or task inbox tabs.

Deleting a Scheduled Task Delegation

You can delete a scheduled task delegation that you have created for your own account, or for another user's account.

To delete a scheduled task delegation

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Do one of the following:
 - To delete a scheduled task delegation for another user, click **Task List Management**.
 - To delete a scheduled task delegation for your account, click **My Inbox**.
3. In the results list panel, click the **Scheduled Delegations** link. The Scheduled Delegations page opens.
4. Select the scheduled delegation you want to delete.
5. Click **Delete**. A confirmation dialog box appears.
6. Click **Delete**.

If the scheduled delegation is active, delegation will cease immediately.

Viewing Scheduled Task Delegations

You can view scheduled task delegations as follows:

- To view scheduled task delegations you have created to for another user, click the **Scheduled Delegations** link on the **Task List Management** page.
- To view scheduled task delegations you have created for your own account, click the **Scheduled Delegations** link in My Inbox or in a task type inbox.

Working with Attachments

Some tasks in your inbox may carry attached documents or other files. Depending on the permissions assigned to you, you can work with these files and add additional attachments to the task. Note that the implementation of attaching content described here is completely different from the functionality described in ["Working with Content in Tasks" on page 68](#).

In earlier versions of Designer and Task Engine, attachment support was provided by including an attachments panel to the task interface at design time. With version 8.0, general attachment support is provided by default on the task **Comments** tab; this implementation is considerably simpler and easier, and is recommended over the previous approach.

It is possible that users who work with tasks created with earlier versions will still encounter the attachments panel; therefore:

- For information about working with attachments on the **Comments** tab, see ["Working with Comments and Attachments in the Comments Tab" on page 61](#), below.
- For information about working with attachments on an attachments panel, see ["Working with Attachments in an Attachments Panel" on page 66](#).

With the introduction of webMethods Content Service Platform (CSP), it is also possible to include attachments consisting of a specific content document type stored in a CSP repository. The task developer can add this capability to the **Data View** tab or to the Start page (if present). For more information, see ["About Attachments from webMethods Content Service Platform on the Data View Tab" on page 64](#).

Working with Comments and Attachments in the Comments Tab

If the proper permissions are granted to you, you can add, delete, modify comments and attachments on a task's **Comments** tab. At design time, the task developer can set a scope for the comments and attachments, defining how comments and attachments are shared.

For more information about scope, see ["About Task Comments and Attachments Sharing" on page 26](#).

Note: The comment permissions cover functionality for both comments and attachments. That is, if you grant permission to a user for comments, you are also granting permission for attachments.

Adding a Comment to a Task

With proper permissions, you can add a comment to a task from the task's **Comments** tab.

To add a comment to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks****My Inbox**, or select a task type inbox.
2. In the results list, click the **Task ID** or **Custom ID** link to open the task you want to modify.
3. On the Details page, click the **Comments** tab.
4. Click **Add Comment**.
5. Type your comment into the **Comment Text** box.
6. Click **Create**.

Updating a Comment in a Task

With proper permissions, you can add a comment to a task from the task's **Comments** tab. Separate permissions are available to enable users to update their own comments, and to update the comments of other users.

To update a comment in a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > My Inbox**, select a task type inbox.
2. In the results list, click the **Task ID** or **Custom ID** link to open the task you want to modify.
3. On the Details page, click the **Comments** tab.
4. Click the **update** link for the comment you want to work with.
5. On the Edit Comment panel, modify the comment in the **Comment Text** box.
6. Click **Update**.

Deleting a Comment from a Task

With proper permissions, you can delete a comment from a task on the task's **Comments** tab. Separate permissions are available to enable users to delete their own comments and attachments, and to delete the comments and attachments of other users.

To delete a comment from a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > My Inbox**, select a task type inbox.

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2. In the results list, click the **Task ID** or **Custom ID** link to open the task you want to modify.
 3. On the Details page, click the **Comments** tab.

Important: No delete confirmation is given in the following step; the comment is deleted permanently when the **delete** link is clicked.

4. Click the **delete** link for the comment you want to work with.

Adding an Attachment to a Task

With proper permissions, you can add an attachment to a task from the task's **Comments** tab.

To add an attachment to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > My Inbox**, select a task type inbox.
2. In the results list, click the **Task ID** or **Custom ID** link to open the task you want to modify.
3. On the Details page, click the **Comments** tab.
4. Click **Add Comment**.
5. Type a comment into the **Comment Text** box (comment text is required to add an attachment).
6. Click **Browse** and select the file you want to attach (one file can be selected).
7. Click **Open** (Windows) or otherwise accept the selected file.
8. Click **Attach**.
9. Do one of the following:
 - Repeat steps 6 - 8 to continue adding attachments.
 - Click **Create** to add the comment and the attachment(s) to the task.

Updating an Attachment in a Task

After you attach a file to a task, the attached file is independent of the original. In other words, if you apply modifications to the original file, they will not appear in the attachment. To update the attachment you must:

- Delete the original instance of the file from the attachments list (see ["Deleting an Attachment from a Task" on page 64](#)).
- Add the latest version of the file as an attachment (see ["Adding an Attachment to a Task" on page 63](#)).

Deleting an Attachment from a Task

With proper permissions, you can delete an attachment from a task on the task's **Comments** tab. Separate permissions are available to enable users to delete their own comments and attachments, and to delete the comments and attachments of other users.

To delete an attachment from a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > My Inbox**, select a task type inbox.
2. In the results list, click the **Task ID** or **Custom ID** link to open the task you want to modify.
3. On the Details page, click the **Comments** tab.
4. On the **Comments** tab, do one of the following:

Important: If you click the **delete** link for the comment at this point, this will remove *both the comment and all attachments*. No delete confirmation is given when deleting attachments; the item is deleted permanently when the **delete** link is clicked.

- Click the **delete** link to remove the comment and all attachments.
- Click the **update** link to remove attachments only. On the Edit Comment panel, you can delete an individual attachment by clicking the **delete** link for the attachment you want to work with.

About Attachments from webMethods Content Service Platform on the Data View Tab

The task developer can create a task type with a **Data View** tab that supports working with attachments that are stored in webMethods Content Service Platform (CSP). For example, suppose an accident claim is published to CSP (or a managed repository). This triggers a BPM business process that contains a CSP content document type with the accident claim form as an attachment. The CSP content document type is identified by a unique content ID.

The business process starts a CSP-attachment-enabled task for a claims adjuster, displaying the accident claim form as an attachment on the task **Data View** tab. The claims adjuster can view, edit, or delete the file associated with the CSP content document type (depending on user permissions) as well as add any other files as attachments to the CSP content document type.

In this case, attachments are restricted to the CSP content document type defined in the task type. If you want to add attachments to any other CSP content document type, you would do this on the **Content** tab of the task (assuming the task has been implemented to support this, which would be unusual). If the **Content** tab is not available to you, you can add attachments only to the CSP document type defined in the task type.

If the task has been implemented with a **Comments** tab, you can add attachments there, but they will not be integrated into the webMethods Content Service Platform repository.

and will exist only in the task. For more information, see ["Adding an Attachment to a Task" on page 63](#).

Attaching Files to a Content Document Type on the Data View Tab

You can add files to a content document type from a Content Service Platform repository on the task **Data View** tab. If you want to attach files to a content document type on the **Content** tab, see ["Working with Content in Tasks" on page 68](#).

To attach files to a content document type on the Data View tab

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Data View** tab. You can drag files and drop them onto the area at the bottom of the Attachments panel, or you can use the following steps.
5. In the Attachments panel, click **Add**.
6. In the Attach Files dialog box, click **Browse** to locate and select the file you want to add.
 - Click **Attach Another File** to add another file to the content.
 - Click **Remove** to remove a selected file.
7. Click **Save** to add the selected files to the repository and the Attachments panel.

Removing File Attachments from a Content Document Type on the Data View Tab

You can remove file attachments from a content document type on the task **Data View** tab.

To remove file attachments from a content document type on the Data View tab

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Data View** tab.
5. In the Attachments panel, click the selection check box for the attachment to select it for removal. You can click the select icon in the column header to select all attachments.
6. Click **Remove**. The selected attachments are removed from the content document type in the task and in the repository.

Working with Attachments in an Attachments Panel

In earlier versions of Designer and Task Engine, attachment support was provided by including an attachments panel in the task interface at design time. This implementation is deprecated, but still may be found in some older task applications.

Attaching a File to a Task

The following procedure applies to the deprecated attachment panel only.

To attach a file to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. On the **Data View** tab, click the **Add** button in the Attachments panel. The Add Attachments dialog box appears. This dialog box enables you to add up to three files at one time.
5. Click **Browse** to locate and select the file you want to attach.
6. Specify the encoding type for the file; for example, binary for a PDF file. If the value you require is not in the **Encoding** list, click **Other** to specify a custom value.
7. Click **Add** to add the file to the task.

Viewing an Attached File

You must have the appropriate application installed on your computer to read a file attachment. For example, to view a PDF file, you must have a PDF application such as Acrobat Reader installed. My webMethods does not provide any internal viewing capability.

To view a file that is attached to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. On the **Data View** tab, click the attachment name in the Attachments panel. In the resulting dialog box, specify that you want to open the file (you can also save the file first and then open it from your file system).
5. Click **OK** to view the file.

Downloading an Attached File

To download a file that is attached to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. On the **Data View** tab, click the file name in the Attachments panel. In the resulting dialog box, specify that you want to save the file.
5. Click **OK**.
6. Specify the file name and location for saving the file.
7. Click **OK** to save the file.

Updating an Attached File

After you attach a file to a task, the attached file is independent of the original. In other words, if you apply modifications to the original file, they will not appear in the attachment. You must upload the updated file to the task.

To update an attached file

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. In the Attachments panel on the **Data View** tab, click the **Update** button next to the file you want to update. The Update Attachment dialog box appears.
5. Click **Browse** to locate and select the updated file in your file system.
6. Specify the encoding type for the file; for example, binary for a PDF file. If the value you require is not in the **Encoding** list, click **Other** to specify a custom value.
7. Click **Update** to update the file attached to the task. The updated file replaces the previous file.

Removing an Attached File

To remove an attached file from a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. On the **Data View** tab, select the file you want to remove in the Attachments panel.

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5. Click **Remove**. A confirmation dialog box appears.
 6. Click **Remove** to remove the document.

Working with Content in Tasks

You can use the task **Content** tab to add, detach, and view content document types sourced in a webMethods Content Service Platform repository. You can also create new document types here as well as edit attached document types.

The **Content** tab appears only if the task developer has included it when creating the task type, and use of the **Content** tab requires the implementation and configuration of a complete webMethods Content Service Platform environment. Note that this implementation of attaching content is completely different from the functionality described in ["Working with Attachments" on page 61](#).

You can also work with content from webMethods Content Service Platform on the **Data View** tab, although it would be unusual for a task type to be implemented with both the **Content** tab and the **Data View** tab enabled for CSP content. For more information, see ["About Attachments from webMethods Content Service Platform on the Data View Tab" on page 64](#)

Note: Your user account may not have the required permissions to carry out some or all of these procedures on the associated webMethods Content Service Platform repository. Contact your system administrator if you need to obtain these permissions. For specific information about the features, functions, and operation of the webMethods Content Service Platform core components, refer to the documentation provided in the installation directory: *Software AG_directory/CSP/*.

Attaching a Content Document Type to a Task

You can attach a content document type to a task on the task **Content** tab.

To attach an existing content document type to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Content** tab.
5. Click **Attach Existing Content**.

The Search and Attach Existing Content dialog box displays the Content Service Platform nodes from the webMethods Content Service Platform server. The available nodes depend on your CSP user permissions.

- a. In the **Date Range** pull-down list, select one of the predefined values. Click the small arrow to the left of the **Date Range** field to display the additional fields for start and end

date. These fields are dynamically updated according to the selected value from the pull-down list.

If you want to select custom dates and time, set the value of the **Date Range** field to **Custom** and enter your own start and end dates.

- b. Select the node you want to attach a content document type from.
- c. Use the **Index**, **Operator**, **Value**, and **Join** fields to define search criteria for the content document type. If more than one node is selected, the **Index** field will show the indexes of all selected nodes.

Note: You can add or remove search criteria by clicking the **Add** and **Remove** buttons in the Tools column.

- d. Click **Search** to display the content document types that match the search criteria.
The search results contain the values of the first five nonrepetitive search criteria you have defined.
- e. Select an entry from the search results and click **Attach Selected**.
The content type is attached to the task and appears in the **Content** tab. Its details appear in the **Content Id**, **Last Modified Date** and **Last Modified By** columns.

Removing a Content Document Type from a Task

You can detach (remove) a Content Service Platform repository content document type that was previously attached to a task on the task **Content** tab.

To detach a content document type from a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Content** tab.
5. Select the content you want to work with by clicking the check box at the left of the content row.
6. Click **Detach Selected** (the **Detach Selected** button remains disabled until you select a content document type).

Creating a New Content Document Type in a Task

You can create a new content document type in a Content Service Platform repository on the task **Content** tab and add it to the task and repository.

To create a new content document type in a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Content** tab.
5. Click **New Content**.

On the New Content dialog box:

- a. Select the content node where you want to save the new content.
The metadata fields appropriate for the selected content node appear.
- b. Type the metadata values you want to define for the new content. The required fields are marked with an asterisk.
- c. Click **Submit** to create the new content.

The newly created content is added to the repository and appears in the list of content document types attached to the task.

Editing a Content Document Type Attached to a Task

You can edit a content document type from a Content Service Platform repository on the task **Content** tab.

To edit a content document type attached to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Content** tab.
5. Select the content you want to work with by clicking the check box at the left of the content row.
6. Click **Edit Content**.
 - a. In the Edit Content dialog box, modify the metadata field values as required.
 - b. Click **Submit** to apply the modifications.

Attaching Files to a Content Service Platform Content Document Type

You can add files to a content document type from a Content Service Platform repository on the task **Content** tab. If you want to attach files to a content document type on the **Data**

View tab, see ["About Attachments from webMethods Content Service Platform on the Data View Tab"](#) on page 64.

To attach files to a content document type

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Content** tab. You can drag files and drop them onto the area at the bottom of an Attachments panel, or you can use the following steps.
5. In the Attachments panel of any attached content document type, click **Add**.
6. In the Attach Files dialog box, click **Browse** to locate and select the file you want to add.
 - Click **Attach Another File** to add another file to the content.
 - Click **Remove** to remove a selected file.
7. Click **Save** to add the selected files to the repository and the Attachments panel.
8. In the Attachments panel, place the cursor over the attachment file name to view a preview of the added file(s).

Removing File Attachments from a Content Document Type

You can remove file attachments from a content document type on the task **Content** tab.

To remove file attachments from a content document type

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Content** tab.
5. In the Attachments panel, click the selection check box for the attachment to select it for removal. You can click the select icon in the column header to select all attachments.
6. Click **Remove**. The selected attachments are removed from the content document type in the task and in the repository.

Viewing Attachments to a Content Document Type

If the Content Service Platform (CSP) WebReader is installed in My webMethods Server, you can view the attachments to a content document type on the **Content** tab with the WebReader. The WebReader is a lightweight alternative to the CSP Windows Client, and it enables you to view and manipulate your documents in any web browser. For more information about the CSP WebReader, see "About the Content Service Platform

WebReader” in the PDF publication *Implementing webMethods Content Service Platform for BPM*.

To view attachments to a content document type in a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Open the task you want to work with.
4. Click the **Content** tab.
5. Click **View All** to view all attached files in the CSP WebReader, which opens in a separate browser tab.

Note: If the CSP WebReader is not installed, you will receive a status 404 error message from the browser indicating that the requested resource is not available.

For more information about working with the WebReader, see the CSP HTML help, which can be found in any of these locations:

- In the product installation directory: *Software AG_directory\CSP\doc*
- If you have installed the Documentation component with the Software AG Installer, in the folder *Software AG_directory_documentation\webMethods\Third-Party\Content_Service_Platform*.
- In the documentation area the Empower Product Support website: <https://empower.softwareag.com> (log in required).

Working with Notifications

The task type developer can create notification events within a task that will publish a notification e-mail when the conditions of the event are matched. For more information, see "[About Task E-mail Notifications](#)" on page 28.

The notification e-mail you receive may contain one or more Task Action Links that enable you to execute specific actions on the task that sent the notification, without requiring a connection to My webMethods Server. These task notification reply e-mail actions are logged and displayed on the task's **Audit View** tab.

For information about replying to task e-mail notifications, see "[Responding to an E-mail Notification](#)" on page 75.

Subscribing to a Task Notification for Your Own User Account

You must be granted the Subscribe to Tasks functional permission to carry out this procedure. An administrator can subscribe you to a task notification if you do not have this permission.

For more information about the conditions governing the sending of task notifications, see the topic “Understanding Task Notification Behavior” in the *webMethods BPM Task Development Help*.

Note: You are subscribing to a notification for a specific task type. This means that you will receive notifications for all task instances that are started from that task type and that are assigned to you.

To subscribe to a task notification for your own user account

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. In the results list panel, click the **Subscriptions** link.
4. On the Task Subscriptions page, click **Subscribe**.
5. In the Select Task Subscriptions wizard, select the task type you want to subscribe to in the **Task** list and click **Next**.
6. If the task type you selected in step 4 contains notifications, they are listed in the **Task Subscriptions** list in the next dialog box. If the task type contains no notifications, the **Task Subscriptions** list will be empty.
7. Select the task subscriptions that you want to subscribe to.
8. Click **Subscribe**.

The selected subscription appears on the Task Subscriptions page.

Unsubscribing from a Task Notification for Your Own User Account

To unsubscribe from a notification for your own user account

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. In the results list panel, click the **Subscriptions** link.
4. On the Task Subscriptions page, select the task notification that you want to unsubscribe from and click **Unsubscribe**.
5. On the confirmation dialog box, click **Unsubscribe**.

The selected subscription is removed from the Task Subscription page.


Subscribing to a Notification Rule for Other Users

You must be granted the Task List Management access permission and the Subscribe to Tasks functional permission to carry out this procedure. An administrator can subscribe

other users to a task notification if you do not have this permission. It is not necessary for the other users to have the Subscribe to Tasks functional permission to be subscribed.

For more information about the conditions governing the sending of task notifications, see the topic “Understanding Task Notification Behavior” in the *webMethods BPM Task Development Help*.

To subscribe to a notification for other users

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **Task List Management**.
3. In the results list panel, click the **Subscriptions** link.
4. On the Task Subscriptions page, click **Subscribe**. The Select Task Subscriptions wizard appears.
5. Select the task type you want to subscribe to in the **Task** list and click **Next**.
6. If the task type you selected in step 4 contains notifications, they are listed in the **Task Subscriptions** list in the next dialog box. If the task type contains no notifications, the **Task Subscriptions** list will be empty.
7. Select the task subscriptions that you want to subscribe to. The entire name of the subscription may not be visible; place the cursor over the subscription name to see the entire name in tool tip form.
8. Click **Browse** to open the Select Principals dialog box. Use the controls in the **Search** panel to select the user, group, or role you want to subscribe; for more information, see ["Working with the Select Principals and Select Users Dialog Boxes" on page 52](#). The results appear in the **Available** list.
9. In the **Available** list, select the user, group, or role name you want to work with, then click  to move your selection to the **Selected** list. Only one user, group, or role can be specified.

Note: When you subscribe a role, the role must have an e-mail address associated with it. This is done by adding a dynamic attribute "email" to the specific role, using a data type of String, with the value set to the desired e-mail address.

10. Click **Apply**.
11. Click **Subscribe**.

The selected subscription appears on the Task Subscription page for the specified user, or for users belonging to a specified group or role. Repeat this process to subscribe additional users, groups, or roles.

Unsubscribing from a Notification Rule for Other Users

To unsubscribe from a notification for other users

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**

-
2. Click **Task List Management**.
 3. In the results list panel, click the **Subscriptions** link.
 4. On the Task Subscriptions page, select the task subscription/subscriber pair you want to unsubscribe.
 5. Click **Unsubscribe**.
 6. On the confirmation dialog box, click **Unsubscribe**.

Responding to an E-mail Notification

Standard e-mail notifications are sent by way of an automated process; although you can reply to them, there is no mechanism available to process the reply e-mail. However, a task type developer can include one or more Task Action Links in the body of the notification e-mail; when you open the e-mail, the Task Action Link appears as a standard hypertext link.

When you click on a Task Action Link, an automated e-mail response (predefined by the task type developer) is sent to an e-mail account specified within the Task Action Link. This reply e-mail usually contains a reference to a specific task action that will be executed upon receipt of the reply e-mail—for example, approve or deny an order, or escalate the priority of the task. For more information, see ["Replying to a Notification without a My webMethods Connection" on page 30](#).

It is up to the task type developer to include information in the notification e-mail informing you of the results of clicking a Task Action Link. These task notification reply e-mail actions are logged and displayed on the task's **Audit View** tab in My webMethods.

Note: To respond to a task notification e-mail with a Task Action Link, your computer must have an HTML-capable e-mail client installed and running, with a connection to an outgoing mail server.

After you click the Task Action Link, you do not need to take any further action. The reply e-mail is sent by way of the e-mail client on your computer. All standard e-mail behavior applies. For example, if you collect outgoing messages in your Outbox to be sent manually, the reply notification e-mail will follow this behavior.

You can execute a Task Action Link one time only. Each subsequent time you click on a Task Action Link, a reply e-mail will be sent, but it will be ignored and will have no effect on the task.

For information about the configuration of task e-mail listeners and further information about the behavior of task reply e-mails, see ["Configuring a Task E-mail Listener" on page 163](#).

Note: Task notifications are sent to the e-mail address recorded in the user's My webMethods Server profile. Some e-mail service providers may configure their server to remove, alter, or otherwise disable the URL contained in the "Click here to open

task" link to comply with security requirements. In this case the link may be missing or inoperative in the delivered e-mail message.

Working with E#form Data in Tasks

A task developer can create a task application that uses information obtained from an e-form to provide some or all of the task's business data. From the task user's point of view (within My webMethods), there is no indication of the fact that this business data was sourced from an e-form, and the task provides the same functionality as any other task running on the Task Engine.

However, the task developer can implement an e-form-enabled task with download and upload capability. This enables you to:

- Download the e-form data in its original e-form format.
- Work with the e-form in your own local environment without having to be connected to the e-form repository.
- Reconnect to the repository and upload the form back to the task that you downloaded it from; your modifications are applied to the task business data.

Note: The default implementation of e-form support for the task interface provides a **Download** button, and **Upload** button, and optionally, a download link in the results list of the task type inbox. Your task developer may have customized the e-form portion of the task interface with more or less functionality. This material describes the default implementation.

For additional information about e-forms, see ["About E-form Integration with Tasks" on page 28](#).

Downloading an E-form from a Task

Be aware that although you can download the e-form to a folder location, you must have the appropriate e-form application installed on your computer to be able to open and modify the downloaded e-form. Software AG products do not provide the functionality for creating, modifying, and managing your electronic forms.

Also, Microsoft Office InfoPath is a Windows-only application; although you can download an InfoPath e-form to a non-Windows operating system, you will not be able to work with it locally.

To download an e-form from a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate the e-form-enabled task you want to work with.

Note: The task developer can choose to add a download link to the results list of the task type inbox. If provided, this link appears at the far right end of the row containing the e-form-enabled task. Click the link to download the e-form without opening the task. If this link is not provided, use the following steps.

4. Open the e-form-enabled task.

Note: You may be required to accept the task before you can complete the following step.

5. On the **Data View** tab, click **Download**.
6. In the Save dialog box, specify a target folder location for the downloaded e-form.
7. Click **Save**.

Uploading an E-form to a Task

You can upload an e-form to a task from a folder location in your file system.

Important: The e-form you upload must be the exact same type and version as the e-form used to source the information you downloaded in e-form format; also, always be sure to upload the form to the same task you downloaded it from.

For example, if you download an e-form to your file system, modify the data in it, and then upload it back to the task, you must not make any changes to the structure of the e-form. Doing so will result in errors. Restrict your changes to form data only.

To upload an e-form to a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the e-form-enabled task you want to work with.

Note: You may be required to accept the task before you can complete the following step.

4. On the **Data View** tab, click **Upload**.
5. In the Open dialog box, select the e-form you want to upload.
6. Click **OK**.

Exporting the Contents of a Task Inbox or Task List

You can export the contents of the following task lists as a comma-separated value (CSV) text file:

-
- My Inbox
 - Task type inboxes
 - Task List Management
 - Task Configuration (on the Task Engine Administration page)

All of the task information fields associated with the task type are saved to the file (not just the fields marked for display as columns in the list).

To export the contents of an inbox

1. Navigate to the inbox or task list you want to work with.
2. Click **Export Table**.
3. Select a character encoding format for the output file.
4. Click **Export**.
5. On the File Download dialog box, do one of the following:
 - Click **Open** to open the file using the CSV application defined on your system.
 - Click **Save** to save the file to a location in your file system.

Other Task Actions

As you work with tasks in your inbox, you may be able to carry out a portion of the work required, but not complete all of the required activities. To record your interim activities, you must submit a task. After you carry out all of the required activities for a task, you can complete it.

Submitting a Task

You must accept a task before you can submit it. For more information, see "[Accepting a Task](#)" on page 55.

To submit a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. Make your modifications to the task as required.
5. On the **Data View** tab of the Details page, click **Submit**.

Your changes to the task are saved and will be displayed for any other user who has access to the task details. The task remains in your inbox and can be opened, modified, and submitted as often as necessary.


Completing a Task

After you carry out all of the activities required by a task, you must indicate that the task is complete.

Note: It is possible for the task developer to include logic in the task to move the task to Completed status upon the matching of a defined condition. In this case, manual completion is not necessary.

To complete a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. Make any final modifications to the task as required.
5. On the **Data View** tab of the Details page, click **Complete**.

Your changes to the task are saved and the task is removed from all of your inboxes, and the inboxes of any other users to whom it has been assigned. The task status displays the Complete icon  in the Task List Management Tasks panel for all users to whom the task has been assigned. If the task is part of an automated process, the process receives the task completion information and continues on to the next step. No further work on the task is possible.

Working with Collaboration Tasks

With proper permissions, you can create and assign collaboration tasks—these tasks can also be created and assigned by a running business process. These dynamically created new tasks enable other users to provide assistance in completing a parent task. For more information about collaboration tasks, see ["About Collaboration Tasks" on page 22](#), as well as the DesignerTask Development online help.

To enhance this collaborative environment, tasks provide users with the ability to add comments and attachments to task in the run-time environment. For more information, see ["Working with Comments and Attachments in the Comments Tab" on page 61](#).

To be able to create a collaboration task from a running task:

- The task type must be enabled as a collaboration task parent.
- One or more task types must be specified for use as collaboration tasks.

For information about enabling these options, see:

- ["Disabling and Enabling Task Collaboration" on page 119](#).
- ["Specifying Allowed Collaboration Tasks" on page 120](#).

Creating a Collaboration Task

With proper permissions, you can create a collaboration task on the task's **Collaboration** tab.


To create a collaboration task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks** **My Inbox**, or select a task type inbox.
2. In the results list, click the **Task ID** or **Custom ID** link to open the task you want to modify.
3. On the Details page, click the **Collaboration** tab.
4. Do one of the following:
 - If no collaboration tasks exist for this task, click **Create Child Task**.
 - If one or more collaboration tasks exist, select the parent task, or any child task, to indicate which task you want to create the collaboration task for, and click **Create Child Task**. If properly enabled, a child task can also serve as a parent task for additional collaboration tasks.
5. Specify the following task information for the collaboration task:
 - **Collaboration Task Type**—select a task type from a list of all the available task types that can be used to create a collaboration task, as specified on the Task Engine Administration page. If no tasks types have been specified, the list is empty.
 - **Name**—The name of the collaboration task. This field is automatically filled out by Task Engine to a concatenation of the Task Type name and the assignee names after you select one or more assignees. You can replace this text with your own value.
 - **Description**—(optional) The description you want to assign to the task.
 - **Priority**—(optional) The priority you want to assign to the task.
 - **Expiration Date**—(optional) The date on which the task will be placed in expired status. Click the calendar icon to set the date.
 - **Time**—(optional) A specific time of day on which the expiration will take place.
 - **Assignees**—(optional) A list of the user names to which the collaboration task has been assigned. Click **Pick** to search for and specify one or more user names. If you do not specify a user name, the collaboration task will be unassigned upon creation. It will appear in Task List Management and can be assigned from there.
 - **Queue Task Immediately**—A check box option the controls whether the task is started immediately upon creation or is deferred for later starting. Enabled by default.
6. Click **Create New**.

Viewing a Collaboration Task

Collaboration tasks are, in general, just like other tasks that you work with in My webMethods, and can be viewed in all of the same locations:

- In My Inbox
- In a task type inbox
- In Task List Management

If the Collaboration Task column is in the results display, a collaboration icon  identifies each collaboration task. This column is not present by default; you can add it by clicking **Properties** in the results window menu. For information about working with these areas, see ["Where to Find Tasks in My webMethods" on page 32](#).

You can also view and open collaboration tasks on the **Collaboration** tab of the parent task. Depending on the permissions granted to you, you may not have access to all of the collaboration tasks.

If you are the user who started the first collaboration task in a parent task, you are the owner of the collaboration process in which all the collaboration tasks are running, and you will have access to all of the collaboration tasks.

You can also view process, step, task, audit, and comment information on the collaboration process Details page.

For more information, see ["About Collaboration Tasks" on page 22](#), and collaboration task topics in ["Administering Task Types" on page 114](#).

Opening a Task on the Collaboration Tab

To open a collaboration task on the Collaboration tab

1. In My webMethods: **Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. Click the **Collaboration** tab.
5. If there is more than one collaboration task, click the expand icon next to the parent task name in the Task display to view all of the immediate child collaboration tasks. Continue clicking any additional expand icons to view all available collaboration tasks.
6. Click the collaboration task name to open the collaboration task.

Modifying the Collaboration Task Display

You can modify the Task display on the **Collaboration** tab.

To modify the collaboration task display on the Collaboration tab

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. Click the **Collaboration** tab.
5. Click **Options**.
6. Set the following display options:
 - **Number of Rows to Display**—select from 10, 20, 50, 100, or Show all. Note that larger numbers of rows (and especially Show All) may cause slower response times when accessing the inbox.
 - **Sort by**—select from any of the available display columns. Although it is not required, verify that the selected column is selected for display in the **Selected Columns** list.
 - **Sort Order**—Ascending or Descending.
 - **Column Display**—Move the columns you want to view into the **Selected Columns** list, or remove columns by moving them to the Available Columns list. Use the up and down arrows to reposition the columns in the **Selected Columns** list.
7. Click **Apply**.

Modifying a Collaboration Task

You can apply the following changes to a collaboration task on the **Collaboration** tab:

- Change status
- Add or change assignment

To modify a collaboration task on the Collaboration tab

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. Click the **Collaboration** tab.
5. Expand the collaboration task display if necessary.
6. Select the collaboration task you want to work with by selecting the check box next to the collaboration task name.
7. Do one of the following;
 - Click **Set Status** to change the collaboration task status value.

-
- Click **Assign To** to view and modify the existing collaboration task assignments, as described in ["Assigning a Task from a Task Inbox" on page 54](#).

8. Click **Apply** to save your changes.

Deleting a Collaboration Task

With proper permissions, you can delete a collaboration task just as you would delete any task on the Task List Management page. For more information, see ["Deleting a Task" on page 96](#).


You can also delete a collaboration task on the **Collaboration** tab.

To delete a collaboration task on the Collaboration tab

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. Click the **Collaboration** tab.
5. Expand the collaboration task display if necessary.
6. Select the collaboration task you want to delete by clicking the check box next to the collaboration task name.
7. Click **Delete**.

Searching for Collaboration Tasks

You can search for collaboration tasks in My Inbox or in Task List Management by specifying a Collaboration Task value of Yes in your search criteria. For more information, see ["Filtering and Searching in My Inbox" on page 48](#).

If the Collaboration Task column is in the results display, a collaboration icon  identifies each collaboration task, and you can sort the task list to show collaboration tasks at the top of the list. This column is not present by default; you can add it by clicking **Properties** in the results window menu.

Working with Collaboration Processes

When a user creates the first collaboration task within an existing task, the collaboration task is created within a unique collaboration process associated with the parent task. Any and all subsequent collaboration tasks started within the parent task are also added to this collaboration process.

The user who started the first collaboration task is the owner of the collaboration process in which all the collaboration tasks are running; that user will have access to all of the

collaboration tasks. Note that the collaboration process owner can be a different user than the parent task owner.

Viewing Collaboration Process Details

You can view the details of a collaboration process from the **Collaboration** tab of a task with child collaboration tasks.

To view collaboration process details

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **My Inbox** or a task type inbox.
3. Locate and open the task you want to work with.
4. Click the **Collaboration** tab.
5. Click **Open Details**.
6. The Process Detail window displays the following process information:
 - A Process panel with a graphical flow view of the process, with the ability to zoom in or out and move around the process.
 - A Details panel that provides the following tabs:
 - **Process Info** tab—basic information and status of the collaboration process.
 - **Step Info** tab—basic information about a selected step in the process diagram.
 - **Task Info** tab—basic information about the collaboration task.
 - **Task Audit**—audit information about the collaboration task.
 - **Task Comments**—Comments and attachments from the collaboration task.
7. Click **Return** to return to the **Collaboration** tab.

Searching for Collaboration Processes

Depending on the permissions granted to you, you can search for instances of collaboration processes of which you are the owner, or for instances of your own instances and the collaboration processes owned by other users. The two abilities are provided by separate permissions. In both cases, the procedure is the same.

To view collaboration process details

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Collaboration Processes**.
2. By default, the Results window displays all collaboration processes owned by you.
3. On the Collaboration Processes window, specify your search criteria in each of the following panels:

-
- Process—search by:
 - **Process ID**—specify text
 - **Process Creator**—browse for a user name
 - **Participant**—browse for a user name
 - **Process Name**—specify text
 - Task
 - **Task ID**—specify text
 - **Task Type**—select from a list of available task types
 - **Task Status**—select from a list of status values
 - Date Ranges
 - **Created**—select from a list of available time periods
 - **Modified**—select from a list of available time periods
4. Click **Search**. Any matching collaboration processes are displayed in the Results window.

Completing a Collaboration Process

A collaboration process will continue to run until one of the following occurs:

- All collaboration tasks in the collaboration process are completed.
- The parent task is completed or deleted.
- The collaboration process is deleted.
- The collaboration process is manually canceled from webMethods Monitor.

Viewing Collaboration Processes in webMethods Monitor

Some, but not all, collaboration processes can be viewed in webMethods Monitor. The following conditions apply:

- Manually started collaboration processes are not visible in webMethods Monitor.
- Collaboration processes started from within a BPM process are visible in webMethods Monitor.
- Visible collaboration processes appear as a subprocess.
- Only limited information is available.

For more information, see the PDF publication *webMethods Monitor User's Guide*

3 Managing Tasks from the Task List Management Page

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Overview

Within My webMethods, each user is granted access to various task functions and features through permission-based access control (for more information, see ["How Permission-Based Access Affects Tasks" on page 21](#)). In a typical business environment, one or more roles are created for administrators or managers who monitor and supervise task activity, and separate roles are created for those with responsibilities limited to task processing.

When an administrator creates a task-enabled role, the members of that role can be granted access to any or all of the following task pages:

- **My Inbox**—this standardized inbox enables the user to search, view, and interact with all of the tasks assigned to the user.
- **Task Type Inboxes**—each of these inboxes is much like the **My Inbox** tab, except that it displays only one specific type of task type. It is also customizable by the task type designer. By default, this page enables the user to search, view, and interact with all of the tasks of the specific task type.
- **Task List Management**—this standardized page enables the user to search, monitor, interact with, and manage all items in the task list. With proper role permissions, the user can suspend, resume, assign, and delegate tasks, among other activities.
- **Task Charts**—this page contains two default task chart portlets that show task counts for all tasks and for critical tasks; you can modify these default charts and you can create additional chart portlets.

This chapter covers the capabilities of the Task List Management page, which would typically be made available for administrative or managerial users.

- For an general information about the Task List Management page, see ["About Task List Management" on page 34](#).
- For more information about providing task features and functions to roles, see ["Administering Tasks" on page 103](#).

Viewing Tasks on the Task List Management Page

You can view, manage, and interact with the list of tasks present on the Task List Management page. To work with a task individually, you must open it, as follows:

To open a task in the Task List Management results list

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks**
2. Click **Task List Management**. By default, the first time you open the Task List Management page, no tasks appear in the Task List Management results. You must enter search terms or use a saved search from the **Saved** tab and click **Search** to generate a list of tasks. You can

customize the behavior of the Task List Management page as described in ["Customizing the Task List Management Search Options" on page 90](#).

3. Click the **Task ID** link for the task you want to open.

Important: If the **Task ID** column is not displayed, add it to the display as described in ["Customizing the My Inbox and Task Type Inbox Results List" on page 50](#). You can also open a task from the **Custom ID** column, but this value may not be populated for every task.

4. The Details page opens with the **Data View** tab automatically selected the first time you open it. Thereafter it will open to the last tab you viewed.
5. You can filter the results shown in the Tasks list and search for tasks as described in ["Filtering and Searching the Task Management List" on page 91](#).

Selecting Tasks in Task List Management

In the task results list, each task row features a selection check box column at the left side of the table by default. To carry out certain actions (for example, delegating a task), one or more tasks must be selected, either by clicking one or more check boxes, or by clicking the **Select All on Page** icon at the top of the column. Clicking the icon selects all of the tasks displayed in the results list, but does not select any tasks that are not displayed.

You can adjust the number of rows and columns displayed in the task results list by modifying the user Preference settings for Task List Management. For more information, see ["Customizing the Task List Management Tasks List" on page 90](#).

Sorting Tasks in the Task Results List

You can sort the tasks displayed in the task list by any of the available columns. By default, the results list is sorted by the **Task ID** column. You can specify a different default sorting column, for more information, see ["Customizing the Task List Management Tasks List" on page 90](#).

Note that when sorting by the **Assigned To** and **Accepted By** columns, the column is sorted by the first user, role, or group name in the list of principals. The list of principals is sorted alphabetically and the order of the list cannot be modified.

About Duplicate Task Type Names in the Task List Management Results

In some instances, it may be necessary to create two or more task types with the same task type name. Programmatically, this is not a problem because the Task Engine tracks each task type by its task type ID, not its task name. However, the appearance of duplicate task type names in the Task List Management results could be potentially confusing to Task List Management users.

When searching or filtering tasks, the **Advanced** tab of the Task List Management page enables a user to filter the task results by task type name. In the event of task types with duplicate names, the list of tasks will contain an entry for each duplicate name, potentially making it difficult for the user to select the desired task.

To alleviate this problem, the **Value** field on the **Advanced** tab displays the task type ID in parenthesis so you can differentiate the tasks. In addition, you can hover the cursor over the **Value** field or a task name entry in the results list; this displays a tooltip that contains the unique task type ID.

Customizing the Task List Management Search Options

You can customize your Task List Management search preferences with the **Options** tab on the Search panel.

To customize the task inbox search options

1. In My Inbox or in a task type inbox, click the **Options** tab.
2. Do any or all of the following:
 - Specify which search tab appears by default (Advanced, Saved, or Saved with Details).
 - Specify the default saved search.
 - Specify if the default saved search is to be run automatically when the inbox is opened.
3. Click **Save**.

Customizing the Task List Management Tasks List

You can customize the Task List Management results list to suit your needs.

To customize the task results list

1. On the Task List Management page, click **Properties** in the Tasks window menu.
2. Click the **Preferences** tab to specify:
 - **Number of Rows to Display**—select from 10, 20, 50, 100, or Show all. Note that larger numbers of rows (and especially Show All) may cause slower response times when accessing the Task List Management page.
 - **Sort by**—select from any of the available display columns to set the default column for sorting the results list. Although it is not required, verify that the selected column is selected for display in the **Selected Columns** list. For more information about sorting the results list, see ["Sorting Tasks in the Task Results List" on page 89](#).
 - **Sort Order**—Ascending or Descending.

-
- **Column Display**—Move the columns you want to view into the **Selected Columns** list, or remove columns by moving them to the **Available Columns** list. Use the up and down arrows to reposition the columns in the **Selected Columns** list.

Important: You must have the **Task ID** column displayed in the results list to be able to open a task. You can also open a task from the **Custom ID** column, but this value may not be populated for every task.

3. Click **Save**.

Filtering and Searching the Task Management List



On the **Advanced** tab of the Task List Management page, you can filter the task list using any or all of the values provided in the Filter panel in the Search window (described below). This provides a filtered view of the task list, showing only those results that match the filter terms. For example:

Status = Expired

Created Date = This month

Priority = Critical

Task Name = MyTask

creates a filter that displays all Critical priority tasks with the name MyTask that were created this month, with a status of Expired. You can add or remove filter terms by clicking the   icons to the right of the **Value** field.

- **Accepted By**—Apply the filter to tasks that have been accepted by a particular user. Click **Browse** to select a user.
- **Accepted Date**—Apply the filter to tasks accepted within a selected time range. Click the **Value** list to select a time range.
- **Assigned To**—Apply the filter to tasks that have been assigned to a particular user. Click **Browse** to select a user.
- **Collaboration Task**—Apply the filter to collaborations tasks. Click the **Value** list to select Yes or No.
- **Created By**—Apply the filter to tasks created by a particular user. Click **Browse** to select a user.
- **Created Date**—Apply the filter to tasks created within a selected time range. Click the **Value** list to select a time range.
- **Custom ID**—Apply the filter to tasks with a specific custom ID (that is, the custom identification that was created for the task when it was started). Enter the text you want to search for in the **Value** box.
- **Expiration Date**—Apply the filter to tasks that expire within a selected time range. Click the **Value** list to select a time range.

-
- **Last Accepted By**—Apply the filter to tasks that were last accepted by a particular user. Click **Browse** to select a user.
 - **Last Updated Date**—Apply the filter to tasks that were last updated within a selected time range. Click the **Value** list to select a time range.
 - **Modified By**—Apply the filter to tasks modified by a particular user. Click **Browse** to select a user.
 - **Priority**—Filter by task priority. Click the **Value** list to select a priority level (None, Low, Medium, High, Critical).
 - **Process ID**—Filter by the process ID assigned to the task by the Task Engine. Enter the text you want to search for in the **Value** box.
 - **Status**—Filter by task status.
 - **Task**—Filter by task type.
 - **Task ID**—Filter by the task ID number assigned to the task by the Task Engine.
 - **Task Name**—Filter by the task name assigned to the task. Enter the text you want to search for in the **Value** box.

In addition, you can search using any of the following default saved searches on the **Saved** tab:

- All tasks
- Critical tasks
- This week's tasks

You can also create and save your own custom searches. For detailed information about searching in My webMethods, see Chapter 10 in *Working with My webMethods*.

Viewing Task Details

You can open an individual task in the Task List Management Tasks panel to view task information using the same procedures for opening a task in My Inbox or a task type inbox. For more information, see ["Viewing Task Details" on page 92](#).

Managing Tasks

You can apply various task management actions to the tasks in the Task List Management Tasks panel. To do so, a task must have a status of Active or Suspended. You cannot apply task list management actions to tasks with a status of Canceled, Completed, Error, or Expired.

From the point of view of the Task Engine, tasks with a status of Canceled, Completed, Error, or Expired are all considered as terminated tasks upon which no further work is to be allowed. If you want to restart a task in any of these states, you must use

webMethods Monitor to resubmit the task; for more information, see *webMethods Monitor User's Guide*.


Suspending a Task

You can suspend a task to keep it in the system but prevent it from being worked on. You might want to suspend a task when you know that although it eventually must be completed, you know that if it is completed now it will cause a conflict with other activities.

- When you suspend a task, the task is removed from the inboxes of all users who have been assigned or delegated the task; however, the task remains in the Task List Management tasks list with a status display of Suspended.
- You cannot change any properties of a suspended task other than to set its status back to Active in Task List Management.

To suspend a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. Select the task or tasks you want to suspend.
3. Click **Suspend**. A confirmation dialog box appears.
4. Click **Suspend**.


The Suspended  status icon appears in the Status column of the results list.

Note: A task designer can also cause a task to be suspended as a result of conditions defined in a task event, using the Suspend Task task action.

Resuming a Task

To resume a suspended task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. Select the suspended task or tasks you want to resume.
3. Click **Resume**. A confirmation dialog box appears.
4. Click **Resume**.

The task is returned to the Active  state. The task will appear in the task inboxes for all assigned users.



Assigning a Task from the Task List Management Page

Important: When assigning a task, the users, groups, or roles you assign the task to must be granted the access and functional privileges required to work with the task type you are assigning. Otherwise, the task will not appear in the user's inbox, or the user may not be able to work with the task. For more information, see ["Configuring Task Access Permissions" on page 105](#).

To assign a task from the Task List Management page

1. In My webMethods: **Navigate** > **Applications** > **Monitoring** > **Business** > **Tasks** > **Task List Management**.
2. Select the task or tasks you want to assign.
3. Click **Assign To**. The Select Principals dialog box appears.

Important: Note that the **Selected** list is empty. The entries you specify here will replace all existing assignments when you click **Apply**. The task will be unassigned if you click **Apply** with an empty **Selected** list.

4. Use the controls in the **Search** panel to search for the users, groups, or roles you want to assign the task to; for more information, see ["Working with the Select Principals and Select Users Dialog Boxes" on page 52](#). The result of the search appears in the **Available** list.
5. In the **Available** list, select the user, group, or role names you want to work with, then click  to move your selection to the **Selected** list.
6. If you have implemented user calendars as described in ["Working with Personal User Calendars" on page 154](#), a user calendar icon  appears to the left of a user name in the **Selected** list. Click the calendar icon to view the user's calendar.
7. Click **Apply** to assign the task to the selected users, groups, or roles.
8. The selected task will appear in the task inboxes of the selected users, groups, or roles. The assignment action is recorded in the task's audit log displayed on the **Audit View** tab of the task's Details page.

Unassigning a Task from a User, Group, or Role

After you have assigned a task to a user, group, or role, you may want to withdraw that assignment. You do this by resetting the task assignment to an empty value. You can also modify the task assignment list to omit an individual user, group, or role assignment.

Note: Before modifying the task assignment list, make a note of the current task assignments as shown on a task's **Details View** tab. They will not be available to you during this procedure.

To unassign a task from the Task List Management page

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. Select the task or tasks you want to unassign.
3. Click **Assign To**. The Select Principals dialog box appears. Note that the **Selected** list is empty. Do one of the following:
 - To unassign the task from all users, groups, or roles, click **Apply**. The empty selection list is applied, and the task is now completely unassigned.
 - To unassign the task from an individual user, group, or role, use the controls to reconstruct the assignment list and omit the users, groups, and roles that you no longer want the task assigned to, then click **Apply** to modify the task assignment. For more information about selecting principals, see ["Working with the Select Principals and Select Users Dialog Boxes" on page 52](#).

The selected task is removed from the task inboxes of the removed users and roles. The assignment action is recorded in the task's audit log displayed on the **Audit View** tab of the task's Details page. When modified, this assignment list replaces all assignments made from My Inbox or a task type inbox.

Accepting a Task for a User

You can accept a task for another user on the Task List Management page. When modified, this assignment list replaces any and all acceptances made from My Inbox or a task type inbox.



Note: Before modifying the task acceptance, make a note of the current task acceptance as shown on a task's **Details View** tab. This information will not be available to you during this procedure.

To accept a task for another user

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. Select the task or tasks you want to accept for another user.
3. Click **Accept For**. The Select Users dialog box appears.

Important: Note that the **Selected** list is empty. The entries you specify here will replace all existing acceptances when you click **Apply**. If you click **Apply** with an empty **Selected** list, the task will not be accepted by any users.

4. Use the controls in the **Search** panel to search for the user you want to accept the task for; for more information, see ["Working with the Select Principals and Select Users Dialog Boxes" on page 52](#). The result of the search appears in the **Available** list.

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5. In the **Available** list, select the user name or names you want to work with, then click  to move your selection to the **Selected** list.
 6. If you have implemented user calendars as described in ["Working with Personal User Calendars" on page 154](#), a user calendar icon  appears to the left of the user name in the **Selected** list. Click the calendar icon to view the user's calendar.
 7. Click **Apply** to assign the task to the selected user.

The Accepted By information for the selected task is updated in all locations where the task is viewed. The action is recorded in the task's audit log displayed on the **Audit View** tab of the task's Details page.

Setting the Task Status

You can set the status for a task on the Task List Management page. For more information about task status, see ["Task Status and Life Cycle" on page 20](#).

To set the task status

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. Select the task or tasks you want to set the status for.
3. Click **Set Status**. The Select Status dialog box appears.

Important: If you apply a status of Canceled, Completed, Error, or Expired, the Task Engine will consider the task as terminated and will allow no further work on the task (other than deletion).

4. Select the status you want to apply in the **Status** list.
5. Click **Set Status** to apply the status to the selected task or tasks.

The status information for the selected task is updated in all locations where the task is viewed. The action is recorded in the task's audit log displayed on the **Audit View** tab of the task's Details page.

Deleting a Task

You can delete a running task (also known as a *task instance*) on the Task List Management page.

Important: When you delete a task, the running task is removed from all task inboxes and is no longer in the system. A deleted task cannot be restored. Exercise caution when deleting Active tasks; for more information, see ["Process Implications When Deleting a Task" on page 97](#).

This action does not delete the *task type* from My webMethods. To accomplish this, see ["Deleting a Task Type from My webMethods Server" on page 125](#). Tasks can

also be deleted with the scheduled global Delete Task Rule. For more information, see ["Managing Global Schedule Rules" on page 134](#).

To delete a running task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. Select the task or tasks you want to delete.
3. Click **Delete**. A confirmation dialog appears.
4. Click **Delete**.

The deleted task is removed from all locations where the task is viewed.

Process Implications When Deleting a Task

It is possible to delete a task with an Active status (that is, the task is currently running with a status of Active and is visible on the Task List Management page). You can delete a task directly from the Task List Management page (see ["Deleting a Task" on page 96](#)) or by deleting the *task type* which defines the task (see ["Deleting a Task Type from My webMethods Server" on page 125](#)).

In those situations where the task was started by a task step in a running process, the process will be currently waiting for a response from the task to indicate that the task has completed. If the task is deleted, the response will never be sent; when you delete an Active task that was started by a running process, no indication of this deletion is provided to the Process Engine where the parent process is running.

Therefore, the process will continue to wait indefinitely for a response from the deleted task step. If you have configured a timeout value, it will eventually time out.

Deleting a Completed, Cancelled, or Expired task will not affect the running process because the task's status was previously delivered to the process; however, it will affect monitoring, in that the task will no longer appear in the monitoring results.

Best practices call for designing processes with adequate transition logic to handle non-responsive tasks (such as a deleted Active task). When a task is Completed, Cancelled, or Expired, the task business data is delivered to the process and the process will continue its execution. The status field value is an implicit output of every task step. Therefore, it is possible to implement transition logic based on a status value of Completed, Cancelled, or Expired.


Delegating a Task from One User to Another

When you delegate a task on the Task List Management page, you can specify the user the task is being delegated from, and the user the task is being delegated to. For information about delegating tasks from one of your inboxes, see ["Delegating Tasks" on page 56](#). Delegation has no effect on the task's acceptance:



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- If you delegate an accepted task, the task continues to be accepted by the initial user. The initial user must release the task to enable the delegated user to accept it, as described in ["Releasing a Task" on page 56](#).
 - A delegated task is not marked as accepted by the delegated user—the delegated user must accept the task as described in ["Accepting a Task" on page 55](#).

Important: When delegating a task, the users you delegate the task to must be granted the access and functional privileges required to work with the task type you are delegating. Otherwise, the task will not appear in the user's inbox, or the user may not be able to work with the task. For more information, see ["Configuring Task Access Permissions" on page 105](#).

To delegate a task on the Task List Management page

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. Select the task or tasks you want to delegate.
3. Click **Delegate**. The Delegate Selected Tasks dialog box appears.
4. Use the **Browse** buttons to specify the user you want to delegate from and the user you want to delegate to. In the Select User dialog box:
 - a. Use the controls in the **Search** panel to search for the user you want to accept the task for; for more information, see ["Working with the Select Principals and Select Users Dialog Boxes" on page 52](#). The result of the search appears in the **Available** list.
 - b. In the **Available** list, select the user name you want to work with, then click  to move your selection to the **Selected** list. You can specify only one user for delegation.
 - c. Click **Apply**.
5. Click **Apply** to delegate the task to the selected user.

The delegation information for the selected task is updated in all locations where the task is viewed. The action is recorded in the task's audit log displayed on the **Audit View** tab of the task's Details page.


In addition, the delegated from  icon appears in the Delegated column of the user who you delegated the task from. The task appears in the delegated user's inbox with a delegated to  icon in the Delegated column.

Removing All Task Delegations

You can remove all task delegations from tasks on the Task List Management page.

To remove all task delegations

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.

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2. Select the task or tasks you want to remove the delegation from. They must be marked with the delegated from  icon.
 3. Click **Remove Delegations**.
 4. On the confirmation dialog box, click **Remove Delegations**.

Scheduling a Task Delegation

You can create a scheduled delegation from one user to another user for each type of task in your task inboxes and define a time period during which all tasks of that type are delegated to a specified user. For specific instructions, see ["Scheduling a Task Delegation" on page 59](#).

Modifying Task Properties

If you are a member of a role with proper permissions, you can modify the following task properties from the Task List Management page.

- Name
- Description
- Priority
- Expiration date and time
- Custom task ID

To modify task properties

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. In the Task List Management Tasks list, click the **Task ID** or **Custom ID** link for the task you want to modify.
3. On the Details page, click the **Details View** tab.
4. Modify the task name, description, priority, expiration date and time, or custom task ID as required.
5. Click **Apply**.



Rolling Back a Task

My webMethods enables you to roll back task activity to any available audit point in the task's audit history. When you roll back a task, all of the task's audit information is retained, but the actual task status, priority, assignment, and other task data is reset to match the task data in effect at the time of the selected audit point.

After you roll back a task, you can also use the roll back feature to "roll forward" a task to a later audit point. For example, if you roll back to audit point number 10, and you also have an available audit point number 25, you can use the roll back feature to "roll forward" to audit point number 25 after you roll back to audit point number 10.

With proper permissions, you can roll back a task from the Task List Management page, or from any task inbox.

To roll back a task

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**, or to **My Inbox** or to a task type inbox.
2. In the results list, click the **Task ID** or **Custom ID** link to open the task you want to modify.
3. On the Details page, click the **Audit View** tab. The available roll back audit points are displayed in the **Roll Back** column with the  icon. If an audit point is not available for roll back, the icon is disabled.
4. Click the  icon for the selected audit point.
5. The task data is reset to match the conditions in effect at the selected audit point, and a "Task Rolled Back" entry appears in the audit list.

Managing Content from webMethods Content Service Platform

If you are a member of a role with proper permissions, you can open a task and add and detach content document types, create new content document types in the repository, and edit the attached content document types on the Task List Management page. To do so, webMethods Content Service Platform must be installed and implemented in your webMethods environment. For more information, see the PDF publication *Implementing webMethods Content Service Platform for BPM*.

Content from webMethods Content Service Platform can be managed on the **Content** tab of a CSP-enabled task, or it can be added to the task as an attachment on the **Data View** tab.

Managing Content Document Type Attachments on the Content Tab

You can manage files attached to a content document type from a Content Service Platform repository on the task **Content** tab. For more information, see ["Working with Content in Tasks" on page 68](#).

To manage content within a task with webMethods Content Service Platform support

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.

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2. In the Task List Management list, click the **Task ID** link for the task you want to modify to open the task.
 3. On the Details page, click the **Content** tab.

If the task already has one or more content document types attached to it, the existing document types appear at the top of the page. Any files that have been attached to a content document type appear in the Attachments panel.

Do any of the following:

- Click **Attach Existing Content** to add a content document type from the repository. For more information, see ["Attaching a Content Document Type to a Task" on page 68](#).
- To detach (remove) content from a task, select the content and click **Detach Selected**. For more information, see ["Removing a Content Document Type from a Task" on page 69](#).
- Click **New Content** to add a new content document type to the task. For more information, see ["Creating a New Content Document Type in a Task" on page 69](#).
- Click **Edit Content** to edit content attached to a task. For more information, see ["Editing a Content Document Type Attached to a Task" on page 70](#).
- To attach files to a content document type, click **Add** in the Attachments panel to add files from your file system to the document content type. For more information, see ["Attaching Files to a Content Service Platform Content Document Type" on page 70](#).
- To remove attached files from a content document type, select the file in the Attachments panel and click **Remove**. For more information, see ["Removing File Attachments from a Content Document Type" on page 71](#).

Managing Content Document Type Attachments on the Data View Tab

You can manage files attached to a content document type from a Content Service Platform repository on the task **Data View** tab. For more information, see ["About Attachments from webMethods Content Service Platform on the Data View Tab" on page 64](#).

To manage files attached to a content document type on the Data View tab

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks > Task List Management**.
2. In the Task List Management list, click the **Task ID** link for the task you want to modify to open the task.
3. Click the **Data View** tab. You can drag files and drop them onto the area at the bottom of the Attachments panel, or you can use the following steps.

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- a. In the Attachments panel, click **Add**.
 - b. In the Attach Files dialog box, click **Browse** to locate and select the file you want to add.
 - Click **Remove** to remove a selected file.
 - Click **Attach Another File** to add another file to the content.
 - c. Click **Save** to add the selected files to the repository and the Attachments panel.
4. You can remove attachments by clicking the selection check box for an attachment and then clicking **Remove**.

4 Administering Tasks

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Configuring Task Permissions

Through its permissions control feature, My webMethods enables administrators to provide or deny access to Task Engine features and functions to users, roles, or groups. Like all other permission control, you implement task permissions from the **Navigate > Applications > Administration > System-Wide > Permissions Management** navigation path. For more information about administering users, roles, and groups, see *Administering My webMethods Server*.

You can grant permissions for a user, role, or group for three different aspects of task interaction:

- **Task type permissions**— these permissions grant or deny the ability to administer, manage, and start task instances for each task type that is present in My webMethods Server, as well as granting access to the task type inbox in the **Monitoring > Business > Tasks** portion of the user's **Navigate** tab.
- **Access permissions**—these permissions enable you to grant or deny access to My Inbox, Task List Management, and Task Charts in the **Monitoring > Business > Tasks** portion of the user's **Navigate** tab, and to the Task Email Listener Administration, Task Analytics Configuration, and Task Engine Administration pages in the **Administration > Business > Tasks** portion of the user's **Navigate** tab.
- **Functional permissions**—these permissions enable you to grant or deny functionality for Global Task Rules Management, Collaboration Process Administration, and Impersonate Users for Remote Clients.

About Access Permissions

You can grant or deny access to tasks to any user, role, or group. You can provide the user, role, or group with access to the following task-based pages within My webMethods:

- **My Inbox**—this standardized inbox enables the user to search, view, and interact with all of the tasks assigned to the user. This can be considered the basic mechanism to enable a user to receive, display, and interact with tasks assigned to the user. Some limitations apply if you deny access to My Inbox. For more information, see ["Limitations When Denying Access to My Inbox" on page 107](#).
- **Task Type Inboxes**—each of these inboxes is much like the **My Inbox** tab, except that it displays only one specific type of task type. It is also customizable by the task type developer. By default, this page enables the user to search, view, and interact with all of the tasks of the specific task type. You can make this inbox available to users who need the ability to interact with tasks in a specialized way, or to enable a user to view a list of specific tasks without having to search and sort for those tasks in **My Inbox**.
- **Task List Management**—this standardized page enables the user to search, monitor, interact with, and manage all items in the task list. With proper role permissions, the user can suspend, resume, assign, subscribe to, and delegate tasks, among other

activities. You can make this page available to supervisory or managerial users who need to be able to distribute and manage tasks.

- **Task Charts**—this page contains two default task chart portlets that show task counts for all tasks and for critical tasks; you can modify these default charts and you can create additional chart portlets.
- **Task Email Listener Administration**—this standardized page enables the user to configure a connection to an e-mail server to be used for processing replies from task notifications that contain a Task Action Link.
- **Task Analytics Configuration**—this standardized page enables the user to specify the URL for an installation of webMethods Broker or a JMS server, and to deploy event maps.
- **Task Engine Administration**—this standardized page displays all of the types of task currently running or available for running on My webMethods. The page enables you to enable, disable, and search for all instances of a task type, to delete a task type, to start a stand-alone task type, and view and modify the rules for a task type. This page is typically assigned to administrative users of My webMethods.

After you make these pages available to a role, you can further customize access by granting or denying specific functional privileges for each page; for more information, see ["About Task Type Functional Permissions" on page 110](#).

Configuring Task Access Permissions

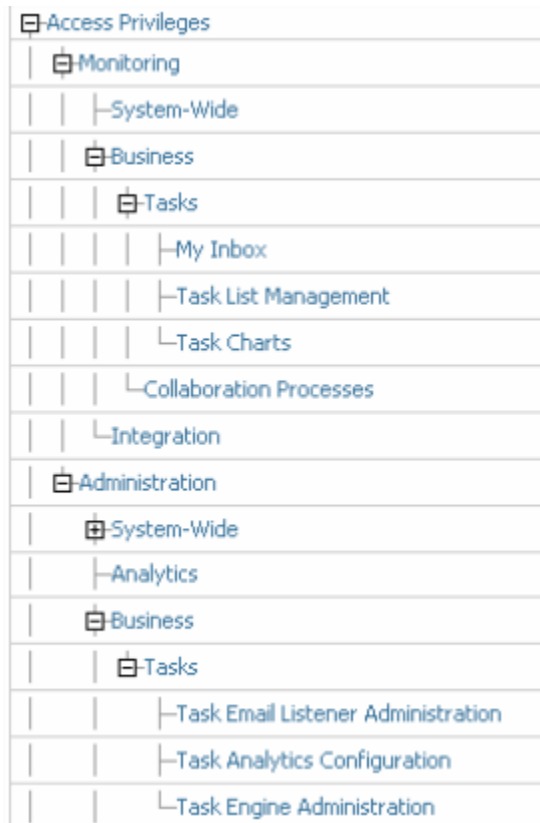
You configure access permissions by granting or denying access permissions to a user, role, or group.

To configure task access permissions

1. In My webMethods: **Navigate > Applications > Administration > System-Wide > Permissions Management**.
2. In the Advanced tab, select **My webMethods Applications** as the resource type, and click **Search**.
3. The search results place the My webMethods Applications in the Selected panel
4. Click **Next**.
5. In the Edit Permissions panel, do one of the following:
 - Select an existing principal and click **Delete** to remove it from the list of available principals.
 - Click **Add Users/Groups/Roles** to open the Add Principals panel, enabling you to search for and add any available user, role, or group to the list of available principals.
6. Click the link in the **Permissions** column for the principal that you want to set permissions for. The text for this link can display either of these values:

- **Granted All**—the principal has been granted all available permissions.
- **Custom**—One or more of the available permissions is denied to the principal.

7. On the Permissions panel, do one of the following:



- Select the **Grant** or **Deny** check box for the following task monitoring permissions:

Important: Clearing the **Grant** check box is *not* sufficient to deny the permission. You must explicitly select the **Deny** check box to ensure the permission is denied.

Note: Some limitations apply if you deny access to My Inbox. For more information, see "[Limitations When Denying Access to My Inbox](#)" on page 107.

- My Inbox
- Task List Management
- Task Charts
- Collaboration Processes
- Select the **Grant** or **Deny** check box for the following task administration permissions:
 - Task Email Listener Administration

-
- Task Analytics Configuration
 - Task Engine Configuration
8. Click **OK** to complete your selections (this does *not* save your selections).
 9. Click **Apply** to save your selections.
 10. Repeat steps 6 - 9 to continue setting permissions for other principals, or click **Back** to return to the Permissions Management page.
 11. The selected pages appear in the My webMethods navigation path for specified user, roles, and groups.
 12. If you are creating a new user, role, or group, you must also specify task functional permissions, as well as permissions for the task types you want to make available.

Limitations When Denying Access to My Inbox

In some circumstances, limitations apply when you deny a user access to My Inbox. These limitations can occur when you grant the user access to a task type inbox, but deny the same user access to My Inbox:

- When the user clicks the Subscriptions link in the task type results list panel, the error message “You are not authorized to view the resource” occurs.
- When the user clicks the Scheduled Delegations link in the task type results list panel, the error message “You are not authorized to view the resource” occurs.

These errors occur because the Subscriptions page and the Scheduled Delegations page are part of My Inbox. When you deny the user access to My Inbox, the user is not authorized to access these pages. There are several ways to address this situation:

- You can provide the user with My Inbox access permission. Doing so will enable access to all aspects of My Inbox, not just subscription management and scheduled delegation management.
- You can ask the task developer to set the `Rendered` property of the subscription and scheduled delegation portlet simple link controls to `false` (or remove the controls entirely) on the Default view of the task Inbox Results portlet, and republish the task. This will remove both links from the custom task inbox display. The user will have no access to subscription management or scheduled delegation management.
- You can ask the task developer to create custom subscription and scheduled delegation pages by copying the existing Task Subscription and Scheduled Delegations portlets included in My Inbox, and then publish these custom pages to the runtime for the user to access. The task developer must also modify the two link controls to access the new custom pages instead of the default pages.

For additional information, see these topics in the *webMethods BPM Task Development Help*:

- “Limitations to Subscription Access”

-
- “Limitations to Scheduled DelegationAccess”

About Functional Permissions

My webMethods enables you to provide or deny various task related functions to a user, role, or group. By default, you can assign functionality for global task rule management, and functionality associated with each type of task in a user's inbox.

- **Global Task Rules Management**—this set of functions provides the ability to create, delete, or modify global task rules, or modify global task rule variables. The actions apply only to global task rules created in the **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration > Global Schedule Rules** and **Global Change Rules** pages. These functional privileges are typically reserved for administrative user roles.
- **Collaboration Processes**—this single function enables the user to administer collaborations processes.
- **Impersonate Users for Remote Clients**—Any My webMethods Server user account that is intended for use with remotely executing components must be granted this functional privilege. In practice, this is granted to the Administrator role to enable WmTaskClient services. For more information, see ["Specifying a User Account for the WmTaskClient Package" on page 148](#).

Configuring Global Task Functional Permissions

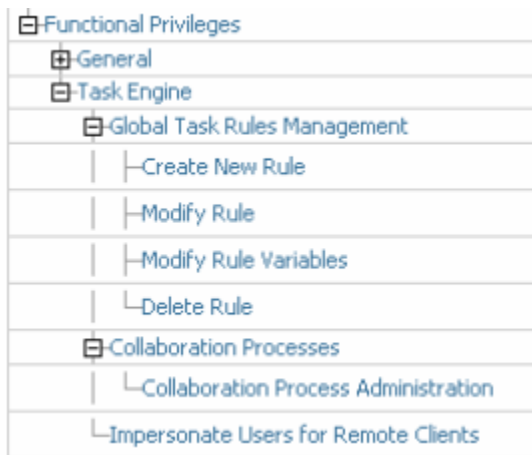
You configure task functional permissions for all task types by granting or denying global functional permissions to a user, role, or group.

To configure task functional permissions

1. In My webMethods: **Navigate > Applications Administration > System-Wide > Permissions Management**.
2. In the Advanced tab, select **My webMethods Applications** as the resource type, and click **Search**.
3. The search results place the My webMethods Applications in the Selected panel
4. Click **Next**.
5. In the Edit Permissions panel, do one of the following:
 - Select an existing principal and click **Delete** to remove it from the list of available principals.
 - Click **Add Users/Groups/Roles** to open the Add Principals panel, enabling you to search for and all any available user, role, or group to the list of available principals.
6. Click the link in the **Permissions** column for the principal that you want to set permissions for. The text for this link can display either of these values:

- **Granted All**—the principal has been granted all available permissions.
- **Custom**—One or more of the available permissions is denied to the principal.

7. On the Permissions panel, do one of the following:



- Select the **Grant** or **Deny** check box for the following global task rule management functional permissions:

Important: Clearing the **Grant** check box is *not* sufficient to deny the permission. You must explicitly select the **Deny** check box to ensure the permission is denied.

- Create New Rule
 - Modify Rule
 - Modify Rule Variables
 - Delete Rule
- Select the **Grant** or **Deny** check box for the Collaboration Process Administration permission.
 - Select the **Grant** or **Deny** check box for the Impersonate Users for Remote Clients permission.
8. Click **OK** to complete your selections (this does *not* save your selections).
9. Click **Apply** to save your selections.
10. Repeat steps 6 - 9 to continue setting permissions for other principals, or click **Back** to return to the Permissions Management page.
11. If you are creating a new user, role, or group, you must also specify task access permissions, as well as permissions for the task types you want to make available.

About Task Type Functional Permissions

You can provide or deny task type functional permissions to any user, role, or group. These task type functional permissions are available, and can be configured, for each individual task type that is present in My webMethods Server.

It is through the task type functional permissions that you provide access to the task type inbox the **Monitoring > Business > Tasks** portion of the user's **Navigate** tab. Permissions are available in the following categories:

- **Tasks Administration**—this set of permissions provides access to the Task Administration page, and enables users to enable or disable the task type settings, delete task types, and queue (start) tasks on the Task Administration page.
 - Tasks Administration
 - Update Task Type
 - Delete Task Type
 - Queue New Task Instance
- **Tasks Management**—this set of permissions enables users to apply any of the granted permissions to a task, either in one of the task inboxes or in the Task List Management Tasks panel (if they have been granted permission to Task List Management through the access permissions).
 - View Task Data
 - View Task Info
 - View Task Audit
 - Complete Task
 - Cancel Task
 - Suspend Task
 - Resume Task
 - Delegate Task
 - Accept Task
 - Assign Task
 - Modify Task Data
 - Modify Task Info
 - Subscribe to a Task
 - Rollback Task
 - Delete Task

-
- **Rules Management**—this set of permissions provides users with the ability to create, delete, or modify task rules, or modify task rule variables associated with the task type.
 - Create New Rule
 - Modify Rule
 - Modify Rule Variables
 - Delete Rule
 - **Task Comments**—these permissions enable the user to work with comments and attachments on the **Comments** tab of a task instance. The task type must be enabled for comments as described in ["Disabling and Enabling Comments and Attachments" on page 118](#).
 - View Comments
 - Add Comment
 - Update Comment
 - Update Other People's Comment
 - Delete Comment
 - Delete Other People's Comment
 - **Task Collaboration**—these permissions enable the user to work with collaboration tasks on the **Collaboration** tab of a task instance. The task type must be enabled for collaboration as described in ["Disabling and Enabling Task Collaboration" on page 119](#).
 - View Collaboration Process
 - Queue Collaboration Tasks
 - Update Collaboration Tasks
 - Delete Collaboration Tasks
 - Search User's Collaboration Processes
 - Search Other People's Collaboration Processes
 - **Task Application Root Page**—these permissions provide users with access to the task type inbox and display the task type inbox name in the **Monitoring > Business > Tasks** portion of the user's **Navigate** tab.
 - Task Inbox Page

Configuring Task Type Functional Permissions

You configure task type permissions by granting or denying the available functional permissions to a user, role, or group.

To configure task access permissions

1. In My webMethods: **Navigate > Applications Administration > System-Wide > Permissions Management**.
 2. On the Advanced tab, select **Tasks** in the **Resource Type** list.
 3. Select a filter you want to apply in the Filter list, or leave the box empty.
 4. Click **Search**. All matching task types are displayed in the Found panel.
 5. In the Found panel, select the tasks you want to set permissions for and move them to the Selected panel.
 6. Click **Next**.
 7. In the Edit Permissions panel, do one of the following:
 - Select an existing principal and click **Delete** to remove it from the list of available principals.
 - Click **Add Users/Groups/Roles** to open the Add Principals panel, enabling you to search for and add any available user, role, or group to the list of available principals.
 8. Click the link in the **Permissions** column for the principal that you want to set permissions for. The text for this link can display either of these values:
 - **Granted All**—the principal has been granted all available permissions.
 - **Custom**—One or more of the available permissions is denied to the principal.
- Important:** Clearing the **Grant** check box is *not* sufficient to deny the permission. You must explicitly select the **Deny** check box to ensure the permission is denied.
9. On the Permissions panel, select the **Grant** or **Deny** check box for the permissions you want to work with, as described in "[About Task Type Functional Permissions](#)" on page 110.
 10. Click **OK** to complete your selections (this does *not* save your selections).
 11. Click **Apply** to save your selections.
 12. Repeat steps 8 - 11 to continue setting permissions for other principals, or click Back to return to the Permissions Management page.
 13. If you are creating a new user, role, or group, you must also specify task access permissions, as well as task functional permissions.

Configuring Task Support for a User

You can provide or deny access to tasks to any user by assigning the user to a role that has task access. All members of the role are given the task access specified in the role.

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- For more information about configuring roles for task access, see ["Configuring Task Permissions" on page 104](#).
 - For more information about administering users and roles, see *Administering My webMethods Server*.

Subscribing Users to Notifications

When a task type developer creates a task type containing a task notification, individual users can subscribe to the notification e-mails generated by the task notification event conditions. Some limitations apply if you deny a user access to My Inbox. For more information, see ["Limitations When Denying Access to My Inbox" on page 107](#).

You can also subscribe other users to a task notification; for more information, see ["Subscribing to a Notification Rule for Other Users" on page 73](#).

My webMethods enables you to view these notification events as rules. For more information, see ["Managing Rules for a Task Type \(Deprecated\)" on page 128](#).

Configuring Support for Collaboration Tasks

In general, most administrative functions for collaboration tasks are the same as regular tasks. Additional administration procedures for collaboration tasks include:

- Grant collaboration permissions—a set of permissions pertaining to collaboration tasks can be granted to users, roles, and groups. See ["About Task Type Functional Permissions" on page 110](#) for a list of task collaboration permissions.
- Enable/disable collaboration—you must enable a task type for collaboration to allow user to create and work with collaboration tasks from within instances of that task type. For more information, see ["Disabling and Enabling Task Collaboration" on page 119](#).
- Enable/disable task data sharing—you must enable task data sharing if you want task business data to be shared between parent and child tasks. For more information, see ["Disabling and Enabling Task Data Sharing" on page 119](#).
- Specifying allowed collaboration tasks—you can assign specific task types for selection by the user when the user creates a collaboration task. For more information, see ["Specifying Allowed Collaboration Tasks" on page 120](#).
- Set display options for collaboration process diagrams—you can specify the layout of the collaboration process diagram on the Process Details page (horizontal or vertical), and the icon used to represent a task step in the collaboration process diagram. For more information, see ["Setting Display Options for the Collaboration Process Diagram" on page 120](#).
- Specify a task e-mail listener—a user can reply to a specially configured task notification by e-mail. To process these replies, you must specify and configure an

e-mail server and account for this activity. For more information, see ["Configuring a Task E-mail Listener" on page 163](#).

Note: Although it is not strictly a collaboration administration procedure, you must also configure a connection to an instance of webMethods Monitor if you want to monitor collaboration processes started from a running business process.

Administering Task Types

When a task type developer creates a task type within Software AG Designer, the developer creates what is essentially a template for a particular kind of human activity that will be carried out at run time— for example, approving an order, or configuring a new employee's computer.

These task types can be used within a process, also developed in Designer. The task type developer can also create stand-alone task types that can be published to My webMethods Server. Within the My webMethods Server run-time environment, tasks can be started from these stand-alone task types as often as necessary. For information about creating and modifying task types, see the Software AG Designer online help.

When the task type developer modifies a task type that already exists on My webMethods Server and then re-publishes the task type (or a process that contains it) from Designer to My webMethods Server, the current task type in My webMethods Server is overwritten with the modified portions of the republished task type. It is important to note that any changes made in My webMethods to the modified portions of the task type will be overwritten when the task type is re-published. For more information about this behavior, see ["About Optimized Task Type Publishing" on page 115](#) and ["Considerations When Publishing Task Types with Duplicate Names" on page 115](#).

The Task Engine Administration portion of My webMethods enables you to manage, modify, and delete the task types available on My webMethods Server.

The following sections provide details on these activities.

Administrative Considerations for Task Publishing

Task types are created in Software AG Designer as part of a *task application* project. A task application can contain just one task type or many, subject to the judgment of the task developer. These task applications and the task types they contain are published to My webMethods Server to make them available in the run-time environment.

There are several administrative considerations that apply to task type publishing, and they are covered in the following sections:

- Considerations When Publishing Task Types with Duplicate Names (below)
- About Optimized Task Type Publishing (below)
- Forcing a Full Publication of a Task Application (below)

-
- ["Considerations When Publishing Task Types with Indexed Data" on page 122](#)

Considerations When Publishing Task Types with Duplicate Names

In some instances, it may be necessary to create two or more task types with the same task type name. For example, multiple process models might contain a user task step named "Cancel Order", but, to accommodate different conditions in the order processing workflow for different departments, a different task type is implemented and invoked for each process model.

Programmatically, this is not a problem because the Task Engine tracks each task type by its task type ID, not its task name. However, the existence of duplicate task type names in the My webMethods user interface has two major ramifications:

- You will encounter problems when you publish task types with duplicate names unless you take the task editing precautions described below. Specifically, the most recently published task type will overwrite any existing task type with the same task type name.
- Duplicate task type names could be potentially confusing to task users. This would be especially true if multiple custom task inboxes are present, all with identical names.

Precautions

For these reasons, whenever a task developer creates a task type with a duplicate name, *before publishing the task type, the developer must use the task editor to manually rename the task application root page* to make it unique among all tasks deployed to My webMethods Server; otherwise, the most recently deployed duplicate task type will overwrite the existing task application pages. This will also ensure that custom inbox page names will be unique. For information about modifying the task application root page, see *webMethods BPM Task Development Help*.

In addition, the **Advanced** tab of the My Inbox and Task List Management pages enables a user to filter the task results by task type name. In the event of task types with duplicate names, the list will contain an entry for each duplicate name, potentially making it difficult for the user to select the desired task. To alleviate this problem, the user can hover the cursor over a task name entry in the list; this displays a tooltip that contains the task type description text entered by the task developer as well as the unique task type ID.

About Optimized Task Type Publishing

Task types are published to My webMethods Server by publishing the task application—all task types within the task application are published as a result. The task application that a task type belongs to is shown on the Task Administration page.

When a task application is first published to a run-time environment, the publishing process can take a considerable amount of time, especially if the task application is a complex one with many tasks, custom inboxes, assignments, and events. Network capacity and traffic can also affect the publishing time.

To ensure that the subsequent publishing of task application is as rapid as possible, Software AG Designer optimizes this process by publishing *only those portions of the task application that have changed* since the last publication. In most cases this optimization is completely transparent.

However, it is possible to modify portions of the task application in the My webMethods Server run-time environment (although this is generally not recommended). If these changes are not applied to the task application project in Designer as well, the two versions will no longer be synchronized.

For instance, if the task application taxonomy is changed in My webMethods Server (for example, the inbox page is renamed), publication of the task application will not update the renamed page if that portion of the task application was not updated in Designer. You can force a publication of the entire task application project; for more information, see ["Forcing a Full Publication of a Task Application" on page 116](#).

Forcing a Full Publication of a Task Application


Software AG Designer optimizes the task application publication process by publishing *only those portions of the task application that have changed* since the last publication. To force a full publication of the entire task application, you can use either of the following procedures:

- In My webMethods Server, delete all of the task types contained in the task application as described in ["Deleting a Task Type from My webMethods Server" on page 125](#), and then republish the task application from Designer.
- Install the task application from within My webMethods Server using the Install Administration functionality (for more information, see the topic "Installing Portlets or Other Deployable Server Components" in *Administering My webMethods Server*).

Searching for Task Type Instances

You can search for all instances of a particular task type from the Task Engine Administration page (that is, all of the tasks started from a particular task type).


To search for all instances of a task

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Locate the task type you want to search for and click the  Search for Tasks of This Type icon in the **Actions** column for that task. The Task List Management page opens with all tasks that were started from the selected task type displayed in the Task List Management Tasks panel.

Deleting All Task Type Instances

You can delete all instances of a particular task type from the Task Engine Administration page (that is, all of the tasks started from a particular task type).

To delete all instances of a task

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Locate the task type you want to work with and click the  Delete All Task Instances icon in the **Actions** column for that task. A confirmation dialog appears.
3. Click **Delete**.

All task instances started from that task type are deleted from user inboxes and the Task List Management list.

Disabling and Enabling a Task Type

When you disable a task type, you prevent tasks from being started from it, either manually or automatically from within a process. The results of disabling a process-started task type depend on how the process developer created the process. If no accommodation for a non-starting task is included, the process will most likely fail as a result of the task not starting. Task types are enabled by default.

To disable and enable a task type

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Click the link in the **Task Type ID** column.
3. Select or clear the **Task Type Enabled** check box as required.
4. Click **Update**.

The task enabled  and task disabled  icons change as appropriate.

Disabling and Enabling Task Analytics

When you enable analytics for a task type, the Task Engine collects task instance metrics in the run-time environment and sends this information to webMethods Optimize for Process. When you disable task analytics for a task type, metrics for instances started from this task type are no longer sent to Optimize for Process. Task analytics are disabled by default.

The following conditions apply when a task is included in a process:

-
- When analytics are enabled for a process, any tasks queued by this process will be reported to Optimize for Process regardless of the above setting.
 - When you enable analytics for the task type, all tasks of this type will be reported to Optimize for Process regardless of the process setting.

Note: Full implementation of task analytics requires additional configuration as described in ["Configuring Task Analytics" on page 159](#).

To disable and enable task analytics

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Click the link in the **Task Type ID** column.
3. On the Task Type Details panel, select or clear the **Task Analytics Enabled** check box as required.
4. Click **Update**.

Disabling and Enabling Comments and Attachments

With proper permissions, users can add, modify, and delete comments and attachments within a task on the task's **Comments** tab. However, task commenting must be enabled for the task type on the task type's administration page; otherwise, the **Comments** tab will not appear.

To disable and enable comments and attachments

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Click the link in the **Task Type ID** column.
3. On the Task Type Details panel, select or clear the **Task Commenting Enabled** check box as required.

Note: If a task instance of this task type has existing comments or attachments and you clear this check box, the **Comments** tab is no longer visible to the user. However, the comments and attachments are retained, and will be present if this option is re-enabled.

4. Click **Update**.

Note: You must also grant users the various comment permissions to enable them to add, modify, or delete comments and attachments. See ["About Task Type Functional Permissions" on page 110](#) for a list of comment permissions.

Disabling and Enabling Task Collaboration

With proper permissions, users can create, assign, and set status for collaborations tasks within a task on the task's **Collaboration** tab. However, task collaboration must be enabled for the task type on the task type's administration page; otherwise, the **Collaboration** tab will not appear.

To disable and enable task collaboration

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Click the link in the **Task Type ID** column.
3. On the Task Type Details panel, select or clear the **Task Collaboration Enabled** check box as required.

Note: If a task instance of this task type has existing collaboration tasks and you clear this check box, the **Collaboration** tab is no longer visible to the user. However, the collaboration tasks and process are retained, and will be present if this option is re-enabled.

4. Click **Update**.

Note: You must also grant users the various comment permissions to enable them to add, modify, or delete collaboration tasks. See "[About Task Type Functional Permissions](#)" on page 110 for a list of task collaboration permissions.

Disabling and Enabling Task Data Sharing

This administrative option becomes available when a task type is enabled for task collaboration. When this option is enabled, task business data is shared, or passed, between the parent task its various child tasks. In some cases, access to this task business data will be helpful to the users who are collaborating on the parent task. However, in other instances, the task business data may contain sensitive information that should not be shared among the collaborators.

To disable and enable task data sharing

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Click the link in the **Task Type ID** column.
3. On the Task Type Details panel, select or clear the **Task Data Sharing Enabled** check box as required.

Note: This option is disabled until the task collaboration option is enabled.

4. Click **Update**.

Specifying Allowed Collaboration Tasks

Collaboration tasks can be started automatically within a business process, or manually by a user from within an existing task that is enabled for collaboration. For more information about these two approaches, see "[How Collaboration Tasks Differ from Standard Tasks](#)" on page 22.

To start a collaboration task manually, the user must specify a task type that will determine what kind of collaboration task instance will be created. The available task types are specified on the Task Type Details page for each task type.

To specify allowed collaboration tasks

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Click the link in the **Task Type ID** column.
3. On the Task Type Details panel, select the task types you want to make available in the **Available** list and move them to the **Selected** list.

Note: This functionality is disabled until the task collaboration option is enabled.

4. Click **Update**. The selected task types will be available to the user in the **Collaboration Task Type** list on the New Collaboration Task panel.

Setting Display Options for the Collaboration Process Diagram

When the user views the Process Details page, a graphical process diagram is displayed showing the collaboration process; each collaboration task is shown as a step. For more information, see "[Viewing Collaboration Process Details](#)" on page 84.

You can specify the layout of the diagram and the icon used to represent collaboration task steps.

To set display options for a collaboration process diagram

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Click the link in the **Task Type ID** column.
3. On the Task Type Details panel, do one or both of the following:

-
- Specify a diagram layout of Horizontal or Vertical from the **Collaboration Diagram Layout** list.
 - Specify an icon for the collaboration task steps in the diagram from the **Collaboration Step Icon** list.

Note: This functionality is disabled until the task collaboration option is enabled.

4. Click **Update**.

Administering Indexed Task Business Data

Task types can be created in the Task Development feature of Software AG Designer to support searches of standard task business data and of indexed task business data. Task types that are implemented to use indexed business data require some special considerations concerning publishing, and also require some administrative attention to the database table for the indexed business data, as described in the following sections:

- About Business Data Field Searches (below)
- ["Considerations When Publishing Task Types with Indexed Data" on page 122](#)
- ["Reindexing Task Types That Contain Indexed Business Data" on page 123](#)

About Business Data Field Searches

When a task application is published to the My webMethods Server runtime, individual task instances can be started either automatically from a process or manually by a user. The specified business data for a task instance is populated from various sources as the task moves through its life cycle.

These business data fields and their values are stored in one of two database tables created and maintained by the Task Engine:

- The Task Engine stores all task business data for all tasks as a binary large object (BLOB) within a full-search database table. While this makes all business data available for all tasks, the BLOB must be de-serialized to make the information available, and it can be quite large when many tasks are present.
- When a task contains indexed business data fields, those fields are stored in a separate indexed fields database table as well as the BLOB; this table contains only indexed business data fields and their values. The indexed field table is created dynamically when a task application containing indexed business data fields is published to My webMethods Server. The indexed field table provides a limited but much faster search mechanism that is especially useful in situations when a very large number of tasks are present in a task inbox.

The Task Engine maintains both database tables and updates them dynamically as new tasks are queued in the system or as existing tasks are deleted from the system.

Users can search within a task inbox for specific business data; the search behavior depends on how the task developer has configured the task:

- If the task is configured with a standard search provider, the search examines all business data in all the tasks in the inbox. If the number of tasks in an inbox is relatively small, this search executes quickly. However, when a large number of tasks are present, a standard (full) search can take significantly longer.
- If the task is configured with an indexed search provider, the search examines only the business data in the indexed fields table and ignores all other fields, resulting in a much faster search. In this case, the task developer must mark one or more business data fields as indexed fields, otherwise the search will return no results.

In addition, separate task client services are available in the WmTaskClient package to execute a full search on data in the BLOB or the limited search on the indexed field table. For more information, see the PDF publication *webMethods Task Engine API and Service Reference*.

Indexed business data fields are available as a standard feature with Task Development Version 8.2 and later. Task applications created with earlier versions can be modified to support indexed data fields. Any task application, regardless of version, can be configured to use either search method. Consult with the task developer if you want to modify the search behavior of an existing task.

Considerations When Publishing Task Types with Indexed Data

The presence of indexed business data in a task type has a distinct impact on the My webMethods Server runtime environment when you publish a task type that is enabled for indexed searches. *You must be aware of these considerations before you begin publishing indexed search tasks to My webMethods Server to avoid negative affects.*

Indexed business data fields are stored in a database table in the run-time environment. These table entries are searched when an business data search is executed by the user. There is one database table for each task type that you publish to the runtime.

When a task type with indexed business data is published for the first time, the Task Engine creates the database table with one column for each indexed field in the task type. You must be aware of the following important issues when you publish the task type thereafter:

- If modifications have been made to the task type interface, assignments, events, and so on, but no changes have been made to the indexed data fields, there is no impact in the run-time environment.
- If any changes have been made to the indexed business data (for example, add or remove a field, or change a field type or attribute, the Task Engine detects this automatically, drops the existing index table for the task type (and all its data), and creates a new (empty) table.
- If you publish a task type with modified indexed business data structure while a reindexing procedure is running for that task type, the reindexing procedure will be

stopped and the status message will be set to “Failed.” The Task Engine drops the existing index table (and all its data), and creates a new (empty) table.

To populate a newly created table with data from existing task instances in your system, you must run the task reindexing procedure as described in ["Reindexing Task Types That Contain Indexed Business Data" on page 123](#). This means that *for the time period between publishing the modified task type and completion of the reindexing procedure, any searches run from a task instance of this task type will return incomplete results or no results at all.*

You are advised to consider the impact of publishing task types with indexed business data very carefully. For production environments, publishing updates to task types with modified indexed business data is best done during scheduled maintenance periods.

- For more information about task business data reindexing, see ["Reindexing Task Types That Contain Indexed Business Data" on page 123](#).
- For more information creating and working with tasks with indexed business data, see “About Indexed Business Data Fields” in the *webMethods BPM Task Development Help*.

Viewing the Indexed Task Business Data Table Contents

You can view the structure of the database table that contains the indexed business data entries for any task type that is configured with an indexed business data provider.

To view the structure of a task type's indexed business data table

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. In the **Task Type ID** column, click the link to the task type you want to work with.
3. On the Task Type panel, click the **Indexes** tab. A read-only table on the **Indexes** tab displays the indexed business data structure for the existing table (that is, prior to reindexing).

Note: If the task type is not configured to work with indexed business data, or has no indexed business data, the **Reindex** button is not available and the **Indexes** field is empty.

A status message near the top of the **Indexes** tab displays the start time, stop time, and status of the last index procedure, or progress information if reindexing is currently underway.

Reindexing Task Types That Contain Indexed Business Data

Before you execute this procedure, review the Usage Notes, below.

To reindex a task type

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. In the **Task Type ID** column, click the link to the task type you want to reindex.
3. On the Task Type panel, click the **Indexes** tab. A read-only table on the **Indexes** tab displays the indexed business data structure for the existing table (that is, prior to reindexing).
4. Click **Reindex**.

Note: If the task type is not configured to work with indexed business data, or has no indexed business data, the **Reindex** button is not available and the **Indexes** field is empty.

While the task type is being reindexed, a status message appears near the top of the **Indexes** tab, in the format **Reindexing: nnnn/xxxx**, where *nnnn* indicates the number of tasks that have been processed, and *xxxx* indicates the total number of task instances. This count is updated for every 1000 tasks that are processed; when not running, the status message displays the start time, stop time, and status of the last index procedure.

If you change your mind, you can click **Stop Reindex** to stop the reindexing procedure. See Usage Notes (below) for more information.

Note: If you stop the reindexing procedure before it completes, be aware that the indexed business data table is incomplete and any searches run from a task instance of this task type will return incomplete results.

Tip: You can refresh the **Indexes** tab at any time to view the current contents of the indexed business data table for the selected task type.

Usage Notes

- The reindexing procedure causes the index table in the database to be completely repopulated with indexed business data from all instances of the task type currently in the system. If the number of task instances is very large, the reindexing procedure can take a relatively long time to complete. For example, a few thousand task instances may take two to five minutes to process; larger numbers will take proportionately longer.
- The **Reindex** button is available at any time for task types configured to use indexed business data. Reindexing does not drop the table, but it does delete all current indexes and then proceeds to reindex the available task instances of the selected task type.
- You cannot pause the reindexing procedure after it is started; it can only be stopped.

-
- When you stop the reindexing procedure, indexing ceases and the table retains the indexes for what ever tasks were reindexed up until the **Stop Reindex** button is clicked.
 - You can execute two or more reindexing procedures simultaneously. However, if the number of task instances is large, this may result in increased consumption of system resources, and performance issues may occur.
 - The reindexing process runs in the background; you can continue to work with My webMethods in other areas.

Indexing Considerations in a Clustered Environment

Although the reindexing process runs in the background, in a clustered environment this process is not distributed across the cluster. When you start a reindexing process, it is executed on the node that you are currently connected to (for example, through a load balancer).

However, the behavior of the reindexing process is propagated to all nodes in the cluster. In other words, you have access to the following regardless of which node you are connected to:

- Read-only view of the database table structure on the **Indexes** tab.
- Reindexing status messages (progress information, or last start time, stop time, and status).
- Ability to stop a running process with the **Stop Reindex** button.

So, for example, if you start the reindexing process while logged in to Node A, then log out and log in later on Node B, you will still see the same information and have the same control over the process as if you were logged in to the original node.

Deleting a Task Type from My webMethods Server

You can completely remove a task type from the My webMethods Server environment. In doing so, the task type is removed from all inboxes as well as the Task Configuration window, and all running task instances started from that task type are removed as well.

Important: When you delete a task type, all task instances of that task type are deleted regardless of the task status. This action can delete currently running tasks with a status of Active. Exercise caution when deleting Active tasks; for more information, see ["Process Implications When Deleting a Task" on page 97](#).

To delete a task type from My webMethods Server

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All task types available in My webMethods appear in the Task Configuration window.
2. Select the task type you want to delete.

-
3. Click **Delete**. A confirmation dialog appears.
 4. Click **Delete**.

The deleted task type is completely removed from My webMethods Server and all running task instances started from that task type are removed from user inboxes and the Task List Management list. You can restore the task type by republishing it to My webMethods Server from Software AG Designer. For more information, see the online help for Software AG Designer.


Deleting a Task Application from My webMethods Server

A task application is deleted by removing all of the task types contained in the task application.

To delete a task application project from My webMethods Server


1. Log in to My webMethods Server with administrator permissions.
2. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**.
3. If a task application contains two or more task types, sort the task list by clicking the **Task Application** column to group together all of the tasks in that application.
4. Select all task types in the task application you want to delete and click **Delete**.

Starting a New Task

When a task type developer creates a task type with capability for manual starting, you can start an instance of that task from the Task Configuration window. When a task type is configured for manual starting, the  Start icon is enabled in the **Actions** column for that task. If the Start icon is disabled, you cannot start a task instance manually.

Note: If you want to start the task instance with unique or specific behavior, you can create or modify rules for the task type before you start the task. However, note that these changes will apply to all following instances of the task. In addition, the changes will be removed if the task type is republished to My webMethods Server from Software AG Designer. For more information about working with task rules, see ["Managing Rules for a Task Type \(Deprecated\)" on page 128](#).

To start a task manually

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Locate the task type you want to start and click the  Start icon in the **Actions** column for that task type. The Start page opens.

-
3. Enter the task information you want to apply to this task instance in the New Task panel:
 - **Name**—the name you want to apply to this task instance.
 - **Description**—your description of this task instance.
 - **Priority**—the priority you want to assign to the task instance.
 - **Custom Task ID**—any custom identification you want to apply to the task instance.
 4. Click **Start Task**. A confirmation dialog box appears.
 - Click **Show Details** to view the task ID number, otherwise click **OK**. The started task is assigned to any users, groups, and roles defined within the task according to its assignment rules, and it appears in the inboxes of all recipients. If the task type contains no assignments, you must assign the task from the Task List Management page.
 - Click **Open the task** to view the task details page for the new task.

Important: You can continue to click **Start Task** after you first start a task; each time you click **Start Task**, a new task instance is started using the task information values you have specified. If you do not change the task information before you start any subsequent tasks, each task instance will display the same task information
 5. Browse to any other location after you have finished starting tasks.

Modifying Task Types in My webMethods Server

Although you can modify rules for a task type (as described below), always keep in mind that it is possible that any changes you make to a task type in My webMethods Server will be overwritten the next time the task type is published to My webMethods Server. For more information about this behavior, see ["About Optimized Task Type Publishing" on page 115](#).

In general, the recommended method for making changes is to ask the task developer to make the changes in Software AG Designer and then republish the task type to My webMethods Server. This ensures that task types will remain in synchronization between the two environments.

Note that you can change the *task type name* in Software AG Designer; this changes the task type name displayed on the task inbox tab and anywhere the task type name is displayed. Certain considerations apply to the creation of task types with duplicate names; for more information, see ["Considerations When Publishing Task Types with Duplicate Names" on page 115](#).

The *task type ID* cannot be changed after the task type is created and serves as a unique identifier for programmatically identifying the task type in both environments.

Managing Rules for a Task Type (Deprecated)

Important: In Task Engine versions prior to 7.1, certain task behavior was governed by task *rules* created by the task designer. In Task Engine Version 7.1 and later, task rules were replaced largely by task *assignments* and *events*.

Although My webMethods provides you with the ability to modify existing task rules and to create new task rules, *this functionality was deprecated* in Task Engine Version 7.1. *You are advised to create new rules and make all rule changes in Software AG Designer and then republish the modified task type to My webMethods Server.*

Most task types contain rules that define how a task behaves in the run-time environment. These rules are created as assignments and event types in Software AG Designer, and consist of a condition that must be matched when the rule is evaluated, and a resulting action that occurs when the condition is matched.

Important: Any task rule additions or changes you make will remain in effect only until the next time that the task type is published from Software AG Designer. At that time, the changes will disappear.

About Task Rules (Deprecated)

A task type developer can create rules within a task type to specify how the task operates in the run-time environment. These rules fall into the following types:

- **Assignments**—these rules assign a task to a specified user, group, or role depending on the occurrence of a defined condition. For example, when a task's status is marked for escalation, assign the task to a manager; or, assign the task to a specific user or role when the task is activated. An e-mail task notification can be sent to a user or role as an assignment result. These are configured as Assignments in Designer.
- **Filters** filter the tasks viewed by users in their task inbox in My webMethods. For example, “do not display any task that has been accepted by another user.” This is useful when tasks are assigned to a role containing many members. These are configured as filter Event Types in Designer.
- **Change rules** apply an action when a specified change occurs in the task's status or business data; for example, if the task status changes to Expired, delete the task. An e-mail task notification can be sent to a user or role as a change result. These are configured as change-related Event Types in Designer.
- **Schedules** apply an action when specified scheduling conditions are met. These rules are used to apply some time-based conditions to the task; for example, send a task notification if a loan application has not been accepted for processing within a certain period of time. Or, you might reassign, escalate, or change the priority of tasks based on the passing of a specific date or an interval of time. An e-mail task notification can be sent to a user or role as a schedule result. These are configured as time or date-related Event Types in Designer.

Rules are created with the following elements:

This Rule Type	Is Defined by...
Assignment	A task assignment defined by: <ul style="list-style-type: none">■ A condition expression■ A result expression■ Rule attributes (re-evaluate rule)
Filter	A task filter event defined by: <ul style="list-style-type: none">■ A condition expression
Change	A task change event defined by: <ul style="list-style-type: none">■ A condition expression■ A result expression
Schedule	A task schedule event defined by: <ul style="list-style-type: none">■ A condition expression■ A result expression■ Rule variables (deprecated in Designer)■ Rule attributes (optional)


Modifying a Task Type Rule (Deprecated)

Important: Although My webMethods provides you with the ability to modify existing task rules and to create new task rules, *this functionality was deprecated* in Task Engine Version 7.1. You are advised to create new rules and make all rule changes in Software AG Designer and then republish the modified task type to My webMethods Server.

Any changes you make in My webMethods will be overwritten the next time the task is published from Software AG Designer. If you want the changes made permanently, have the task type developer make them in the task type in Software AG Designer and then republish the task type. For more information about this behavior, see ["About Optimized Task Type Publishing" on page 115](#).

To modify a rule in a task type

1. In My webMethods: **Navigate > Applications Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.

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2. Locate the task type with the rule you want to modify and click the appropriate rule icon in the **Actions** column for that task type (Assignment, Filter, Schedule, or Change rule). The Manage [Rule] page opens for the selected rule type (for example, Manage Change Rules).
 3. Click the **View Rules** tab if it is not already displayed.
 4. On the **View Rules** tab, click the **Rule Name** link for the rule you want to work with, or click the  Tools icon and choose **Modify Rule** from the menu.
 5. On the **Modify Rule** tab, make changes to the rule in accordance with the instructions in ["Creating a Task Type Rule \(Deprecated\)" on page 130](#).
 6. Click **Update Rule** to save your entries.


The changes to the rule are applied immediately to all tasks started from this task type.

Removing a Task Type Rule (Deprecated)

You can remove a rule from a task type in My webMethods.

Note: If the rule you remove remains in the task type as it exists within Software AG Designer, the rule will return the next time the task type is published to My webMethods Server. If you no longer need the rule, have the task type developer remove it from the task type in Software AG Designer and republish the task type.

To remove a rule from a task type in My webMethods

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Locate the task type with the rule you want to remove and click the appropriate rule icon in the **Actions** column for that task type (Assignment, Filter, Schedule, or Change rule). The Manage [Rule] page opens for the selected rule type (for example, Manage Change Rules).
3. Click the **View Rules** tab if it is not already displayed.
4. On the **View Rules** tab, click the  Tools icon for the rule you want to work with and choose **Remove Rule** from the menu. A confirmation dialog box appears.
5. Click **OK**. The rule is removed from the task type.
6. Click **Return** to go back to Task Engine Administration page.

Creating a Task Type Rule (Deprecated)

You can create a new assignment, filter, schedule, or change rule for a task type in My webMethods. You can also create new global rules.

Important: Although My webMethods provides you with the ability to create new task rules, *this functionality was deprecated in Task Engine Version 7.1. You are advised to create all new rule behavior in Software AG Designer and then republish the modified task type to My webMethods Server.*

Unless the new rule is added to the task type as it exists within Software AG Designer, the rule will disappear the next time the task type is published to My webMethods Server. For more information about this behavior, see ["About Optimized Task Type Publishing" on page 115](#).

Important: When you create a new task type rule in My webMethods, you cannot create variables for use in a rule expression. Although existing rules with variables are supported, variables can no longer be created in Software AG Designer.

To create a rule in a task type

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Locate the task type you want to add a rule to and click the appropriate rule icon in the **Actions** column for that task type (Assignment, Filter, Schedule, or Change rule). The Manage [Rule] page opens for the selected rule type (for example, Manage Change Rules).
3. Click the **Create New Rule** tab.
4. In the **Name** and **Description** boxes, type a unique name for the rule and a description of the intended behavior of the rule.
5. Create a condition expression by typing in the expression terms and clicking the **Add Operator** button, and then selecting the desired value from the resulting display. When this condition is matched, the rule will be enforced.

For example:

```
{oldTask.taskInfo.status} == "new"
```

This indicates a condition for a task change rule where the task status is "new". This occurs when a task is started. For more information about creating conditions, see ["About Condition Expressions" on page 185](#).

Note: Task global change rules support expressions such as `caf["MyWebApp"].valueOf("managedBeanName.method")`, which is invoked when any task instance in the system is changed. This functionality enables you to access managed beans in other contexts.

6. Create a results expression by typing in the expression terms and clicking the **Add Operator** button, and then selecting the desired value from the resulting display (filter rules do not contain a result expression).

For example:

```
{currentTask.completeTask}
```

With the condition and result examples given above, this rule would auto-complete any newly started task.

For more information about expressions, see ["Creating Task Type Expressions" on page 184](#).

-
7. When creating an assignment or schedule rule, specify the rule attributes as follows:
 - For an assignment rule, you can set the **Re-evaluate Rule** options to specify that the rule is enforced one time only for a particular task instance (false) or every time the condition is matched (true). When the check box is selected, the assignment rule is applied each time the condition is matched; when the condition is no longer matched, the task assignments are removed and the task is no longer assigned to the specified user or role.
 - For a schedule rule, you can specify the time values you want to apply to the rule.

For more information about attributes, see ["About Rule Attributes" on page 190](#).
 8. Click **Create Rule** to save your entries. The rule appears beneath the selected rule type.


Copying a Task Type Rule (Deprecated)

You can copy a rule in a task type in My webMethods and use the copy to create a new rule within the task type.

Important: Although My webMethods provides you with the ability to create new task rules, *this functionality was deprecated in Task Engine Version 7.1. You are advised to create all new rule behavior in Software AG Designer* and then republish the modified task type to My webMethods Server.

Unless the new rule is added to the task type as it exists within Software AG Designer, the rule will disappear the next time the task type is published to My webMethods Server. If you want the rule added permanently, ask the task type developer to add it to the task type in Software AG Designer.

To copy a rule in a task type

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration window.
2. Locate the task type with the rule you want to copy and click the appropriate rule icon in the **Actions** column for that task type (Assignment, Filter, Schedule, or Change rule). The Manage [Rule] page opens for the selected rule type (for example, Manage Change Rules).
3. Click the **View Rules** tab if it is not already displayed.
4. On the **View Rules** tab, click the  Tools icon for the rule you want to work with and choose **Copy Rule** from the menu.
5. On the **Copy Rule** tab, type a new name and description for the rule.
6. Click **Copy the Rule**.

The renamed rule appears in the rules list on the **View Rules** tab. All of the copied rules properties are copied, that is, the condition expression, result expression, variables, and other properties, are retained.

Managing Global Task Rules

You can create, modify, and delete global task rules in My webMethods; these rules apply to all tasks running in the My webMethods Server environment. Global task rules can be created as change rules or as scheduling rules. For information about expressions for global rules, see ["About Global Rule Expressions" on page 191](#).

Note: Global task rules are created and maintained in the My webMethods Server environment only, and are not affected by the publishing of task types from Software AG Designer. You cannot create, modify, or delete global task rules in Designer


Although the navigation path to global task rules is different from the navigation path to individual task rules, the procedures for working with them are the same. Individual task rules are evaluated in the specified order, and then the global task rules are evaluated, in their specified order. The precedence of individual task rules over global rules is fixed and cannot be modified. For specific procedures, see the following topics:

- ["Modifying a Task Type Rule \(Deprecated\)" on page 129](#)
- ["Removing a Task Type Rule \(Deprecated\)" on page 130](#)
- ["Creating a Task Type Rule \(Deprecated\)" on page 130](#)
- ["Copying a Task Type Rule \(Deprecated\)" on page 132](#)
- ["Creating Task Type Expressions" on page 184](#)
- ["Changing the Rule Evaluation Order" on page 190](#)

Managing Global Change Rules

Note: Task global change rules support expressions such as `caf["MyWebApp"].valueOf("managedBeanName.method")`, which is invoked when any task instance in the system is changed. This functionality enables you to access managed beans in other contexts.

To manage global change rules


1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**.
2. Click the  Manage Global Change Rules icon. The Global Change Rules page opens. This page provides three tabs:
 - **View Rules**—click this tab to view the available global change rules. By default, one global change rule is provided with Task Engine, the **Infinite Loop Task Rule**. This rule places a task in Error status when the one-hundredth version of the task

is created. You can edit the expression for this rule to specify a different number. For more information, see ["About Global Rule Expressions" on page 191](#).

- **Change Rule Evaluation Order**—click this tab to rearrange the order in which global task change rules are evaluated, as described in ["Changing the Rule Evaluation Order" on page 190](#).
- **Create New Rule**—click this tab to create a new global task change rule. Create the new rule as described in ["Creating a Task Type Rule \(Deprecated\)" on page 130](#).

Managing Global Schedule Rules

To manage global schedule rules

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Engine Administration**.
2. Click the  Manage Schedule Rules icon.
3. On the Global Schedule Rules page, manage rules with the following three tabs:
 - **View Rules**. Click this tab to view the available global schedule rules. By default, one global schedule rule is provided with Task Engine, the **Delete Task Rule**. This rule deletes a task in Completed, Cancelled, Expired, or Error status after a specified period of time. The time interval is set by the keepDays parameter (set to 30 days by default). This rule is evaluated once per day.
 - **Change Rule Evaluation Order**. Click this tab to rearrange the order in which global task schedule rules are evaluated, as described in ["Changing the Rule Evaluation Order" on page 190](#).
 - **Create New Rule**. Click this tab to create a new global task schedule rule. Create the new rule as described in ["Creating a Task Type Rule \(Deprecated\)" on page 130](#).

Specifying Task Audit View Logging Levels

You can specify the amount of information logged for each task type that has been published to My webMethods Server. This audit data is displayed on the **Audit View** tab for each instance of that task type. For information about setting Task Engine logging levels, see ["Configuring the Task Engine Logging Level" on page 162](#).

To specify the task type audit view logging level

1. Log in to My webMethods Server as sysadmin.
2. In My webMethods: **Folders > System > Task > Task Definitions**
3. In the **Name** column, click the name of the task you want to work with (the task type ID is displayed here), or click **Properties** in the **Tools** menu for the task type.

-
4. In the Task Definition panel of the Properties page, select one of the following values in the **Task Auditing** list:
 - **Full**—The task **Audit View** page displays all logged task data (default setting).
 - **Task Updates and Rule Firing (No Business Data Auditing)**—The task **Audit View** page displays task creation and all task updates and event actions.
 - **Task Updates Only**—The task **Audit View** page displays only task creation and updates.
 - **No Auditing**—Task auditing is disabled. No data appears on the **Audit View** page.
 5. Click **Apply** to save your changes.

Working with Task Charts

webMethods Task Engine provide basic task charting on the Task Charts page. This page contains two default task chart portlets, one displaying the number of all tasks, and one displaying the number of critical tasks. You can modify these default charts, and you can create additional chart portlets for deployment on the Task Charts page or in any other location of My webMethods.

You define the results displayed in a chart portlet by selecting from the saved searches available in the following locations: My Inbox, Task List Management, and all task type inboxes.

Note: To work with task charts, users or roles must be granted access to the Task Charts page. For more information, see "[Configuring Task Access Permissions](#)" on page 105.

Viewing and Refreshing Charts on the Task Charts Page

You can view and refresh task charts on the Task Charts page.

To view and refresh charts on the Task Chart page

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks Task Charts**.
By default, two chart portlets are displayed, one with information on all tasks, and one displaying information on critical tasks.
2. To refresh (update) the chart display, click the Refresh button on your browser or press F5 on your keyboard. All charts on the page are updated to current conditions.

Configuring a Task Chart

You can configure a task chart on the Task Charts page or in any other location where a task chart has been placed.

To configure a task chart

1. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks Task Charts**.
2. On the chart window menu, click **Properties**.
3. On the **Preferences** tab, specify the following configuration properties, or accept the default values:
 - **Chart Height** — The display height of the chart in pixels. Enter 0 (zero) for default (auto) sizing.
 - **Chart Width** — The display width of the chart in pixels. Enter 0 (zero) for default (auto) sizing.
 - **Show Current User Results** — Select this check box to create a separate graph displaying results for the current user.
 - **Show Results Per Task Type** — Select this check box to create a separate graph displaying results for each task type in the results.
 - **Selected Searches** — Use the **Select Saved Searches** button to specify one or more saved searches that will be used to determine the task chart results. The selected searches are displayed in the **Available** list; double-click a saved search, or use the Move arrows, to transfer a saved search to the **Selected** list or back again.
 - **Saved Search Screen** — Click the **Select** button to specify the search page that will open when you double click on the task chart. You have a choice of all available task pages, including My Inbox, Task List Management, and all task type inboxes. The selected page is displayed to the left of the **Search Screen** label.
4. Click **Apply** to apply your changes and return to the task chart.


Working with Task Chart Portlets

You can create new task chart portlets and define properties for existing task chart portlets. These activities require you to log on to as the My webMethods Server system administrator. For additional information on working with portlets and pages in My webMethods Server, see the PDF publication *Administering My webMethods Server*.

Creating a Task Chart Portlet

To create a task chart portlet

1. Log on to My webMethods as sysadmin.
2. Access the page where you want to create the task chart portlet; for example:
 - a. In My webMethods: **Folders > My webMethods Applications > Fabric Tasks > Monitoring > Business > Tasks**
 - b. Click **Task Charts**.


-
3. On the Task Charts page, click the  Tools icon for the page and choose **Edit Page** from the menu. The page editing view appears.
 4. In the **Tools** list, click **Portlets**.
 5. In the **Portlets** list, expand `wm_task_chart`.
 6. Drag the TaskChart portlet entry to the desired location on the Task Charts page. A new TaskChart portlet is added to the page.
 7. With the new TaskChart portlet selected, click **Properties** at the top of the page view.
 8. Click the **General** tab if it is not already displayed.
 9. Type a name for the task chart portlet; add a description and keywords as desired.
 10. Click **Save**.
 11. Log off as sysadmin and log on as a My webMethods user.
 12. In My webMethods: **Navigate > Applications > Monitoring > Business > Tasks** and click **Task Charts**. The new task portlet is displayed on the page.
 13. If you need to create a custom saved search to define the task chart results, do so now.
 14. Configure the task chart as described in "[Configuring a Task Chart](#)" on page 135.

For additional information on working with portlets and pages in My webMethods Server, see *Administering My webMethods Server*, as well as the PDF publication *My webMethods Server Portlet Reference*.

Renaming a Task Chart Portlet

You can configure a task chart so that the results displayed no longer match the name of the task chart portlet. You can change the name of the task chart portlet to reflect the new data display.

To change the name of a task chart portlet

1. Log on to My webMethods as sysadmin.
2. Access the page where you want to create the task chart portlet; for example:
 - a. In My webMethods: **Folders > My webMethods Applications > Fabric Tasks > Monitoring > Business > Tasks**
 - b. Click **Task Charts**.
3. On the Task Charts page, click the  Tools icon in the task chart portlet toolbar and choose **Properties** from the menu. The Properties page appears.
4. In the General panel, type the new name for the task chart portlet, and modify the description and keywords as required.
5. Click **Apply**.

-
6. For additional information on working with portlets and pages in My webMethods Server, see the PDF publication *Administering My webMethods Server*, as well as the PDF publication *My webMethods Server Portlet Reference*.

Placing Task Portlets on Other Pages in My webMethods

As initially installed, My webMethods provides access to tasks in two primary navigation paths: **Administration** and **Monitoring**. You can customize the My webMethods interface to place task portlets on other existing pages, or you can create new pages and add task portlets to them.

If you place related task portlets on a new page (for example, a task type portlet and a search portlet for that task type), you must wire the portlets together to obtain proper operation. Specifically, the 'queryString' property of a result portlet must be wired to the 'lastSearchState' property of a search bar portlet to ensure they work together.

For information on these procedures, see *Section IV. Page Development*, in the PDF publication *Administering My webMethods Server*. It is possible to add an inbox results portlet without a search bar portlet; in this case the inbox results portlet will always display all tasks without any search criteria applied.

Deleting and Hiding Task Type Entries in My webMethods

When you rename a task type root label name or page name in Software AG Designer and publish the task to My webMethods Server, the previous name will continue to appear in the **Navigate** tab or in the task interface and must be manually deleted.

Deletion of the following task type entries is required whenever any of these items are renamed in Software AG Designer:

- Task type inbox root label
- Task inbox page
- Task details page
- Task start page

For information on how to change these names, see the Designer online help.

When a task type does not contain a task type inbox, an empty task type inbox entry will appear in the **Navigate** tab of My webMethods by default. In this case, you can configure the entry to be hidden.


Deleting a Task Type Inbox Entry

Deleting a task type inbox entry in the **Navigate** tab of My webMethods Server is necessary in those instances when you change the task type root label name in Software AG Designer and publish the renamed task type to My webMethods Server.

You must then manually delete the previous task type inbox entry in the **Navigate** tab of My webMethods Server. For more information about changing the task type root label in Designer, see the online help for Software AG Designer.

Important: Do *not* delete the previous task inbox entry until *after* you have published the renamed task type to My webMethods Server. If there are currently running task instances displayed on the task type inbox entry you want to delete, be sure you *first* rename the task type in Designer and publish the renamed task type to My webMethods Server; alternatively, you can delete the running tasks as described in ["Deleting a Task Type from My webMethods Server" on page 125](#).

To delete a task type inbox entry


1. Log on to My webMethods Server using the 'sysadmin' account (default password is 'manage').
2. Do one of the following:
 - Navigate to **Folders > My webMethods Applications > Fabric Tasks > Monitoring > Business > Tasks**
 - Go to the following URL in the address field of your browser:
`http://ServerName:Port/webm.apps.workflow?layout=details`
where *ServerName:Port* specifies your My webMethods Server location.
3. Click the  Tools icon for the task type inbox you want to work with and click **Delete**.
4. Log out as sysadmin and log back on to My webMethods.

Hiding and Displaying a Task Type Inbox Entry

Hiding a task type inbox entry in the **Navigate** tab of My webMethods Server is desirable when a task type does not contain a task type inbox. In this case, an empty task type inbox entry appears in the **Navigate** tab of My webMethods by default. If you add a task type inbox to the task type at a later time, you can then configure the hidden entry to be displayed again.

To hide or display a task type inbox tab

1. Log on to My webMethods Server using the 'sysadmin' account (default password is 'manage').
2. Do one of the following:
 - Navigate to **Folders > My webMethods Applications > Fabric Tasks > Monitoring > Business > Tasks**
 - Go to the following URL in the address field of your browser:
`http://ServerName:Port/webm.apps.workflow?layout=details`
where *ServerName:Port* specifies your My webMethods Server location.

-
3. Click the  Tools icon for the task type inbox you want to work with and click **Properties**.
 4. Do one of the following:
 - To hide the task type inbox entry, clear the **Is Task Folder** check box.
 - To display the task type inbox entry, select the **Is Task Folder** check box.
 5. Click **Apply**.
 6. Log out as sysadmin and log back on to My webMethods.

Deleting a Task Type Page

Deleting a task type page in My webMethods Server is necessary in those instances when you change any of the following task type page names in Software AG Designer and publish the renamed task type to My webMethods Server:

- Task Inbox page
- Task Details page
- Task Start page


You must manually delete the previous task type page in My webMethods Server. For more information about renaming a task type page in Designer, see the online help for Software AG Designer.

To delete a task type page

1. Log on to My webMethods Server using the 'sysadmin' account (default password is 'manage').
2. Do one of the following:
 - Navigate to **Folders > My webMethods Applications > Fabric Tasks > Monitoring > Business > Tasks**
 - Go to the following URL in the address field of your browser:
`http://ServerName:Port/webm.apps.workflow?layout=details`
where *ServerName:Port* specifies your My webMethods Server location.
3. Open the task type you want to work with and locate the original version of the page and the relabeled version of the page. For example:



Note: The Start page windows shown above are in the minimized state.

-
4. Click the  Tools icon for the page you want to delete (that is, the original version of the page) and click **Delete**.
 5. Log out as sysadmin and log back on to My webMethods.

Hiding and Displaying a Task Type Page

It is possible to hide a task type page within the My webMethods taxonomy with the procedure described below. However, this approach is essentially temporary, as the page will be displayed again the next time the task type is published to My webMethods Server.

For a permanent solution, modify the task type page properties in Software AG Designer as described in "Hiding and Displaying a Task Page" in the Designer online help, and then publish the task type to My webMethods Server.

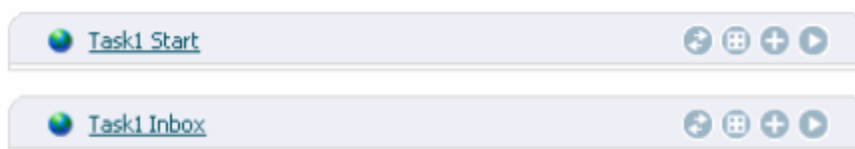
Note: In general, the default Inbox page is displayed by default, but not select the Details page or the Start page (if one is present). If custom pages have been added to the task, they may configured to be displayed or hidden as required.

You can hide or display any of the following task type page names in My webMethods Server:


- Task Inbox page
- Task Details page
- Task Start page

To temporarily hide or display a task type page

1. Log on to My webMethods Server using the 'sysadmin' account (default password is 'manage').
2. Do one of the following:
 - Navigate to **Folders > My webMethods Applications > Fabric Tasks > Monitoring > Business > Tasks**
 - Go to the following URL in the address field of your browser:
`http://ServerName:Port/webm.apps.workflow?layout=details`
where *ServerName:Port* specifies your My webMethods Server location.
3. Open the task type you want to work with and locate the task type page you want to hide or display. For example:



Note: The page windows shown above are in the minimized state.

4. Click the  Tools icon for the Details, Inbox, or Start page you want to hide or display and click **Properties**.
5. Do one of the following:
 - To hide the task type page, clear the **Is Task Folder** check box.
 - To display the task type page, select the **Is Task Folder** check box.
6. Click **Apply**.
7. Log out as sysadmin and log back on to My webMethods.

Analyzing Task Engine Runtime Performance

My webMethods Server provides you with built-in capabilities for tracking and analyzing Task Engine performance.

To view the Task Engine performance information

1. Log on to My webMethods Server using the 'sysadmin' account (default password is 'manage').
2. Navigate to **Folders > Administrative Folders > Administration Dashboard > Analysis > Performance Analysis and Configuration**.
3. In the **Refine** drop-down list, select **Task**.

The resulting list displays columns for the **Number of Actions**, the **Total Time**, and the **Average Time** for the following task activities:

- TaskCompletionHandler.execute -- send task completion to Process Engine.
- TaskSchedulerHandler -- task Date/Time events.
- TaskMechanics.updateCluster -- cluster notification for task updates.
- TaskMechanics.getInfo -- obtain basic task info.
- TaskMechanics.getData -- obtain task business data.
- TaskMechanics.delete -- delete task.
- TaskMechanics.update -- any task updates, including queuing a new task.
- TaskFormFlowService.nnn -- form flow operations.
- TaskChangeHandler.onEvent -- process all task assignments and events.
- TaskApplyChangesWait -- task updates from client (CAF) applications.
- TaskMechanics.countIndex -- indexed search count.
- TaskMechanics.searchIndex -- indexed search.

-
- TaskMechanics.search -- non-indexed search.
 - Any task assignments or events are tracked under "rule:<name>" with the name of the assignment or event.

Note: With proper permissions, you can also access the Performance Analysis portlet from the My webMethods user interface at **Tools > MWS Monitoring and Diagnostics > Performance Information > Performance Analysis**

5

Configuring the Task Engine Environment

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About Task Engine Configuration

webMethods Task Engine interacts with several other webMethods components, including the Process Engine and Integration Server. To enable proper operation, you must specify information about these components as follows:

- You must configure a connection to the Process Engine you want to work with to enable the Task Engine in My webMethods Server to provide results from completed tasks to the Process Engine. You do this by specifying the location of the Integration Server where the Process Engine is running.
- You must configure a connection between the Process Engine and the Task Engine that it is to work with. You do this with the Integration Server Administrator.

Important: If you are working in a clustered My webMethods Server environment, you must also apply the Task Engine server role to each server node in the cluster when you set up clustered operation, as described in the PDF publication *Administering My webMethods Server*. This role must be applied to all nodes of the cluster where Task Engine operations are performed; for example, tasks being worked on (either from an inbox or Task List Management) or queued from the Process Engine. If there are nodes in the cluster where these operations would never happen, this role can be omitted from these nodes.

The Task Engine also requires a connection to a JDBC data source on Integration Server to enable the Task Engine to provide log events for webMethods Monitor. When the Task Engine first requires this connection, it queries the specified Integration Server to determine the name of this JDBC pool, and configures a connection automatically.

Therefore, no manual configuration is required. However, in the event the name or location of the JDBC pool on Integration Server changes, you can redefine the configuration as described in ["Configuring a JDBC Data Source" on page 149](#).

Configuring the Task Engine in My webMethods

Make note of the following information:

- If you are working with a single Integration Server/Process Engine, use the following procedure to configure a connection from the Task Engine on My webMethods Server to that Integration Server.
- If you are working in a clustered Integration Server environment, all of the Process Engines in the cluster typically share a single instance of webMethods Broker, a Process Engine database component, or both. In this situation, use the following procedure to connect from the Task Engine on My webMethods Server to any Integration Server/ Process Engine in the cluster; by doing so, communications will be established with all Process Engines in the cluster.

Note: If you have installed My webMethods Server/Task Engine and Integration Server on the same system at the same time, these values are set at the time of installation, using the default user name and password values of `Administrator/manage` and the host and port values of `localhost:5555`. If your installation requires different values, specify them with the procedure below.

To configure the Task Engine in My webMethods

- In My webMethods: **Navigate > Applications Administration > My webMethods > System Settings.**
- In the **Task Engine Settings** area in the System Settings panel, specify values for connecting to the Process Engine on the Integration Server you want to work with.

Note: The user name you specify must be a member of the Administrators group on the Integration Server you specify in step 3.

- **Username**—type the name of the user account you want to use to connect to the Integration Server. If no value is specified, a default value of `Administrator` is used.
- **Password**—type the password for the specified user account. If no value is specified, a default value of `manage` is used.
- In the **Integration Server (Process Engine Host)** area in the System Settings panel, specify the following values:
 - **Host**—type the URL of the Integration Server where the Process Engine is running. If no value is specified, a default value of `http://localhost` is used.
 - **Port**—type the port number for the specified Integration Server host. If no value is specified, a default value of `5555` is used.
- If you are connecting to the Integration Server in a Secure Socket Layer environment, select the **Use SSL** check box.
- Click **Save**.

Configuring the WmTaskClient Package in Integration Server

Make note of the following information:

- If you are working with a single Integration Server, use the following procedure to configure a connection from the Process Engine on that Integration Server to the Task Engine on My webMethods Server.
- If you are working in a clustered Integration Server environment, all of the Process Engines in the cluster typically share a single instance of webMethods Broker, a Process Engine database component, or both. In this situation, use the following procedure to connect from any Process Engine in the cluster to the Task Engine on

My webMethods Server; by doing so, communications will be established with all Process Engines in the cluster.

Specifying a User Account for the WmTaskClient Package

The My webMethods Server user account you specify for the WmTaskClient package must be a member of an existing My webMethods Server role.

The user account must be assigned the permission, "Impersonate Users for Remote Clients." This is normally done by making the user a member of a role that grants this permission, although this permission can be granted directly to the user if necessary. For additional information, see ["Remote Session Timeout Values" on page 174](#). For general information about granting permissions, see ["Configuring Task Access Permissions" on page 105](#).

In addition, the user account must be granted permissions to the appropriate tasks, and permissions for all actions that you want to apply to the task using WmTaskClient (again, through role membership or directly).


One way of meeting these requirements is to make the user a member of an administrative role (such as sysadmin or My webMethods Administrators). By default, these roles are granted full functional and access permissions for all task types.

For example, if you are running instances of a task type named OrderApproval on My webMethods Server and you want to access these instances using WmTaskClient, the user name you specify must have been granted all permissions for the OrderApproval task type, and must be granted the "Impersonate Users for Remote Client" privilege.

Note: If you have installed My webMethods Server/Task Engine and Integration Server on the same system at the same time, these values are defined at the time of installation, using the default user name and password values of Administrator/manage, the host value of localhost and the port value you specified at installation. If your installation requires different values, specify them with the procedure below.

Configuring the WmTaskClient Package

To configure the WmTaskClient Package in Integration Server

1. Open the Integration Server Administrator in your browser.
2. In Integration Server Administrator: **Packages > Management**
3. In the **Package List**, locate the WmTaskClient package.
4. Click the  Home icon for the WmTaskClient package. The WmTaskClient Configuration page opens.
5. Specify the following values:

Note: Be sure to read ["Specifying a User Account for the WmTaskClient Package" on page 148](#) before typing this information.

- **Task Server URL.** Type the URL of the of the My webMethods Server instance that contains the Task Engine you want to connect with, including the port number. For example, `http://myserver:8585`.
- **Username.** Type the name of the My webMethods Server user account you want to use to connect to the Task Engine. The default value is `sysadmin`.
- **Password.** Type the password for the specified user account or accept the default value.
- **Service Socket Timeout.** Type the timeout period in milliseconds that all services will wait for a response on the WmTaskClient package Home page. The default value is 60000 ms. This value applies to all WmTaskClient IS services only and cannot be overridden for individual service invocations.
- **Number of Retries on Service Failure.** Type the number of times to attempt to invoke a service if the initial attempt fails. The default is 0 times. This value applies to all WmTaskClient IS services only and can be overridden for individual service invocations by specifying the `retryOnFailureCount` parameter when invoking the service.
- **Delay Between Service Retries.** Type the number of milliseconds to wait between attempts. The default is 1000 ms (this field is ignored if **Number of Retries on Service Failure** = 0). This value applies to all WmTaskClient IS services only and can be overridden for individual service invocations by specifying the `retryDelay` parameter when invoking the service.

Note: For more information about WmTaskClient IS services, see the PDF publication *webMethods Task Engine API and Service Reference*.

6. Click **Save**.
7. Close the WmTaskClient Configuration page.

Configuring a JDBC Data Source

To enable the Task Engine to provide log events for webMethods Monitor, a JDBC data source must be specified as a JDBC pool existing on the Integration Server specified in ["Configuring the Task Engine in My webMethods" on page 146](#). Otherwise, it will not be possible to view task-related information when browsing process instances with webMethods Monitor.


The name of the pool must be `ProcessAudit` and it must point to the process audit database used by webMethods Monitor. If this JDBC pool is not already defined locally on the My webMethods Server, the Task Engine automatically checks to see if this pool

exists on the configured Integration Server. If the pool is defined there, the Task Engine creates an identical pool in My webMethods Server.

Note: The Task Engine checks for the presence of an existing pool on the configured Integration Server only after the first task is queued from a business process following a start-up of My webMethods Server. During the interval between start-up and the queuing of the first task from a business process, the JDBC pool may not exist on My webMethods Server.

In general, no manual configuration is required. However, in the event the name or location of the JDBC pool on Integration Server changes, you can redefine the configuration as follows:

To reconfigure a Task Engine JDBC data source

1. In My webMethods: **Navigate > Applications Administration > My webMethods > Data Sources**. This panel displays all available data sources. Note that the **default** data source cannot be deleted or modified.
2. On the Data Source panel, click the  Tools icon for the `ProcessAudit` data source and choose **Modify** from the menu.
3. On the Data Source Properties panel, modify the display name and database server type from list if required.
4. Click **Next**.
5. Modify the required database connection information as needed:
 - Server host name
 - Server port number
 - Database name
 - User name
 - Password
6. Click **Submit**.

Configuring Calendars

Software AG Designer and My webMethods Server support the use of business calendars and user calendars to assist with task definition and behavior. Both business and user calendars are set up and configured in My webMethods Server. Each type of calendar is configured separately, and you can define business calendars only, user calendars only, or both.

Working with Business Calendars

Business calendars define standard business days and hours for your business organization, including holidays, weekends, or any other times when your organization is not conducting business. For example, you might define your business calendar for normal business hours of Monday through Friday, 8:00 A.M. to 5:00 P.M. Eastern Standard time. You can define multiple business calendars.

These business calendars are defined in My webMethods Server and can be specified when you define a task date/time event type, for example. This ensures that when counting days, only business days will be considered and that non-business days such as weekends and holidays are not included.

A business calendar can also be associated with a process. In this case, the business calendar is used only to determine process time outs and joins and does not apply to any tasks in the process.

Creating a Business Calendar


You can create multiple business calendars, enabling you to accommodate operations that may span different locations. For example, you may have an office in one location that works 8 A.M. to 4:30 P.M. Monday through Friday, and another office that works 8 A.M. to 6:30 P.M. Tuesday through Friday.

In this case, you can define two different business calendars, and associate users in each location with the appropriate calendar. When calculating time intervals, the Task Engine will take the proper business schedule into account.


Note: After you create a business calendar on an instance of My webMethods Server version 8.2 or later, you can use webMethods Deployer to migrate the calendar to other instances of My webMethods Server. In addition, in Software AG Designer 8.2 or later, you can locate the business calendar in the MWS Admin view, right-click it and then click **Import/Export > Extract Asset Into Project**. This extracts the calendar into a deployable My webMethods Server component.

To configure a business calendar

1. In My webMethods: **Navigate > Applications Administration > System-Wide > Calendars Management**.
2. Click on the **Business Calendars** tab.
3. On the Calendar Administration panel, click **Create New Calendar**.
4. On the Create New Calendar panel, enter the following:
 - **Name** — A name for the calendar; this name must be unique within My webMethods Server. This name is displayed in the My webMethods and Designer interfaces as the name of the calendar.

-
- **Lookup Name** — This is an internal name (or alias) used to identify the calendar. This name must be unique within My webMethods Server. For example, a task may define an event to set an expiration date based on business calendar. The calendar to use may be specified during task design time or it could be taken from a piece of business data; in either case, the task will use the lookup name to identify the given calendar.
5. The time zone is set to the system time zone by default. If you are setting up a calendar for another time zone, select it from the drop-down list.
 6. Add the workdays of the week by clicking the New Workday link. The New Workday dialog box appears.
 7. Select the day of the week, specify the hours of the day, and click **Add**.
 8. Repeat steps 5 and 6 to add additional days of the week.
 9. Add any holidays you want to include in the calendar by clicking the New Holiday link. The New Holiday dialog box appears.
 10. Enter a name for the holiday. Click the  Calendar icon to select a date, and then specify the duration (one day, by default). Click **Add**.
 11. Repeat steps 8 and 9 to add additional holidays.

Important: Calendars are not limited to the current year, but continue automatically into following years. *Holidays are not carried forward from year to year, and must be manually defined for each calendar year.* Consider creating a task (or other reminder) to notify you near the end of a year to schedule holiday date creation for the coming year.

12. To delete a workday or a holiday from the calendar, click the  Delete icon next to the workday or holiday.
13. Click **Create New**.

The new calendar appears in the Calendar Administration list. Be sure you specify a default business calendar, as described in the following section.

Specifying a Default Business Calendar

When you define a My webMethods user, you can specify a business calendar for the user. By default, this value is set to "Default," indicating that the default calendar specified on the Calendar Administration panel is used.

Important: No default calendar is defined initially. If you do not specify a default calendar, any user with the Default calendar will have no business calendar association.

To specify a default business calendar

1. In My webMethods: **Navigate > Applications > Administration > System-Wide > Calendars Management**.

-
2. Click on the **Business Calendars** tab.
 3. On the Calendar Administration panel, select the calendar you want to specify as the default calendar.
 4. Click **Set As Default**.
 5. The word **Yes** is displayed in the **Default Calendar** column for that calendar.

Modifying a Business Calendar

To modify a business calendar

1. In My webMethods: **Navigate > Applications Administration > System-Wide > Calendars Management**.
2. Click on the **Business Calendars** tab.
3. On the Calendar Administration panel, click the link for the calendar in the **NAME** column. The Edit Calendar panel appears.
4. Make changes to the calendar as described in ["Creating a Business Calendar" on page 151](#).

Important: You can change the calendar Name as needed, but *changing the Lookup Name will break any associations made to the calendar* for My webMethods Server users, and for any tasks or processes that reference the calendar. In this case, the task or process will revert to calculating time intervals using every day of the week (including weekends and holidays).

5. Click **Update** to save the changes.

Deleting a Business Calendar


Important: *Deleting a calendar will break any associations made to the calendar* for My webMethods Server users, and for any tasks or processes that reference the calendar. In this case, the task or process will revert to calculating time intervals using every day of the week (including weekends and holidays).

To delete a business calendar

1. In My webMethods: **Administration > System-Wide > Calendars Management**
2. Click on the **Business Calendars** tab.
3. On the Calendar Administration panel, select the calendar you want to delete.
4. Click **Delete**. A confirmations dialog appears.
5. Click **Delete**.

Specifying a Business Calendar for a User Account

To specify a business calendar for a user

1. In My webMethods: **Navigate > Applications Administration > System-Wide > User Management**.
2. Click **Users**. All of the user accounts available in My webMethods are displayed in the Users panel.
3. Click the **User ID** link for the user account, or click the  Edit icon for the role.
4. On the Edit User page, click the **Calendar** tab.
5. Do one of the following:
 - If you have created and specified a default business calendar as described in "[Specifying a Default Business Calendar](#)" on page 152, and you want the user account to be associated with the default calendar, ensure that **Default** is selected in the **Business Calendar** list. If it is not, select **Default**.
 - If you have created and specified another (non-default) business calendar and you want the user account to be associated with that calendar, select the calendar in the **Business Calendar** list.
6. Click **Save**

Working with Personal User Calendars

Personal user calendars are maintained in a third-party application such as Microsoft Outlook or Lotus Notes, where the user maintains daily calendar events that define the user's availability. When a task is being assigned to or accepted for another user, the Task Engine checks the user's personal calendar to determine if the user is available on this working day, taking into consideration only Out of the Office and Busy types of calendar events that are *scheduled for the entire day*.

You can also view a user's personal calendar on the Task List Management page in My webMethods when you manually assign a task or accept a task for another user. In this case, all of the events in the user's calendar are displayed.

You can configure My webMethods Server to provide access to user calendars, enabling you to view individual user calendars. User calendars are accessible when you are assigning a task, or accepting a task for others, on the Task List Management page.

When you open the Select Principals dialog box and select a user, a small calendar icon appears next to the user name if a user calendar is configured for that user. When you click on the icon, the user's calendar appears, and you can determine when the user is available.

You can also view the user's calendar on the **Calendar** tab of the Edit User page, accessed from **Navigate > Applications > Administration > System-Wide > User Management > Users**

Configuring User Calendars — Microsoft Exchange

Configuration of user calendars has the following prerequisites:

- You must have a network connection to your e-mail server.
- You must have the URL of the Microsoft Exchange server. Consult with your mail server administrator to obtain this information.
- Each user account must be configured with the user's e-mail address as recognized by the e-mail server. Navigate to **Navigate > Applications > Administration > System-Wide > User Management > Users**. Click the **User ID** link to open the Edit User panel and specify the user's e-mail address.

Note: This typically needs to be done only for users that have been created manually in My webMethods. Users derived from an LDAP directory would normally already have an e-mail address.

To configure user calendars for Microsoft Exchange

1. In My webMethods: **Navigate > Applications > Administration > System-Wide > Calendars Management**.
2. Click the **User Calendars** tab.
3. On the User Calendars Configuration panel, enter the following:
 - **External User Calendar**—Select Microsoft Exchange from the drop-down list.
 - **External host name or IP**—Enter the URL for the Exchange e-mail server; for example, `main.mail.server.com`. To use a secure connection to the server, you must specify a server URL starting with `https://`. Otherwise, the `http` protocol is used by default.
 - **Email User Attribute**—This is the attribute from User attribute page that is used to pass the e-mail account name to the server to identify the correct user calendar on the Exchange server. The default value `email` passes the e-mail address entered on the Edit User page; in most cases, this is the information required by the server. If this value does not work, consult with your mail server administrator to determine the required value. In this case, you must define a new dynamic attribute at the role level and configure it to pass the required information.
 - **Calendar Data Caching**—This value specifies how often the user calendar information is retrieved from the mail server. Select a value from the drop-down list. The information is cached in My webMethods Server until the next refresh time. Select No Cache to retrieve the calendar information from the mail server with each request.
 - **Time Window** — This value specifies the calendar time period that is retrieved from the mail server, beginning with today's date. Select from the drop down list.

-
- **Time Slot**—This value defines the time divisions displayed in the user calendar. Events that are of a shorter duration than the selected value are "rounded up" to the selected value. Select a value from the drop-down list.
 - **Exchange User**—The user name for connecting to the Exchange server.
 - **Exchange User Password**—Password for the Exchange user.
4. Click **Update**.
 5. In My webMethods: **Navigate > Applications > Administration > System-Wide > User Management > Users**
 6. Click the **User ID** link to open the Edit User panel.
 7. Click the **Calendar** tab. The calendar appears in the User Personal Calendar panel.

Configuring User Calendars — Lotus Notes

Configuration of user calendars has the following prerequisites:

- You must have a network connection to your e-mail server.
- You must have the URL of the Lotus Notes Domino server. Consult with your mail server administrator to obtain this information.
- You (or your mail server administrator) must apply configuration changes to your Lotus Notes Domino server, as described in "[Configuring the IBM Lotus Domino Server](#)" on page 158.
- You must install the notes.jar file in the My webMethods Server file system, as described in "[Installing the notes.jar File](#)" on page 157.
- Each user account must be configured with the user's e-mail address as recognized by the e-mail server. Navigate to **Navigate > Applications > Administration > System-Wide > User Management > Users** Click the **User ID** link to open the Edit User panel and specify the user's e-mail address.

To configure user calendars for Lotus Notes

1. Ensure that all prerequisite activities have been completed.
2. In My webMethods: **Navigate > Applications > Administration > System-Wide > Calendars Management**.
3. Click the **User Calendars** tab.
4. On the User Calendars Configuration panel, enter the following:
 - **External User Calendar**—Select IBM Lotus Notes from the drop-down list.
 - **Calendar hostname or IP**—Enter the URL for the Lotus Domino e-mail server containing the desired calendar; for example, `main.mail.server.com`.
 - **Calendar Server Port**—Enter the port number for the Lotus Domino e-mail server containing the desired calendar

-
- **Email User Attribute**—This is the attribute from User attribute page that is used to pass the e-mail account name to the server to identify the correct user calendar on the Lotus Domino server. The default value `email` passes the e-mail address entered on the Edit User page; in most cases, this is the information required by the server. If this value does not work, consult with your mail server administrator to determine the required value. In this case, you must define a new dynamic attribute at the role level and configure it to pass the required information.
 - **Calendar Data Caching**—This value specifies how often the user calendar information is retrieved from the mail server. Select a value from the drop-down list. The information is cached in My webMethods Server until the next refresh time. Select No Cache to retrieve the calendar information from the mail server with each request.
 - **Time Window**—This value specifies the calendar time period that is retrieved from the mail server, beginning with today's date. Select from the drop down list.
 - **Time Slot**—This value defines the time divisions displayed in the user calendar. Events that are of a shorter duration than the selected value are "rounded up" to the selected value. Select a value from the drop-down list.
 - **Notes Admin User ID**—Administrator user name for connecting to the Lotus Domino server.
 - **Notes Admin Password**—The password for the administrator user.
5. Click **Update**.
 6. In My webMethods: **Navigate > Applications > Administration > System-Wide > User Management > Users**
 7. Click the **User ID** link to open the Edit User panel.
 8. Click the **Calendar** tab. The calendar appears in the User Personal Calendar panel.

Installing the notes.jar File

Access to IBM Lotus Notes user calendars requires the use of the Notes.jar file. This file is distributed with the Lotus Notes Domino server installation and can be found in this directory:

```
..\jvm\lib\ext
```

Copy this file and place it in the My webMethods Server file system in the following directory:

```
[Software AG_directory]\MWS\lib\ext
```

Important: It is your responsibility to read and conform to all IBM requirements concerning the use and distribution of this jar file.

After the jar file is in place, you must update My webMethods Server.

To update My webMethods Server

1. If My webMethods Server is running, stop it.
2. Open a command window and change directory to: [

Software AG_directory] \MWS\bin

3. Run the following update command:

```
mws -s [Name of your MWS] update
```

Note: Unless you have specified a My webMethods Server name during installation, the name `default` is applied to the installation.

4. Start My webMethods Server.

Configuring the IBM Lotus Domino Server

The installation, setup, and configuration is intended to be done by a qualified Lotus Notes Administrator that is qualified and trained on the Domino Server version 7.

Note that the following documents and information are based on the Domino version 6, but the user calendar feature has been developed and tested on a Domino version 7. There is no implied or expressed backward compatibility with the earlier version of the IBM Domino server.

Useful IBM site for configuration and trouble shooting information:

http://www-128.ibm.com/developerworks/lotus/library/ls-Java_access_2/

More information:

http://www-128.ibm.com/developerworks/lotus/library/ls-Java_access_pt1/index.html

Make the following changes to your Domino server:

Important: If you are configuring over a remote connection do not issue quit or restart commands in the Domino server console. This will terminate your Lotus Domino server connection and it will have to be restarted from an admin session on the physical Lotus Domino server machine.

- On the Internet Protocols tab, HTTP tab and R5 Basics tab, Set the "Allow HTTP clients to browse databases" field to Yes.
- On the Internet Protocols tab and the DIIOp tab, specify the Internet host name for the server in the Host name/Address field (Domino Internet Inter-Orb Protocol).
- Anonymous access must be allowed. In the Server document in the Domino Directory, go to the Ports tab, then the Internet Ports tab, then the Web tab. Ensure that the Anonymous field under Authentication options is set to Yes.

Useful Lotus Domino server console commands:

-
- `tell diiop show config` — this lists all the configuration information that is needed for setting up the server. If this shows an error then DIIOP may not be loaded. If DIIOP is not loaded than run this command:
 - `load diiop` — this will also refresh/update the DIIOP setting instead of waiting the default time interval (5 minutes) for updates.

Configuring Task Analytics

You can configure the Task Engine to collect task instance metrics in the run-time environment and send this information to webMethods Optimize for Process. This capability requires that both webMethods Broker and webMethods Optimize for Process are installed and configured for interaction with My webMethods Server.

To work with the available task metrics in Optimize for Process, you must:

- Define a connection to webMethods Broker and deploy the event maps as described in ["Configuring a webMethods Broker or JMS Server Connection and Deploying Event Maps" on page 161](#).
- Enable one or more task types as described in ["Disabling and Enabling Task Analytics" on page 117](#).

A default Task Metrics event map is available, containing predefined dimensions, facts, and key performance indicators (KPIs). You can begin monitoring tasks immediately with these predefined KPIs, and you can add custom task monitoring KPIs as required.

About the Task Metrics Event Map

With the installation of webMethods Optimize for Process and its components, a default Task Metrics event map is available that consists of the following:

Dimension attributes:

- **Assignee** — Name of a user, group, or role that the task is assigned to.
- **ModelId** — Identifies the process model that triggered the task (where applicable).
- **ModelStepId** — Identifies the step ID within the process model that triggered the task (where applicable).
- **Operation** — Identifies and action that is applied to the task (for example, queued, reassigned, or completed).
- **ProcessId** — Identifies the unique ID number for the process that contains the task (where applicable).
- **TaskId** — Identifies the unique ID number for the task.
- **TaskType** — Identifies the task type from which the task instance was started.
- **User** — Identifies the user that performed a reported operation.

Fact attributes:

- **AcceptedCount** — Tasks that have been accepted by a user.
- **CancelledCount** — Tasks in Canceled status.
- **CompletedCount** — Tasks in Completed status.
- **Count** — Number of tasks.
- **ExpiredCount** — Tasks in Expired status.
- **FailedCount** — Tasks in Failed status.
- **IsFirstTransactionFlag** — Identifies the first event when multiple transactions are sent per task. Value is 1 for the first event, 0 for remaining events. Not user-editable.
- **QueuedCount** — Tasks started (queued).
- **QueueTime** — Time elapsed between start (queue) time and the time the task was first accepted.
- **ReleasedCount** — Tasks that have been released by a user.
- **ReassignedCount** — Tasks reassigned to a new user, group, or role.
- **ResumedCount** — Tasks that have been resumed from a Suspended status.
- **SuspendedCount** — Tasks in Suspended status.
- **TotalTime** — Total time elapsed between start (queue) time and task termination (completed, expired, canceled).
- **UserTime** — Total time less queue time.

Generic Attributes

- **StepId** — Identifies the step ID within the process instance where the task is being executed (where applicable).

A number of predefined KPIs are provided for each fact except Count.

You can manage and monitor the Task Metrics KPIs just as you would any other KPIs. For information about working with and monitoring KPIs in My webMethods, see *webMethods Optimize User's Guide*

Working with the Task Metrics Event Map

To access the Task Metrics event map

1. Ensure that webMethods Broker and webMethods Optimize for Process are installed and configured.
2. In My webMethods: **Navigate > Applications > Administration > Analytics > KPIs > Business Data**.

-
3. In the KPIs list, expand **Business Process**, then expand **Intrinsic Task Engine Metrics** to view the Task Metrics event map.

You can create one or more new event maps in the **Intrinsic Task Engine Metrics** list and add, modify, or delete KPIs as described in the PDF publication *webMethods Optimize User's Guide*. After making any changes, be sure to re-deploy the Intrinsic Task Engine Metrics event maps.

Configuring a webMethods Broker or JMS Server Connection and Deploying Event Maps

You can configure the Task Engine to collect task instance metrics in the run-time environment and send this information to webMethods Optimize for Process. This capability requires that both webMethods Broker and webMethods Optimize for Process are installed and configured for interaction with My webMethods Server.

Note: If you have installed My webMethods Server/Task Engine and webMethods Broker on the same system at the same time, these values are set at the time of installation, using the default host value `broker://localhost:6849/Broker #1/analysis`; if you specified a different port number at installation time, it will be used. If you require different values, specify them with the procedure below.

To configure a webMethods Broker or JMS server connection and deploy the event map

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Analytics Configuration**.
2. On the Task Engine Analytics Configuration panel, type the URL of your webMethods Broker server or JMS server in the **JMS Server URL** field.
3. Click **Deploy Event Maps** to deploy all event maps contained in the Intrinsic Task Engine Metrics list on the Business Data page.

About Modifying the Task Analytics Schema

The task analytics schema is defined by the file `..\MWS\server\ <server_instance>/config/analytics/taskEngine/eventMap/TaskEngineEvent.xml`. Any changes to the task analytics schema require modifications to this file. However, these modifications are not easily applied and Software AG customers are strongly advised not to apply changes to this file manually.

Changes to the task analytics schema are most often required as a result of product enhancements provided by Software AG, typically in the form of product fix packages or as part of an upgrade to a later version. To apply these changes, an administrative portlet is available in My webMethods Server. When necessary, the product fix package or upgrade documentation will contain instructions about how you can use this portlet to apply the changes.

Important: Any time modifications are applied to the task analytics schema, all historical analytic data gathered to date is discarded. In addition, Optimize will delete all runtime data and metadata for "Task Metrics."

To access the administrative portlet, log in as sysadmin and go to **Folders > System > Portlets > wm_teeventmapoverwrite**. If you have questions about modifying the TaskEngineEvent.xml file, contact Software AG Global Support.

Configuring the Task Engine Logging Level

By default, the Task Engine records task application log messages into the My webMethods Server log files located in:

[Software AG_directory]\MWS\server\default\logs

with a logging level of INFO, which reports only limited information. To help analyze Task Engine problems or to assist with task application development, it can be useful to have the Task Engine log more information; this is done by setting the DEBUG value for task applications.

Note: This setting has no relationship to the information displayed on a task's **Audit View** tab; for more information on that capability, see ["Specifying Task Audit View Logging Levels" on page 134](#).

To configure the Task Engine logging level

1. Log in to My webMethods as sysadmin.
2. In My webMethods: **Folders > Administrative Folders > Administration Dashboard > Analysis > Logging Configuration**. This page controls logging levels for all available logging categories in My webMethods Server. For more information working with logging levels in general, see the PDF publication *Administering My webMethods Server*.
3. Locate the **task** logging category and select the DEBUG logging level. You can also set logging levels for individual task applications, as well as for:
 - /wm_task_analytics
 - /wm_task_chart
 - /wm_task_migration
 - /wm_task_search
4. Depending where you would like the output to show up (in the console, in the logs, or both) select the DEBUG value for Console and log file output.
5. Click **Apply**.
6. Log out as sysadmin.

When you complete the procedure you are working on, be sure to log back in to My webMethods as sysadmin and set the logging level back to INFO; otherwise, your log files will grow at a much faster rate.

Configuring a Task E-mail Listener

Task notifications can be configured to contain a Task Action Link control, which enables the recipient to send a pre-defined e-mail response to a specified e-mail account; you must specify and configure a task e-mail listener to monitor the e-mail account for incoming messages.

You can configure multiple e-mail listeners to monitor different mailboxes on different schedules. When the listener checks the specified account, it downloads any e-mails in the monitored account. For more information about creating task notification e-mail replies, see the topic "About Task E-Mail Notification Replies" in the *webMethods BPM Task Development Help*.

To configure a task e-mail listener

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Email Listener Administration**.
2. In the Task Email Listener Administration window, specify the following settings:
 - **Name**—The name you want to assign to this listener.
 - **Type**—Select either **POP3 Mailbox** or **IMAP Mailbox** from the drop-down list.
 - **Run Every**—Select an interval that determines how often the specified server is contacted.
 - **Email Server**—The host name of the mail server.
 - **Port**—The incoming server port. For example, by conventional usage:
 - POP3: 110
 - POP3 secure: 995IMAP: 143IMAP secure: 993
 - **Is secure**—Indicates if a secure SSL (Secure Socket Layer) connection is required.
 - **User name**—User name with access to a mail account.
 - **Password**—Password for the specified user name.
3. Click **Create**.

When the listener checks the specified account, it downloads any e-mails in the monitored account and deletes the e-mail from the server.

Managing Task E-mail Listeners

After you create a task e-mail listener, you can modify or delete an e-mail listener.

To modify or delete a task e-mail listener

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Task Email Listener Administration.**
2. In the Task Email Listener Administration window, do either of the following:
 - To delete a listener, select the check box for the listener, then click **Delete**.
 - To modify a listener, click the link to the listener in the **Name** column, apply your changes, and then click **Update**.

About E-mail Listener Security

Security concerns must be addressed as the task e-mail listener effectively provides access to the Task Engine through an e-mail gateway.

In the case of task notifications, the key security considerations concern the following scenarios:

- A subscribed user uses the e-mail notification to perform an action on a task he does not have permission to work with.
- A subscribed user uses the e-mail notification to perform an action on a different task from the one that sent the notification e-mail.
- A malicious user attempts to spoof a reply e-mail and execute an action on an arbitrarily task.

This request body created by the Task Action Link is sent to the specified e-mail account monitored by the Task Engine, encoding the following data:

- TaskID—identifier of the task.
- GUID—A unique, one-time security ID assigned to this notification. This is used to prevent a user from spoofing an e-mail and performing actions on arbitrarily tasks.
- Action identifier—ID of an action to be performed on given task when the e-mail is processed by Task Engine. As noted, an action is configured as a binding expression when the Task Action Link is defined, but the e-mail body does not contain the actual binding expression; instead, it contains an identifier of the action. The actual action binding expression is stored on the server. This also prevents a user from spoofing an e-mail body and executing a random action on the task.

There is no sensitive information in the reply-to body, nor does this information give a user access into the system, so it formatted with Base64 encoding.

About E-mail Listener Behavior

For each downloaded e-mail, the e-mail listener does the following:

1. Instructs the mail server to delete the e-mail.

-
2. Parses the e-mail body looking for encoded action request. If a request is not found or is malformed, an error is logged in the Task Engine logs and the e-mail is ignored.
 3. Fetches the task instance for the given task ID specified in the request.
 4. Checks that the security GUID contained in the request matches the one stored on the task (the latter is generated during task notification publishing). If these values do not match, an error is recorded in the logs and in the task audit and the e-mail is ignored
 5. Determines the binding expression of the action from the action ID from the request (this is again stored in the task instance during task notification publishing).
 6. Executes the specified action for the given task and records an e-mail receive event in the task audit.

The status of each task e-mail listener is displayed on the Task E-Mail Listener Administration page (**Navigate > Applications > Administration > Business > Tasks > Task Email Listener Administration**):

- Whether it is currently paused or running, and what the monitoring interval is.
- Last run date and time.
- Last run status.

Running an E-mail Listener in a Clustered Environment

By itself, an e-mail listener does not implement any synchronization and relies on the external mail server to delete processed e-mails to ensure they are not processed twice.

In a cluster, it is possible that under certain timing conditions the same e-mail will be downloaded and processed multiple times for a given task instance. However, this is not a problem, because during processing, the e-mail listener checks against a security GUID attached to the task. This is a one-time token; after a request is processed, the token is removed from the task, thus preventing a second e-mail request instance from being processed.

Configuring an E-form Environment

There are a number of actions that must be taken before you can work with e-forms in your task applications; you must:

- Create a repository for your e-form instances and templates (in certain circumstances, you can keep your templates in a file system or web server).
- Configure a e-form environment in My webMethods and deploy that environment to the Integration Server host(s) where you will be creating your IS document types and running your business processes.
- Ensure that you have network connectivity between all of the host servers.

-
- Review various implementation issues for the supported e-form types.
 - Create and publish e-form enabled tasks, either separately or as part of a business process model, using an IS document type that is created from an e-form template as task business data.
 - In addition, if you are working with e-forms stored in webMethods Content Service Platform, you must configure global environment settings for task applications as described in ["Integrating Task Engine and webMethods Content Service Platform" on page 166](#).

All of these procedures, as well as conceptual information about the use of e-forms in the webMethods product suite, are available in the PDF publications *Implementing E-form Support for BPM* and *Implementing webMethods Content Service Platform for BPM*. For additional information about working with e-forms, see the following webMethods documentation:

- *webMethods Service Development Help*
- *webMethods BPM Process Development Help*
- *webMethods BPM Task Development Help*
- *webMethods CAF Development Help*
- *webMethods BPM Task Development Help*

Integrating Task Engine and webMethods Content Service Platform

Before you can enable interaction with webMethods Content Service Platform (CSP) content, you must:

- Install webMethods Content Service Platform as part of your Software AG product suite installation.
- Configure a webMethods Content Service Platform environment in My webMethods and deploy that environment to the Integration Server host(s) where you will be creating your IS document types and running your business processes.
- Ensure that you have network connectivity between all of the host servers.
- Create and publish CSP-enabled tasks, either separately or as part of a business process model, using an IS document type that is created from an e-form template stored in a webMethods Content Service Platform repository.
- Configure your task applications for use with a particular webMethods Content Service Platform repository, as described in the PDF publication *Implementing webMethods Content Service Platform for BPM*.

When you create task applications with CSP support, each task application must have run-time environment entries configured to enable connection to the CSP

server. Typically, you do this by setting global variables for all task applications. For information about configuring CSP environment entries for task applications, see the PDF publication *Implementing webMethods Content Service Platform for BPM*.

Conceptual and configuration information about the use of e-forms stored in a webMethods Content Service Platform repository is available in the guide *Implementing webMethods Content Service Platform for BPM*. For additional information about working with e-forms stored in a webMethods Content Service Platform repository, see the following webMethods documentation:

- *webMethods Service Development Help*
- *webMethods BPM Task Development Help*
- *webMethods CAF Development Help*

Creating a Task Time-to-Live Eviction Policy

You can create a Time-to-Live (TTL) eviction policy for My webMethods Server caches to remove tasks based on the last used object date. This policy enables automatic shrinkage of caches by removing completed tasks that are no longer being accessed, thus allowing more space for active tasks in the cache. To configure a TTL eviction policy, you must add the following setting to "TaskDataCache" and "Thing Cache" in the cache.xml. To do so:

1. Obtain the cache.xml configuration file by running the following command: `MWS/bin/mws.bat|sh getconfig cache.xml`

This saves a local copy of cache.xml to `MWS/server/default/config`.

2. Open `/MWS/server/default/config/cache.xml` and edit the following cache configuration attributes in "TaskDataCache" and "Thing Cache" in the cache.xml file:

- `lastAccessedEvictionPolicy="true"`
- `timeToLive="seconds"`

3. Save the file.
4. Upload cache.xml back to the database by running the following command: `MWS/bin/mws.bat|sh putconfig cache.xml`

This setting specifies that if an entry is not accessed in the cache for the specified number of seconds, then it will be automatically evicted from the cache. For example, to set a 24 hour eviction policy:

```
<cache name="Thing Cache"
  class="com.webmethods.portal.service.meta2.impl.ThingTransientCache"
  maxSize="10000"
  isClustered="true"
  timeToLive="86400"
  lastAccessedEvictionPolicy="true"
  ID= "1"
  enabled="true"/>
<cache name="TaskDataCache"
  class="com.webmethods.portal.service.cache.impl.TransientCache"
```

```
maxSize="10000"  
isClustered="true"  
timeToLive="86400"  
lastAccessedEvictionPolicy="true"  
ID="12"  
enabled="true"/>
```

Configuring Task Service Retry and Timeout Values

The Task Engine supports a number of built-in Integration Server services for working with tasks remotely. When you execute one of these services, the service establishes a connection with the Task Engine to carry out its interaction with one or more tasks. Because of issues such as network latency and heavy network traffic, it is possible for the initial connection attempt to fail.

When you invoke an IS service, you can specify the following parameters to help ensure the connection is established:

- *retryOnFailureCount* . This parameter specifies how many times to attempt to invoke the service after the initial attempt fails. The default is 0 times.
- *retryDelay* . This parameter specifies the number of milliseconds to wait between attempts. The default is 1000 ms (this field is ignored if *retryOnFailureCount* = 0).

You can set global values for this behavior on the WmTaskClient Home page in Integration Server Administrator. These values apply to all WmTaskClient service invocations, but are overridden when you pass a *retryOnFailureCount* or *retryDelay* value to the service when you invoke it.

You can also specify the timeout period that all services will wait for a response on the WmTaskClient package Home page. The default value is 60000 ms. This value cannot be overridden for individual service invocations.

- For more information about setting the global values, see ["Configuring the WmTaskClient Package" on page 148](#).
- For more information about WmTaskClient IS services, see the PDF publication *webMethods Task Engine API and Service Reference*.

About Task Engine Optional Settings

You can configure a number of optional environment settings for Task Engine. These settings all carry default values and are not exposed in the My webMethods user interface; however, in certain situations, you may want to optimize your environment by altering these default values. The available options are described in the following sections. For instructions about how to implement these options, see ["Applying Task Engine Optional Settings" on page 180](#).

Available settings include:

Description	Optional Setting
"Completed Task Re-Delivery Count" on page 170	-Dtask.completion.redeliver.count
"Completed Task Re-Delivery Interval" on page 171	-Dtask.completion.redeliver.interval
"Disable/Enable Task Logging in Processes" on page 171	-Dtask.prt.audit.enabled
"Limit the Number of Tasks Returned to a Results List" on page 172	-Dtask.max.results
"Look Up Principal Retry Behavior" on page 172	-Dtask.retry.lookup.principal
"Look Up Principal Retry Timeout" on page 172	-Dtask.retry.lookup.principal.timeout
"Maximum Thread Count" on page 173	-Dtask.max.processing.threads
"Preload the Task Cache at Startup" on page 173	-Dtask.max.preload
"Remote Session Timeout Values" on page 174	-Dtask.remote.session.timeout -Dtask.remote.session.ttl
"Return of Empty Documents" on page 174	-Dcom.webmethods.caf.common.model.emptydoc
"Return Order of Task Data Fields" on page 175	-Dtask.data.return.in.order
"Setting Conditions for Task Preloading" on page 176	-Dtask.preload.condition
"Storing Task Events Persistently" on page 176	-Dtask.event.lightweight

Description	Optional Setting
"Suppress Task Deleted Events" on page 176	-Dtask.delete.event.suppressed
"Synchronous Cluster Updates" on page 177	-Dtask.update.sync
"Task Event Processing Wait Time" on page 177	-Dtask.wait.time
"Task Locking in a Cluster Environment" on page 178	-Dtask.lock.lightweight (Deprecated)
"Task Lock Timeout Values" on page 178	-Dtask.lock.wait.timeout -Dtask.lock.valid.time
"Task Permission Checking Behavior" on page 178	-Dtask.based.permission
"Task Search Thread Count" on page 179	-Dtask.inbox.search.threads
"Task Update Behavior" on page 179	-Dupdate.completed.task
"Task Update Thread Count" on page 180	-Dtask.update.threads
"Turn on Oracle Database Hints" on page 180	-Dtask.use.oracle.hint

Completed Task Re-Delivery Count

This option specifies the number of times the Task Engine attempts to re-deliver a task completion event to the Integration Server that hosts the Process Engine. For example, when a transport failure occurs between Task Engine and Integration Server (Integration Server is off-line or there are network problems) and a task is completed, the attempt to deliver the completion event to Integration Server fails. The Task Engine attempts to re-deliver the completion event until the specified number of attempts is reached. If the Task Engine is unable to deliver the completion event after the specified number of attempts, it places the task into an error state with an appropriate error code. When connectivity between the Task Engine and Integration Server is restored, you can re-

submit the task completion event by manually changing the task status back to Active and then to Completed. To change the interval between re-delivery attempts, see Completed Task Re-Delivery Interval.

```
-Dtask.completion.redeliver.count=<number of redelivery attempts>
```

The default value is 30.

Completed Task Re-Delivery Interval

This option specifies the time the Task Engine waits until attempting to re-deliver a task completion event to the Integration Server that hosts the Process Engine. For example, when a transport failure occurs between Task Engine and Integration Server (Integration Server is off-line or there are network problems) and a task is completed, the attempt to deliver the completion event to Integration Server fails. The Task Engine waits for the specified period of time before attempting to re-deliver the completion event so business process execution can proceed. To change the number of re-delivery attempts, see Completed Task Re-Delivery Count.

```
-Dtask.completion.redeliver.interval=<wait time in milliseconds>
```

The default time is 60000 milliseconds.

Disable/Enable Task Logging in Processes

When a task is included in a webMethods business process, it is referred to as a *user task*. In earlier releases of Task Engine, a logging mechanism was enabled that writes task status to the audit logging component of Process Engine. Under certain circumstances, this audit logging behavior can cause unexpected behavior in webMethods Monitor, specifically:

- A task step (user task) in a completed process instance displays the status "Task Completed" instead of "Completed".
- A grey arrow icon appears on the user task in the process diagram in Monitor instead of green check mark.
- The logged times of the different steps indicate that the final step in the process completed before the task step was last updated.

Beginning with fix MWS_8.2_SP1_Fix11 and in later releases, task audit logging is controlled by the optional setting:

```
-Dtask.prt.audit.enabled=true | false
```

The default is `false` (task audit logging is disabled). To enable task audit logging, set this value to `true`.

Limit the Number of Tasks Returned to a Results List

It is possible to configure the properties of a task type inbox to specify a limit to the number of tasks returned in the search results, or to select the **No Maximum** check box, which effectively returns all matching tasks (note that this check box is not available in My Inbox or Task List Management). For certain queries or certain environments, selecting the **No Maximum** check box can return an extremely large number of tasks, causing performance problems as well as Out Of Memory errors.

You can use the following option to specify a maximum number of tasks to be returned when the **No Maximum** check box is selected for a task type inbox:

```
-Dtask.max.results=<number of tasks>
```

The default is 1,000.

Note: If the task type associated with the task type inbox is configured with an indexed search provider, clearing or selecting the **No Maximum** check box has no effect; all search results are always returned, and the value defined in this option is ignored.

Look Up Principal Retry Behavior

This option specifies whether the Task Engine is to attempt another lookup for a My webMethods Server principal (a user, group, or role) when the initial lookup fails. If this option is set to true and the initial principal lookup attempt fails, Task Engine waits for the time specified by the timeout property (see below) and attempts the lookup again. If the second attempt fails, no further attempts are made, and the procedure associated with the lookup fails (for example, task assignment).

This option (and the associated timeout option) addresses a situation where users, groups, or roles are being created by a remote API just before queueing a task. In a clustered environment, these changes can take up to 2 seconds to propagate to all nodes in the cluster. Thus, it is possible that the Task Engine might not find this newly created principal when attempting to queue the task. Setting this option and the associated timeout value will help to handle this condition.

```
-Dtask.retry.lookup.principal=true|false
```

The default is false.

Look Up Principal Retry Timeout

This option specifies the time the Task Engine waits before attempting another lookup for a My webMethods Server principal (a user, group, or role) when the initial lookup fails.

```
-Dtask.retry.lookup.principal.timeout=<wait time in milliseconds>
```

The default time is 2000 milliseconds.

Maximum Thread Count

You can specify the maximum number of processing threads in the Task Engine with the following option (these are threads which process task events and assignments):

```
-Dtask.max.processing.threads=<ThreadNumber>
```

The default value is 4.

Preload the Task Cache at Startup

This option preloads tasks into the My webMethods Server internal caches in a single query during startup of My webMethods Server. This helps alleviate performance problems during a restart of My webMethods Server when there is a very large number of tasks in the database.

Note: This cache preloading option has no impact on indexed task searches, as indexed searches do not use caches and always load tasks from database.

When this option is not enabled, the caches are empty upon restart, and performance issues can occur with task search queries that need to scan large number of tasks. Because tasks are loaded into the caches one at a time, it may take a very long time to process these initial queries until the caches are fully loaded.

Task preloading is disabled by default. To enable preloading, you must specify how many tasks to preload using the following system property:

```
-Dtask.max.preload=<maximum number of tasks to preload>
```

By default, only Active tasks are preloaded. You can also specify an optional condition to define which tasks to preload. For more information, see ["Setting Conditions for Task Preloading" on page 176](#).

One thing to consider when setting this option is the size of business data and the total maximum memory given to My webMethods Server. In some cases it may be not possible to fit all tasks into the available in-memory caches. If you specify too many tasks to preload, it should not cause an out of memory error (as in-memory caches will not grow beyond of memory available), but it will waste system resources during preload.

Before you implement preloading, you must also configure the default cache sizes for My webMethods Server to be at least equal to or greater than the number of tasks to be preloaded. To do so:

1. Obtain the cache.xml configuration file by running the following command: `MWS/bin/mws.bat|sh getconfig cache.xml`. This saves a copy of the cache.xml file to the `MWS/server.default/config` directory.
2. Open `/MWS/server/default/config/cache.xml` and edit `maxSize` for "ThingCache" and "TaskDataCache" to be equal to or greater than the number of tasks to preload.
3. Save the file.

-
4. Upload `cache.xml` back to the database by running the following command: `MWS/bin/mws.bat|sh putconfig cache.xml`

For example:

```
<cache name="TaskDataCache"
  class="com.webmethods.portal.service.cache.impl.TransientCache"
  maxSize="number of tasks to preload"
  isClustered="true"
  ID= "12"
  enabled="true"/>
<cache name="Thing Cache"
  class="com.webmethods.portal.service.meta2.impl.ThingTransientCache"
  maxSize="number of tasks to preload"
  isClustered="true"
  ID= "1"
  enabled="true"/>
```

Remote Session Timeout Values

When impersonating a user through the use of the Task Engine APIs, the Task Engine handles role membership updates for the impersonated users. The Task Engine updates a user's role membership when:

- A specified time has passed since last time the user ID was impersonated. The default value is 30 minutes.
- A specified time has passed since the last time the user's role membership was updated. The default value is 24 hours (session total time-to-live).

These default time periods can be modified with the following environment settings:

```
-Dtask.remote.session.timeout=<the time period in seconds between
updates of user role information. The session is not invalidated
or expired.>
-Dtask.remote.session.ttl=<user session time-to-live in seconds>
```

Important: It is important to understand that the `-Dtask.remote.session.timeout` setting does *not* affect the duration of the actual session. The only purpose of the setting is to specify the time interval between updates to the impersonated user's role membership.

For more information about working with the Task Engine APIs, see the PDF publication *webMethods Task Engine API and Service Reference*.

Return of Empty Documents

This option specifies whether or not empty documents are returned by the Task Engine. The option is:

```
-Dcom.webmethods.caf.common.model.emptydoc=true|false
```

The default is false. The Task Engine does not return uninitialized documents of task business data to Integration Server, or when using the `pub.task.taskclient.getTask` and `pub.task.taskclient.searchTasks` services, or services that depend on `getTask` and `searchTasks`, such as:

-
- GET Task Instance
 - GET Tasks
 - POST a Complex Task Search

Prior to MWS_8.0_SP2_Fix11, these documents were returned as empty even if the represented data did not exist. The default value of false prevents the return of empty documents. Set this property to true to revert to the behavior prior to Fix11 (that is, empty documents are returned).

Return Order of Task Data Fields

This option specifies how task data fields are ordered when returning task business document values back to Integration Server, or when using the `pub.task.taskclient.getTask` and `pub.task.taskclient.searchTasks` services, or services that depend on `getTask` and `searchTasks`, such as:

- GET Task Instance
- GET Tasks
- POST a Complex Task Search

The option is:

```
-Dtask.data.return.in.order=true|false
```

The default is false. When set to false, task business data document fields are returned in an order that does not match the order defined in the document type. Set the value to true to ensure the proper order of fields is returned (that is, corresponding to the order defined in the document type).

When this value is set to true, additional data is returned, which may affect existing consumers of Task Engine Web services. When set to false, existing web service behavior does not change.

This flag impacts `WmTaskClient` services, standard Task Engine Web services, and REST web services. For Task Engine Web services, business data documents are returned in a SOAP serialized map, which does not define an order for its entries. When this option is set to true, Task Engine returns the `__fieldsOrder` key of the business data, which contains the order of the fields as a string array of field names in the order they are present in the document.

This option requires that the metadata describing the field order in the document type must be present in the task application. For versions prior to 8.2, you must install the Designer fix `DES_8.0_SP2_CAD_Fix5` to obtain this functionality. After this fix is applied to Designer, the required metadata is generated whenever a new task is created. To generate metadata for previously created tasks after you apply this fix:

1. In Designer, open the previously created task in the task editor.
2. On the **Business Data** tab, select the document type you want to create metadata for.

-
3. Click **Refresh**. This re-generates the business data document and creates the field order metadata used by the runtime.
 4. Repeat for any additional documents in the task.

Setting Conditions for Task Preloading

If you enable task preloading as described in "[Preload the Task Cache at Startup](#)" on [page 173](#), you can use this optional setting to define the tasks to be preloaded. Use the following optional setting to specify an SQL WHERE clause as a preload condition:

```
-Dtask.preload.condition=WHERE <condition statement>
```

Use "T" as a table alias for the "T_TASK" table. For example, the following condition specifies that only "Active" and "Completed" tasks are to be preloaded:

```
-Dtask.preload.condition=WHERE T.STATUS = 1 OR T.STATUS = 3
```

This is a pure SQL query and it must use the values that are in the tables, for example, numeric values for statuses, milliseconds for dates, and so on. If more information is needed, contact Software AG Global Support.

Suppress Task Deleted Events

This option enables you to suppress the generation of Task Deleted events. In a task application, it is possible to create custom code that handles Task Deleted events. However, this custom code is not typically implemented. In such cases, disabling these Task Deleted events further reduces the number of SQL queries needed to delete a task and improves performance. The option is:

```
-Dtask.delete.event.suppressed=true|false
```

The default value is false. When set to true, Task Deleted events are not generated.

Storing Task Events Persistently

You can set the following option to enable in-memory event handling:

```
-Dtask.event.lightweight=true|false
```

This default value is true. When true, the Task Engine does not use the JMS queue for processing task events and all events are processed locally on the same JVM instance where they were originated. This produces less database load and thus speeds up processing. The disadvantage of using this setting is that there is a bigger chance for events to be left unprocessed if the system shuts down unexpectedly or fails.

To overcome this, you can use a related option to specify if task events are to be maintained in system memory, or persistently stored to disk:

```
-Dtask.event.lightweight.persistent=true|false
```

The default value is false (use system memory).

When persisting task events to disk (true), the processing of each task change event to disk imposes a performance penalty, but adds quality of service. For example, if a system shuts down unexpectedly or fails while there are unprocessed events in the queue, the system can recover them from the disk store and continue processing when restarted.

When task events are stored in memory (false), these events will be lost upon shutdown or failure. This can result in queued tasks not getting assigned (that is, the tasks were queued but not yet assigned when the shutdown or failure occurred).

The `-Dtask.event.lightweight.persistent` option is active only when `-Dtask.event.lightweight` is set to true.

Synchronous Cluster Updates

This option applies only to cluster environments. The option helps to solve the problem that when a task is updated, there is a small (up to 2 second) delay until other nodes in the cluster reflect the change. This is normally is not an issue for standard task interfaces, but it can present a problem for remote Task Engine web service APIs, including APIs from the WmTaskClient package and REST web services.

Unless the end-point is set to single cluster node, the API call can be routed by a load-balancer to any node in a My webMethods Server cluster. In this case, it is possible that a call to `updateTask()` followed immediately by `getTask()` may return incorrect (out of date) data, because the cluster node has not been updated yet. In this case setting this flag will ensure that up-to-date data is always returned. The option is:

```
-Dtask.update.sync=true|false
```

The default value is false. If set to true, any task update operation will attempt to synchronously refresh caches on all other cluster nodes and wait until other cluster nodes report back that their caches have been updated

A disadvantage to setting this option to true is that any task update operation will have to wait until all cluster nodes are refreshed. This does not introduce any additional load on the server, but it does increase task update operation response time

Task Event Processing Wait Time

This option specifies the time the Task Engine waits for any asynchronous task event processing to complete when a task update is initiated from a user interface page (such as custom inbox, Task List Management, or My Inbox). This option does not apply to updates initiated by task events or task APIs. For example, if a task is updated from the task details page, the Task Engine will wait for this period of time to enable any associated task events to finish processing. This ensures that the user who changed the task receives an up-to-date task following the change.

```
-Dtask.wait.time=<wait time in milliseconds>
```

The default time is 10000 milliseconds.

Task Locking in a Cluster Environment

Note: This optional setting is deprecated. With the application of the following fixes (and in all subsequent releases), the Task Engine now *always* uses database locking for tasks to ensure transactional updates, and this optional setting, if present, is ignored:

- MWS_7.1.2_Fix24
- MWS_7.1.3_Fix16
- MWS_8.0_SP2_Fix15
- MWS_8.2_SP1_Fix8

The following description is provided for reference purposes only:

This option forces the use of non-distributed locks in a clustered environment. The option is:

```
-Dtask.lock.lightweight=true|false
```

The default value is false (that is, task locking is enabled). In this case, the Task Engine uses distributed database locking when updating task instances. This puts an additional load on the database but ensures that task updates are always serial.

For example, if two concurrent users are updating the same task instance, this ensures that a user is always updating an up-to-date task data and if not, a "Task Out of Date" error is raised. If you set this value to true, when the same task instance is being updated by two different users working on two separate cluster nodes, an optimistic lock for the task will not be enforced and only one user's changes are applied.

Task Lock Timeout Values

These options specify both the time that the Task Engine will wait to obtain a lock on a task instance, as well as the duration of the lock. When a task is updated from any location (for example, from the My webMethods interface, from a task event, or from a remote service), the Task Engine applies a cluster-wide lock on the task instance prior to updating it to ensure all updates are serial.

- `#Dtask.lock.wait.timeout=<wait time in milliseconds>` Use this option to specify the amount of time that the Task Engine waits to obtain a lock on a task instance. The default value is 10000 milliseconds. The Task Engine will be unable to obtain a lock if a lock is already applied to the task instance by an update operation initiated in a separate thread or cluster node. If a lock cannot be obtained within this timeout period, the update operation fails.
- `-Dtask.lock.valid.time=<lock duration in milliseconds>` Use this option to specify the duration of the lock period. The default value is 60000 milliseconds.

Task Permission Checking Behavior

This option specifies how task viewing permissions are checked. The option is:

```
-Dtask.based.permission=true|false
```

The default is true. Prior to MWS_7.1.3_Fix9, the mechanism to determine if a user had permission to view a task verified only if the user held "view task data" permission. With the introduction of MWS_7.1.3_Fix9, an additional check occurs to determine if the user/role is also present in the "assigned to" or "delegated to" lists. Under these conditions, if the user holds only "view task data" permission, permission to view the task is denied and the following error occurs:

```
com.webmethods.portal.mech.access.PortalAccessException:  
[POP.017.0007] You don't have permissions to view this task.
```

When this setting is true, the additional checks added with MWS_7.1.3_Fix9 are applied. If you change this value to false, the previous permission check ("view task data" permission only) is applied.

Task Search Thread Count

This option specifies the maximum number of concurrent threads allowed to execute task searches. While the default value is generous, it is important to control this number to ensure that the maximum number of task search threads plus the maximum number of task update threads (default 30 - see below) is less than the maximum size of the My webMethods Server Data Source JDBC pool (default size is a maximum of 100 connections). Therefore, this value may need to be lowered in some circumstances (for example for large My webMethods Server clusters when there is a need to control the overall count of JDBC connections). The option is:

```
-Dtask.inbox.search.threads=<thread count>
```

The default value is 50.

Task Update Behavior

This option enables a remote service to update tasks regardless of task status. It applies to the operation of:

- The Task Engine service `pub.task.taskclient:updateTask`
- The Task Engine web service `updateTask`
- The Task Engine REST web service PUT Information in a Task Instance

For more information about these services, see the PDF publication *webMethods Task Engine API and Service Reference*.

By default, these services enable you to update only tasks in Active, Error, and Suspended state. Tasks with other statuses (such as Completed, Cancelled, or Expired) cannot be updated.

However, a Task Engine optional setting is available to apply update actions to a task regardless of its current status. When this option is not present or set to = false, task updates apply only to Active, Error, or Suspended tasks. The option is:

```
#Update.completed.task=true|false
```

The default value is false.

Task Update Thread Count

This option specifies the maximum number of concurrent threads allowed to execute task updates. It is important to control this number to make sure that the maximum number of task search threads (default 50 - see above) plus the maximum number of task update threads is less than the maximum size of the My webMethods Server Data Source JDBC pool (default size is a maximum of 100 connections). Therefore, this value may need to be lowered in some circumstances (for example for large My webMethods Server clusters when there is a need to control the overall count of JDBC connections). The option is:

```
-Dtask.update.threads=<thread count>
```

The default value is 30.

Turn on Oracle Database Hints

When set to true, this option enables Oracle hints that may significantly improve performance when querying for inbox results, assuming that the user inbox queues are not very large (for example, less than 1,000 tasks per role or user). For large queues this will not provide benefits and may possibly slow performance. This option is set to false (off) by default:

```
-Dtask.use.oracle.hint=true|false
```

Applying Task Engine Optional Settings

To apply a Task Engine optional setting

1. Shut down My webMethods Server.
2. Open the custom_wrapper.conf file in a text editor, from the following location:

For Windows systems:

```
<Software AG_directory>\profiles\MWS_serverName \configuration
```

For UNIX systems:

```
<Software AG_directory>/profiles/MWS_serverName /configuration
```

3. Locate the following section in the file:
4. After the section header, find an appropriate location in the section and type the option you want to set, using the following format for each individual setting:

```
# Java Additional Parameters
```

```
wrapper.java.additional.nnn=-Dtask.inbox.search.threads=25
```

where *nnn* is a unique sequential number, such as between 400 and 499, inclusive.
For example:

```
wrapper.java.additional.400=-Dtask.inbox.search.threads=25  
wrapper.java.additional.401=-Dtask.wait.time=6000
```

5. Save the file.
6. Start My webMethods Server.

6 Task Expression Reference

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About Task Expressions

The task expression language used within task type rules is proprietary and is essentially simplistic in nature. However, it does offer binding capability to a wide range of data within the task environment.

Task expressions are created primarily with the task editor interface in Software AG Designer. The simple condition editor, for example, enables you to select various condition parameters in plain English, and then creates a task expression automatically. With this functionality, you are able to create conditions and actions without learning the task expression language.

Note: Although My webMethods provides you with the ability to modify existing task rule expressions and to create new task rule expressions, this functionality is deprecated in Task Engine Version 7.0. *You are advised to make all rule changes in Software AG Designer and then republish the modified task type to My webMethods Server*

For those users who would like to learn more about the task expression language, and possibly construct custom expressions, the material in this appendix provides an overview of the task expression language.

Creating Task Type Expressions

You can use task type rule expressions to define a condition that must be matched for the rule to be enforced, and to define a result that will be applied when the rule is enforced. In addition, you can define variables that can be used within a rule expression, and attributes that apply to how or when a rule is evaluated. You can also create bindings from expression terms to run-time data associated with the task instance.

For conditions, a basic expression statement consists of the following:

[A data field] [An operator] [A data field]

For example:

```
# {currentTask.taskInfo.status} == "active"
```

This condition determines if the current task status is "active." When this condition is matched, any actions specified in the results expression will be applied.

You enter expression terms by typing, and by clicking the **Add Operator** button next to the expression field. You can then select an operator from the resulting display. Various operators such as AND and OR enable you to combine data tests in a single condition.

For further information about creating task rule expressions, see the following topics:

- ["About Condition Expressions" on page 185](#)
- ["About Filter Rule Expressions" on page 185](#)

-
- ["About Results Expressions" on page 186](#)
 - ["About Assignment Rule Results Expressions" on page 186](#)
 - ["About Expression Operators" on page 187](#)
 - ["About Rule Attributes" on page 190](#)
 - ["About Date/Time Values in Rule Expressions" on page 190](#)

You can also read about task expressions in the *webMethods BPM Task Development Help*.

About Condition Expressions

You can create a condition expression to test for a wide range of task characteristics, including:

- Current status or previous status
- Priority
- Input and output values
- Escalation
- Dates and times associated with the task
- Current user

For example, this simple condition expression tests for a task status of active:

```
#{currentTask.taskInfo.status} == "active"
```

- The `#{currentTask.taskInfo.status}` portion was selected from the Add Field display.
- The "equals" operator `==` was selected from the Add Operator display.
- The status "active" was selected from the Add Field display.

This more complex statement tests for the expiration of an active task:

```
#{currentTask.taskInfo.status} == "active" &&  
(#{System.currentDateTime} + (ExpirationThresholdDays * 86400000)) >  
#{currentTask.taskInfo.expireDate}
```

You can view the available operators by clicking the **Add Operator** button on the Manage [Rule] Page for each rule type. The available data fields vary depending on the rule type you are creating.

All expressions are checked for validity and syntax errors are displayed. Select a field or operator and click **OK** to add it to the expression field.

About Filter Rule Expressions

Filter rules contain condition expressions only. Use these rules to filter certain tasks from the task inbox of a user or role.

-
- For the Filter Inbox - Accepted Tasks action, the following expression is used:

```
(isEmpty #{currentTask.taskInfo.acceptedByList}) ||  
(#{currentTask.taskInfo.acceptedByList} contains  
#{currentUser.principalID})
```

This condition allows a user to see only tasks that have not yet been accepted, or tasks accepted by the user. This effectively filters out tasks accepted by other users.

- For the Filter Inbox - User Activity action, the following expression is used:

```
(#{fieldExpr} doesNotContain #{currentUser.principalID} &&  
#{fieldExpr} doesNotContain #{currentUser.principalURI} &&  
#{fieldExpr} doesNotContain #{currentUser.principalDN})
```

This condition filters out tasks that the current user has already worked on. It requires you to select a custom business data field or service that returns a list of the users that have worked on the task. You must also configure the custom field or service to be updated by the Task Details portlet or by another event action.

About Results Expressions

You can create a results expression for Assignment, Change, and Schedule rules. Filter rules do not contain a results expression. Click the **Add Action** button on the Manage [Rule] page to select from the following available actions:

- Complete task
- Suspend task
- Resume task
- Update task
- Cancel task
- Delete task

Select an action and click **OK** to add it to the expression. For example, this simple rule expression completes a task:

```
#{currentTask.completeTask}
```

All expressions are checked for validity and syntax errors are displayed.

For assignment rules, you can specify a My webMethods Server user, group, or role as a target for task routing. For more information, see ["About Assignment Rule Results Expressions" on page 186](#)

About Assignment Rule Results Expressions

You can create an assignment rule to assign a task to a specific My webMethods Server user, group, or role. You do this by including the user, group, or role name in the results expression for the assignment rule.

Assigning a Task to a Specific User, Group, or Role with an Expression

To assign a task to a specific user, group, or role in an expression

1. Open the assignment rule for the task type as described in ["Modifying a Task Type Rule \(Deprecated\)" on page 129](#).
2. Enter the user, group, or role name directly in the **Result** box of the assignment rule. For multiple users, separate the values with a comma. For example:

```
"user1,user2,role3"  
"user1,group1,role3"
```

The expression could also be:

```
"user1";"user2";"role3"
```

or

```
"user1";"user2";"role3";#{expression that returns user/role uids}
```

3. Continue to add other expression terms, or click **Update Rule** or **Create Rule**.

When the rule is saved, the specified principals are added as to the rule as a variable. During run time, the associated task will then be routed to the specified principals only when the rule conditions are matched.

Assigning a Task to a My webMethods Server Role or Group by Searching

To assign a task to a My webMethods Server role or group

1. Open the assignment rule for the task type as described in ["Modifying a Task Type Rule \(Deprecated\)" on page 129](#).
2. Click **Add Users, Groups, and Roles** next to the **Result** box.
3. On the Select Principals dialog box, use the controls to search for and specify the users, groups, or roles you want to assign the task to.
4. Click **Apply**.
5. Continue to add other expression terms, or click **Update Rule** or **Create Rule**.

The associated task will be routed to the My webMethods Server role specified by the selected security role when the rule conditions are matched.

About Expression Operators

You can view the available expression operators by clicking the **Add Operator** button on the Manage [Rule] page. The following operators are available:

Operator	Definition
+	Add

Operator	Definition
-	Subtract
*	Multiply
/	Divide
%	Modulus
^	Exclusive OR
>	Greater than
<	Less than
==	Equals
=	Assignment (sets a value)
!=	Does not equal
>=	Greater than or equal
<=	Less than or equal
&&	Logical AND
	Logical OR)
!	Logical NOT
Contains	The preceding string, collection, or object array contains the following string
Does Not Contain	The preceding string, collection, or object array does not contain the following string
Is Empty	The preceding collection, string object, or object array is empty

Operator	Definition
Not Empty	The preceding collection, string object, or object array is not empty
Matches	The preceding sting matches the following regular expression
Starts With	The preceding string starts with the following string
Ends With	The preceding string ends with the following string
Semi-colon	Statement separator

About Rule Expression Variables

When a task designer creates a task type in My webMethods, task rules can be configured to use variables within a rule expression. My webMethods users can then specify the values for these variables as they work with a particular task instance.

However, you cannot create rule expression variables from within My webMethods. If you want to create a rule that requires the use of a variable, or add a variable to an existing rule, you must ask the task type designer to create the variable or rule in Software AG Designer and then publish the task type to My webMethods Server.

You can modify variables that exist within a task type rule.

Modifying a Rule Expression Variable

To modify a rule expression variable

1. Navigate to **Administration > Business > Tasks > Task Engine Administration**. All of the task types available in My webMethods are displayed in the Task Configuration panel.
2. Locate the task type with the rule you want to modify and click the appropriate rule icon in the **Actions** column for that task (Assignment, Filter, Schedule, or Change rule). The Manage [Rule] page opens for the selected rule type (for example, Manage Change Rules).
3. Click the **Rule Name** link for the rule to open the rule.
4. In the **Rule Variables** area, modify the variable as required.
5. Click **Update Rule**.

About Rule Attributes

Both assignment rules and schedule rules contain rule attributes that enable you to further define how the task instance behaves in the run-time environment.

For assignment rules, the following attribute is available:

- **Re-evaluate Rule**—select the False option to specify that the rule is enforced one time only for a particular task instance. When the True option is selected, the rule is applied each time the condition is matched; when the condition is no longer matched, the task reverts to its previous behavior. If the condition is matched again, the rule is enforced again.

For schedule rules, you can define how often the rule is evaluated:

- **Every n day/hour/minute**—set these values to specify how often the rule is evaluated. For example, every 10 minutes, every 12 hours, every 3 days.

Note: Scheduled rules display a rule variable named "True." This is an artifact produced during publication from the task editor and represents a Boolean expression which evaluates to true. It requires no user input.

About Date/Time Values in Rule Expressions

You can specify date and time values in a rule expression; for example:

```
# {System.currentTimeMillis}
```

or

```
# {currentTask.taskInfo.expireDate}
```

These date and time values are evaluated as follows:

If a given data element within a rule expression is a `java.util.Date` type, it is automatically converted into epoch time in milliseconds as a `java.lang.Long` type. Therefore, all arithmetic and comparison operators can be applied to that value, as it now exists as a long number.

Changing the Rule Evaluation Order

When a task type contains two or more rules of a particular rule type, the rules of that rule type are evaluated in a specific order. Different results can be obtained by changing the order in which the rules are evaluated. You can set the rule evaluation order in My webMethods.

Note: Individual task rules are evaluated in the specified order, and then the global task rules are evaluated, in their specified order. The precedence of individual task rules over global rules is fixed and cannot be modified. For more information about changing the rule evaluation of global task rules, see ["Managing Global Change Rules" on page 133](#).

To change the rule evaluation order

1. In My webMethods: **Navigate > Applications > Administration > Business > Tasks > Administration**. All of the task types available in My webMethods are displayed in the Task Configuration panel.
2. Locate the task type with the rule type you want to reorder and click the appropriate rule icon in the **Actions** column for that task type (Assignment, Filter, Schedule, or Change rule). The Manage [Rule] page opens for the selected rule type (for example, Manage Change Rules).
3. Click the **Change Rule Evaluation Order** tab. The **Evaluation Order** list displays the current order of rule evaluation. The rule evaluation order begins at the top of the list and moves downward.
4. Select a rule in the **Evaluation Order** list, and click the up and down arrow buttons to modify the evaluation order.
5. Click **Update** to enter your changes.

About Global Rule Expressions

You can create and apply global rules that apply to all tasks (for more information, see ["Managing Global Task Rules" on page 133](#)). If you create additional global rules, you must create a condition expression and a result expression for each new rule.

Expressions for Default Global Rules

The following expressions are used in global rules that are installed with the Task Engine:

Infinite Loop Rule

This rule places a task in Error status when the one-hundredth version of the task is created. You can edit the expression for this rule to specify a different number. For more information, see ["Managing Global Task Rules" on page 133](#).

Condition Expression:

```
{oldTask.taskInfo.taskVersionNumber} == 99 &&  
{newTask.taskInfo.taskVersionNumber} == 100
```

Result Expression:

```
{currentTask.taskInfo.status} = "error";  
{currentTask.taskInfo.errorCode} = "task.error.infinite.loop";  
{currentTask.taskInfo.errorMessage} = "Task has  
reached maximum number of modifications"; {currentTask.applyChanges}
```

Delete a Task Rule

This rule deletes a task in Completed, Cancelled, Expired, or Error status after a specified period of time defined by the keepDays parameter. The rule evaluates the

keepDays value based on the time since the task was last modified. This rule is evaluated once per day. The default value for keepDays is 30.

The condition `#{currentTaskExtended.processArchived}` specifies that the task is allowed to be deleted if the business process owning a task is archived. This condition checks the Process Audit database schema for the presence of the process that owns the task.

Condition expression:

```
(["completed", "cancelled", "expired", "error"] contains  
#{currentTask.taskInfo.status}) && (#{currentTaskExtended.processArchived})  
&& keepDays
```

Result expression:

```
#{currentTask.deleteTask}
```

Example Global Rule: Expire Task

This example rule places a task in Expired status when the task's expiration date and time are reached (if specified). You can specify a rule attribute to define how often the rule is evaluated, for example, once an hour.

Condition expression:

```
#{currentTask.taskInfo.status} == "active" &&  
#{currentTask.taskInfo.expireDate} > #{System.currentTimeMillis}
```

Result expression:

```
#{currentTask.taskInfo.status} = "expired";  #{currentTask.applyChanges}
```


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