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Workflow Maps

OpenText™ Content Server

This document is part of the Content Server User Online Help documentation list. If conflicts exist, the Online Help supersedes this document.

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Workflow Maps
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Chapter 1

Introducing Workflows

Workflows allows you to implement and execute business processes in Content Server. When you want to implement a business process in Content Server, you create a Workflow Map.

1.1 Understanding Workflow Maps

A Workflow Map is a predefined implementation of a business process that usually involves multiple users and tasks. For example, a simple Workflow Map can provide a way for an employee to request and receive permission to take a vacation day and may consist of a few tasks that involve the employee, a manager, and a human resources representative. A complex Workflow Map can contain numerous steps and require the participation of dozens of users.

Note: For more information about initiating and participating in a Workflow, see *OpenText Content Server - Workflows (LLESWFW-UGD)*.

Implementing a Business Process as a Workflow Map

The way you design Workflow Maps may vary depending on your business process. Before you begin, you may want to familiarize yourself with Workflow Map features and consider how to translate a business process into a Workflow Map. You may also want to outline your business process on paper and then try to present it as a flow chart. A completed Workflow Map resembles a flow chart, except that standard flow chart symbols are replaced by steps and links. By clearly defining the process you want to automate in a Workflow Map, you can save time, and prevent logical errors and other mistakes.

When you create a flowchart of your business process, think of it as a set of interrelated tasks that lead to a defined outcome. Consider the functions you want to perform and the people or roles (for example, editor, accountant, or research assistant) you want to perform each function. After you complete a flow chart of your business process, you can then begin to create the Workflow Map by matching the tasks and events in your flow chart to the Workflow steps that will best meet the requirements of the tasks and events.

For more information on how to design and build Workflow Maps, see the *OpenText Workflow - Workflow Designer's Guide (LLESWFP-CWM)* on OpenText My Support (https://knowledge.opentext.com).

1.2 Understanding Workflow Map Components

A Workflow Map is a graphical representation of a business process and the information used in the business process. A Workflow Map contains:

- A series of linked steps that define tasks, users, milestones, evaluations, and other functions that are performed sequentially or in parallel.
- A work package, which consists of attachments, comments, attributes, and other information related to the work process.
- General settings, which consist of management permissions, due date calculations, the type of information included in the work package, and other settings that affect the entire Workflow Map. For information about specifying general settings, see "Defining General Properties" on page 37.

For information about adding a Workflow Map, see "Working with Workflow Maps" on page 27. For information about configuring a Workflow Map, see "Configuring Workflow Maps" on page 37.

Choosing Steps

Workflow Map steps define the work and events in a Workflow (an executing instance of a Workflow Map). The following table describes Workflow Map steps and their functionality.

Step	Description	Details
Start	Tasks to be completed by the Workflow Initiator before a Workflow Map is initiated. Can be configured to be completed in Content Server Classic View or Content Server Smart View.	"Understanding the Start Step" on page 10
User	Tasks to be completed by users or groups. Can be configured to be completed in Content Server Classic View or Content Server Smart View.	"Understanding User and Initiator Steps" on page 11
Evaluate	Automatically routes the Workflow based on the conditional statements you define.	"Understanding Evaluate Steps" on page 16
Milestone	A point in a process used to monitor Workflow progress.	"Understanding Milestone Steps" on page 16

Step	Description	Details
Initiator	Tasks to be completed by the Workflow Initiator. Can be configured to be completed in Content Server Classic View or Content Server Smart View.	"Understanding User and Initiator Steps" on page 11
Process	Automatically send an email, modify attributes, and copy attachments.	"Understanding Process Steps" on page 18
Item Handler	Automatically create folders, modify attributes, perform versioning operations, and move or copy items.	"Understanding Item Handler Steps" on page 17
Sub-Workflow	Embed another Workflow Map in your Workflow Map.	"Understanding Sub-Workflow Steps" on page 17

Using Form Task Steps

The **Form Task** step allows you to assign Forms to a user or group. For more information about **Form Task** steps, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

Working with the Work Package

The work package is a collection of information used or created during the execution of a Workflow Map. You control which work package information is available on steps and allow step assignees to add or modify data in the work package. For example, if you want an assignee to review a document, you can add the document as an attachment, and then create a step that requires the step assignee to review the attached document. You must enable each type of information you want to include in the work package for your Workflow Map before it is available. The work package consists of the following types of information:

- Attachments, which are documents, files, and any Content Server item. For more information about Workflow Map attachments, see "Defining Attachments" on page 42.
- Attributes, which are fields and values you create. For more information about attributes, see "Defining Attributes" on page 44.
- Comments, which are text fields on steps where participants can record thoughts and comments.
- Forms, which allow you to make Forms, PDF Forms, and eForms available in the Workflow Map work package. PDF Forms and eForms are available only if the optional product modules are installed.

  For more information about using Forms, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

Note: To include attachments, attributes, and comments in a Workflow Map, from the **Map** menu, select **General** and then select the package type check boxes in the **Packages** section.

To include forms in a Workflow Map, from the **Map** menu, select **General** and then select the **Forms** check boxes in the **Packages** section.

Chapter 2

Understanding Steps and Links

You define the tasks and events in your business process in Workflow Map steps. You use links between steps to control the order in which steps are processed. The default steps in the Workflow Map Designer toolbox are:

- **Start** step
- **User** step
- **Initiator** step
- **Evaluate** step
- **Milestone** step
- **Item Handler** step
- **Sub-Workflow** step
- **Process** step

You can configure the **Start**, **User**, and **Initiator** steps to display and be completed by Workflow participants in either Content Server Classic View or Content Server Smart View.

After you add a step to the Workflow Map Designer, you can alter the name of the step to better identify each step. Step names appear inside the step shape, except for the **Start**, **Evaluate**, and **Milestone** steps, which are rendered below the step shape. When you save the Workflow Map, the ID of the step is shown in the step name, as well as the step details. In both cases, the ID is added at the end of the step name in braces []. The due date, if applicable, and done date for a step appears below the text for all steps. For more details on adding a step to the Workflow Map Designer, see "Exploring the Workflow Map Designer" on page 31.

The number of steps executed at one send on is restricted to 70. If more than 70 steps are executed at one send on, all other steps are executed in the background.

Understanding Workflow steps in the Content Server Mobile app

Start, **User**, and **Initiator** steps that you configure for Smart View can be completed by Workflow participants on the **My Assignments** tile in the Content Server Mobile app. You must configure steps to display in Smart View if you want Workflow assignments to be available in the Content Server Mobile app.

In some situations, Workflow steps behave differently in the Content Server Mobile app than steps completed from Smart View. Consider the following as you design your Workflow steps:

- Smart View Form sections that you create are read-only in the app. Workflow participants cannot enter values in Workflow steps from the mobile app.
- Workflow participants can view attachments from a Workflow step but cannot add new attachments from the app.
- Workflow participants can Send On a Workflow step or they can complete the step by choosing between two dispositions. The Forward and Send for Review actions are not supported.

For more information about designing **Start**, **User**, and **Initiator** steps, see “Defining a Start Step” on page 55 and “Defining a User or Initiator Step” on page 60. For more information about Content Server Mobile, see the *Content Server Mobile Release Notes* and *OpenText Content Server Mobile App - Installation Guide (CSMOB-IGD)* on OpenText My Support.

2.1 Understanding the Start Step

The **Start** step is required and always appears as the first step in every Workflow Map. You can use the **Start** step to provide instructions and describe tasks that must be completed by the Initiator before a Workflow Map is initiated. For example, in a Workflow Map that processes expense reports, you can configure a **Start** step that requires the Initiator to attach a spreadsheet, that contains the expense report, and then select an attribute value that describes what type of expense report is being submitted.

When you configure the **Start** step, you specify whether the Workflow step displays in Content Server Classic View or Content Server Smart View. If you configure the **Start** step to display in Classic View, you can configure the **Start** step to initiate a Workflow Map without requiring the Initiator to read instructions or perform a task. If you configure the **Start** step to be initiated in Smart View, a **Smart View** tab is added to the step in the Workflow Designer and the **Attributes** tab is hidden, even if Attributes are enabled for the Workflow Map. Any settings you might have previously configured on the **Attributes** tab are reset. Attributes you define from the **Attributes** option on the **Map** menu and predefined Workflow system attributes (Workflow Fields) are added to the step from the **Smart View** tab. If Forms are enabled for the Workflow Map, you can also add Form Attributes to the step. For more information about adding Form Attributes, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

For more information about the start step, see “Defining a Start Step” on page 55.

2.2 Understanding User and Initiator Steps

When you want to define a task to be completed by a user or group, you define it in a **User** step. The step assignee can read the instructions you provide and then complete work on the task. Part of completing the task may require users to access and modify the work package or other information you configure on the step.

If you want to assign the task to the Workflow Map Initiator only, you can define the task in an **Initiator** step. An **Initiator** step is the same as a **User** step except that it is always assigned to the user who initiates the Workflow Map. Also, you can use an **Initiator** step to notify the Initiator of events during processing. For example, you can notify the Initiator that a Workflow Map has completed by placing an **Initiator** step at the end of the Workflow Map.

When a **User** or **Initiator** step becomes the active step in the Workflow Map and the date is on or after the step's start date, in Content Server Classic View, the step appears on the assignee's **Assignments** page and on the **Assignments** tab of the **My Workflows** page. In Content Server Smart View, the step appears on the assignee's **My Assignments** tile. If the task is assigned to a Content Server group, in Classic View, the task appears on the **Assignments** page and **Assignments** tab of the **My Workflows** page of each group member. In Smart View, the task appears on the **My Assignments** tile of each group member. Depending on the group options defined for the step, the task is completed by one member of the group, by all members of the group, or by all members of the group and its subgroups.

Understanding the Display of the User and Initiator Step

The **User** and **Initiator** step can display the contents of the Workflow Map work package using a standard view (default), single page view, or Smart View. For more information about the work package, see “Working with the Work Package” on page 7.

Standard View

The standard view is a double frame view that opens the workflow step in Content Server Classic View. The left frame contains links to all packages in the work package while the right frame displays the corresponding package details. All packages display regardless if they are required to approve the step.

For more information about the standard view, see “Using the Standard View Display Option” on page 61.

Single Page View

The single page view displays the contents of the work package on a single page in Content Server Classic View. When designing the **User** or **Initiator** step, you choose which packages in the work package to display and the order in which to display them.

Notes

- By default, no packages display when the **Single Page View** check box is selected. You must select the packages you want to display.

- If your Workflow Map contains attachments or requires mandatory attributes for approval, you must ensure that the packages display in the step.

For more information about the single page view, see “Using the Single Page View Display Option” on page 61.

Smart View

The Smart View option displays the contents of the work package in Content Server Smart View.

When you choose Smart View as the display option, a **Smart View** tab is added to the User or Initiator step in the Workflow Designer and the **Attributes** tab is hidden, even if Attributes are enabled for the Workflow Map. Any settings you might have previously configured on the **Attributes** tab are reset. Attributes you define from the **Attributes** option on the **Map** menu and predefined Workflow system attributes (Workflow Fields) are added to User and Initiator steps from the **Smart View** tab. If Forms are enabled for the Workflow Map, you can also add Form Attributes to the steps. For more information about adding Form Attributes, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

For more information about the Smart View option, see “Using the Smart View Display Option” on page 61.

Assigning User Steps

When you define a **User** step, you can use advanced assignment options to determine the step assignee. User steps can be assigned to:

- A specific user or group
- Multiple users or groups
- The assignee from a previous Workflow Map step
- An assignee specified in an attribute
- User or groups based on one or more conditional statements you create using the Expression Builder
- A Workflow Map role

Assignment options for Workflow tasks:

- **User or Group Options**
  - **Member Accept / Member Accept (Maintain)**

    When a group is set as assignee, the group is set as task assignee in the database and one member of the group has to accept the task. If the task is accepted by one person, the task assignee in the database is switched from the group to this user.
  - **One Level Expand / Full Expand**

When a group is set as assignee, a sub-Workflow is created for this task, even if the group contains only one person. The sub-Workflow contains a task for each person in the group and all tasks must be completed and sent on before the main Workflow can be sent on. The task assignee for the main Workflow is the group.

- **Multiple Users/Groups Options**
  - **Member Accept / Member Accept (Maintain)**

    If only one user or one group is in the list, no sub-Workflow is created. If a group, one member of the group has to accept the task and send it on. If multiple users or groups are added to the list a sub-Workflow is created. The sub-Workflow contains a task for each entry in the list. If the task in the sub-Workflow is assigned to a user, the user has to send on the task. If the task in the sub-Workflow is assigned to a group one member of the group has to accept the task and send it on. If all tasks of the sub-Workflow are sent on, the main workflow is also sent on.
  - **One Level Expand / Full Expand**

    In this case, a sub-Workflow is only created if more than one user is addressed. The list is computed from all entered users and groups in the list. If only one user is addressed, the assignee of task in the main workflow is set to this user. If a sub-Workflow is created, it contains a task for each person computed from the "Multiple Groups / Users" list and all tasks have to be sent on to send on the main workflow. If a sub-Workflow is created, the task in the main Workflow has no assignee set.
- **Roles**

  Roles are only replacement tags, which are replaced during runtime. The behavior depends on the selection (User or Group/Multiple Users/Groups).

Note: OpenText recommends using "Multiple Users/Groups" for maximum flexibility.

For more information on using the Expression Builder, see "Working with the Expression Builder" on page 80.

Processing Steps in the Background

You can specify whether a **User** or **Initiator** step is automatically processed in the background by the Workflow Agent. For more information about the Workflow Agent, see "Understanding the Workflow Agent" on page 22.

Participating in Step Assignments by Email

You can allow groups or users assigned to **User** or **Initiator** steps to perform work on the steps through email messages. Depending on the way the Workflow Map and steps have been designed, an entire Workflow Map can be processed by email messages.

Also, you can allow users assigned to **Form Task** steps to complete the steps by email.

Note: Users assigned to steps that can be completed by email always have the option to sign in to Content Server to monitor and complete Workflow Map steps as they would for a Workflow Map that does not permit email interaction.

When Workflow Map processing reaches an email-enabled Workflow Map step, Content Server sends the users or groups assigned to work on the step an email message indicating that the step is ready. Users can complete work on the step by replying to the step assignment email message. After the step work message is received, Content Server sends a confirmation message to the user. Email-enabled steps can include many of the optional step features available for **User** and **Initiator** steps, such as permission to delegate a step or send it for review.

If you want to prevent users from working by email on a particular step in an email-enabled Workflow Map, you can disable email interaction for the step.

For more information about participating in email-enabled steps, see *OpenText Content Server - Workflows (LLESWFW-UGD)*. For more information about designing email-enabled **User** and **Initiator** steps, see the *OpenText Workflow - Quick Start Guide (LLESWFW-UQS)* on OpenText My Support (https://knowledge.opentext.com).

Specifying User Permissions

User and **Initiator** steps include permissions that allow the step assignee to perform the following operations:

- View Workflow Map comments
- Send the step for review
- Delegate the step to another user or group
- Authenticate the step
- Use dispositions to gather feedback

Allowing Assignees to View Comments

If you have enabled comments in the Workflow Map, you can allow step assignees to view all comments made on previous steps in the Workflow Map.

Note: If your step displays in the single page view, you must ensure that the **Comments** package is selected in order for assignees to view comments.

Allowing Users to Send the Step for Review

You can allow step assignees to send a step to another user or group, or to a Sub-Workflow to review the work that has been performed on a step. For example, if you create a **User** step that requires the assignee to complete a report and you allow the assignee to send the step for review, the step assignee can send the step to another user to verify the accuracy of the report before sending the step on to the next step in the Workflow Map. When a step assignee sends a step for review, the step disappears from the step assignee's **Assignments** page and **Assignments** tab of the **My Workflows** page. It appears on the **Assignments** page and **Assignments** tab of the **My Workflows** page of the user or group to whom it is assigned. When the review is completed, the Workflow Map step returns to the step assignee's **Assignments** page and **Assignments** tab of the **My Workflows** page.

Allowing Users to Delegate Steps

You can allow users to delegate **User** or **Initiator** steps to another user or group when they want another user or group to perform the step task. Also, step assignees can forward the step to a Sub-Workflow. For example, if a step requires approval of a purchase order, you can allow the step assignee to delegate the pending purchase order to a separate Workflow that automates purchase order approval.

Requiring Users to Authenticate Steps

You can force step assignees to authenticate themselves when they send on the Workflow step after all work on the step is completed. If you require authentication, the step assignees must supply their Content Server password before the step can be processed. When you enable authentication for a step, the system enforces the login policy settings the administrator has configured for Content Server. For example, if the administrator has configured a user account to be disabled after three failed attempts to sign into Content Server, the same rule is enforced for a user attempting to access an authenticated step. If the user fails three times to sign in to work on the step, the user's Content Server account is disabled and the Workflow Map processing pauses until the step can be completed. For more information about Content Server login policies, contact your administrator.

Workflow step authentication is supported for Workflow steps that are configured for Content Server Classic.

Using Dispositions

Dispositions provide a way for you to quickly gather feedback about an **Initiator** or **User** step. Also, a disposition value can automatically route the Workflow Map or determine the assignee for a **User** step. You can specify up to five dispositions for an **Initiator** or **User** step. Each disposition must be unique. For example, in a step that requires the assignee to review a document, you can provide **Approve**, **Reject**, or **Resubmit** dispositions from which the step assignee can choose. When the step assignee performs the task, the dispositions appear as buttons on the step page. When the step assignee clicks a disposition button, the step is processed and the disposition is recorded in the Workflow Map.

When you define a disposition for an **Initiator** or **User** step, you can enter localized text for the disposition. The Workflow displays localized dispositions when the step assignee is using a version of Content Server where the system or user-selected language is set to a language other than English.

If Content Server is only installed in English, you can use the localize disposition feature to change the display name for a disposition without requiring you to update the Evaluate step.

2.3 Understanding Evaluate Steps

You can configure a Workflow Map to automatically route processing to one or more steps, based on information in the Workflow Map. An **Evaluate** step routes a Workflow Map to one of multiple steps by evaluating the conditional statements that you specify. Conditional statements are based on conditions or information in the Workflow Map before processing reaches the step. For example, you can create an **Evaluate** step that routes Workflow Map processing to one step if the previous step's disposition is set to **Approve** or to another step if the disposition is **Rejected**.

You can use the Expression Builder to create conditional statements and associate with each statement the steps the Workflow Map proceeds to if the expression is true. You can create multiple expressions that route the Workflow Map to two or more steps. For more information about using the Expression Builder, see “Working with the Expression Builder” on page 80.

2.4 Understanding Milestone Steps

A milestone is a point in a process that allows participants to monitor progress. You can use the **Milestone** step to provide Workflow Map managers a way to monitor Workflow Map processing. A **Milestone** step contains a target date. When the current date is later than the milestone's target date, the step status is set to **Milestone Late**. The step status is displayed on the **My Workflow** page where Workflow Map managers can quickly check the step status to see whether the Workflow Map reaches a milestone on time. For more information about Workflow Map status pages, see *OpenText Content Server - Workflows (LLESWFW-UGD)*. For more information about Workflow Map managers, see “Setting Management Permissions” on page 38.

Milestone steps execute automatically (with no durations) after the previous Workflow Map step is completed. You do not assign **Milestone** steps to users or groups. You can use the **Milestone** step status in a conditional statement interpreted on an **Evaluate** step, which determines the route that the Workflow Map will follow. For more information about **Evaluate** steps, see “Understanding Evaluate Steps” on page 16.

2.5 Understanding Item Handler Steps

The **Item Handler** step provides a powerful environment in which you can configure Content Server operations to be automatically performed when a Workflow Map reaches the step. The operations that an **Item Handler** step can perform include:

- Create folders in a Content Server container or in the Workflow Map attachments volume. For more information about creating folders with the **Item Handler** step, see "Creating Folders" on page 91.
- Add, modify, or delete categories and attributes on Content Server items, or update the current value of Workflow Map attributes. For more information about using the **Item Handler** step to work with categories and attributes, see "Working with Categories and Attributes in Workflow Maps" on page 103.
- Perform versioning operations on documents and compound documents. For more information about using the **Item Handler** step to perform versioning operations, see "Performing Versioning Operations" on page 98.
- Move or copy Workflow Map attachments or Content Server items. For more information about using the **Item Handler** step to move or copy Content Server items, see "Moving or Copying Items" on page 93.

The administrator must give you permission to create and modify **Item Handler** steps before you can add an **Item Handler** step to your Workflow Map. Also, the administrator has the ability to control which Item Handler features are available in the step. For more information about the **Item Handler** step features available in your Content Server site, contact your administrator.

Using the Workflow Agent

The tasks you define in an **Item Handler** step can be performed by the Workflow Agent, which causes all step processing to be handled transparently (in the background), without user interaction. For more information about the Workflow Agent, see "Understanding the Workflow Agent" on page 22.

2.6 Understanding Sub-Workflow Steps

If you want to take advantage of processing performed in another Workflow Map, you can use the **Sub-Workflow** step in your Workflow Map. For example, if part of your Workflow Map requires editorial approval of a document, you can use the **Sub-Workflow** step to embed the Workflow Map that performs the editorial review in your Workflow Map. When the embedded Workflow Map is finished, processing returns to your main Workflow Map.

When Content Server executes a **Sub-Workflow** step, it pauses the main Workflow Map processing to initiate a Workflow Map instance based on the Sub-Workflow. When work on the Sub-Workflow instance is completed, Content Server resumes processing of the main Workflow Map. You specify how the main Workflow Map's work package and information are exchanged with the Sub-Workflow so that work completed in the embedded Workflow Map is returned to the main Workflow Map.

2.7 Understanding Process Steps

The **Process** step provides a way to automatically complete operations that you configure on the step. The operations you can complete with a **Process** step include the following:

- Send an email message
- Assign a value to a Workflow Map attribute
- Copy a Workflow Map attachment to a Content Server container item

Important

OpenText strongly recommends that you use the **Item Handler** step when defining attribute and attachment operations. The **Process** step may not be supported in future Workflow Map releases. For more information about **Item Handler** steps, see “Understanding Item Handler Steps” on page 17.

2.8 Understanding Form Task Steps

A **Form Task** step allows you to add a Content Server Form to a Workflow Map process. The information collected on a **Form Task** step can be used in the Workflow Map.

For more information about using **Form Task** steps in Workflow Maps, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

2.9 Understanding Links

When you want to define the path a Workflow Map takes to executes a work process, you create links between steps by placing your mouse over the step and dragging the arrow that appears onto another step. Content Server processes a Workflow Map by following the links and executing the steps it encounters in the order they appear in the links. When you link two steps in the Workflow Map Designer, a line joins the steps. If you want to break the flow of processing between two steps, you delete the link.

Depending on your Workflow Map's requirements, you can create any of the following kinds of links between steps:

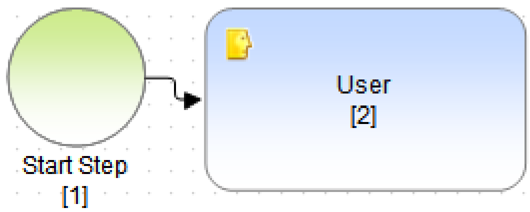
- “Serial Links” on page 19
- “Parallel Links” on page 19
- “Rendezvous Links” on page 19
- “Conditional Links” on page 20
- “Loopback Links” on page 21

• "Conditional Loopback Links" on page 21

After you design links in your Workflow Map, you can verify it to ensure that the links do not form invalid operations or cause other errors. For more information, see "Verifying Workflow Maps" on page 33.

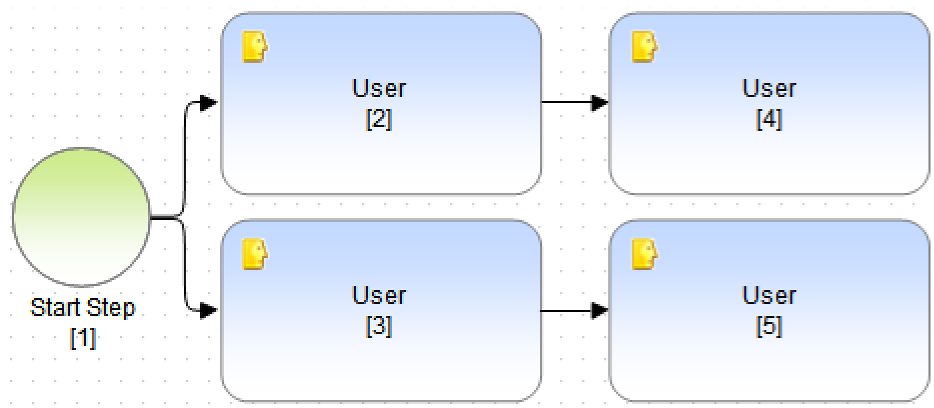
Serial Links

Serial links connect two steps in a single line.



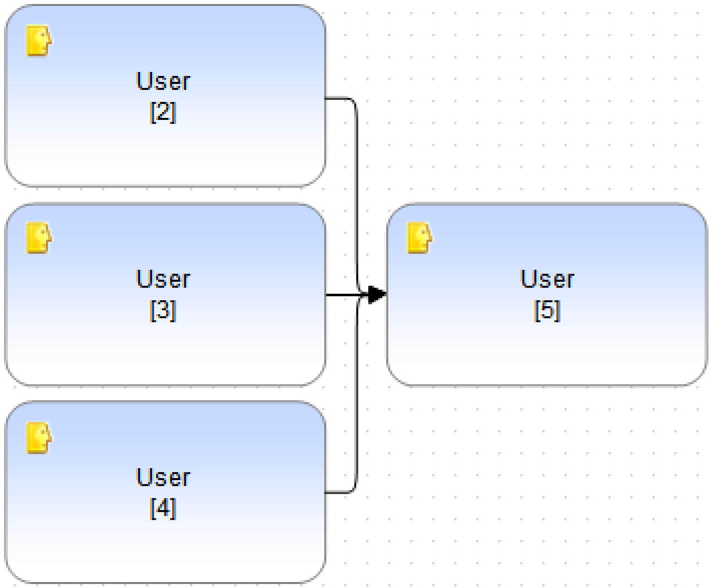
Parallel Links

Parallel links connect a single step to two or more steps of any type. A parallel link lets multiple steps execute at the same time.



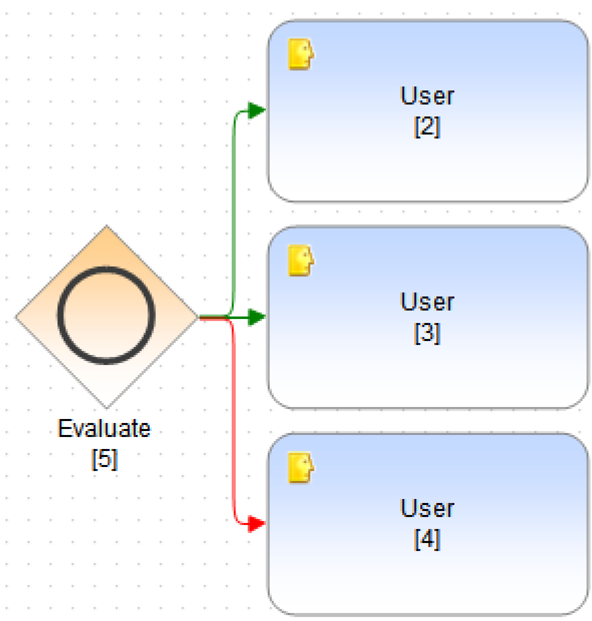
Rendezvous Links

Rendezvous links connect multiple steps to a single step.



Conditional Links

Conditional links connect an **Evaluate** step to other steps through TRUE and FALSE paths. Once a path is set, right-click the line and select **True** or **False**. You can use multiple TRUE and FALSE paths leaving an **Evaluate** step, as long as you create at least one of each. **TRUE** links are *green*. **FALSE** links are *red*.

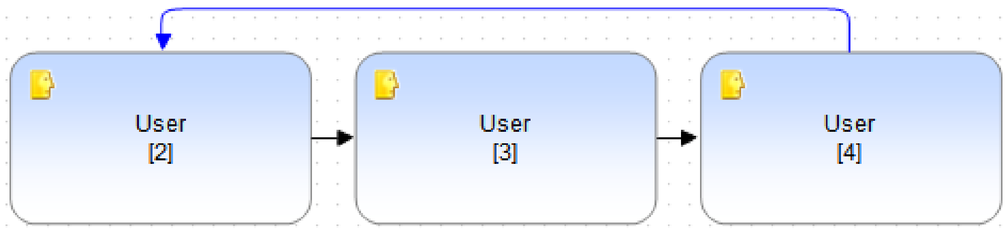


The criteria defined for an **Evaluate** step determines whether the Workflow Map follows the TRUE link or the FALSE link. For more information about **Evaluate** steps, see “Defining an Evaluate Step” on page 68.

Note: If the Workflow Map includes one or more **Evaluate** steps, Content Server calculates the due dates for both paths from each **Evaluate** step and uses the greater date to calculate the Workflow Map's due date.

Loopback Links

A **Loopback** link connects a step to a previous step within the Workflow Map, letting you repeat one or more previous steps. **Loopback** links are *blue*.

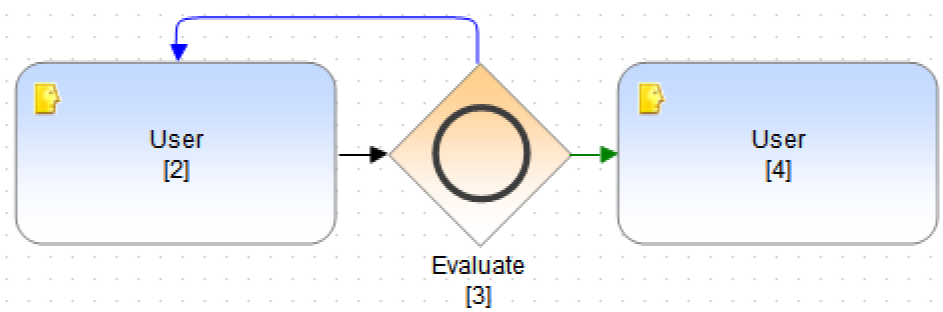


A connection cannot loop back to the **Start** step. If you attempt to create an illegal link, a message informs you of the error. **Loopback** links must satisfy the following rules:

- A **Loopback** link must form a loop that is self-contained; that is, the loop cannot contain steps that have links to steps outside the loop, and steps external to the loop cannot link to steps that are part of the loop. Content Server verifies that your links do not violate this rule when you save a Workflow Map.
- A **Loopback** link cannot invalidate another **Loopback** link by making it no longer self-contained. You can use the Workflow Map Designer to verify that your **Loopback** links conform to this rule.

Conditional Loopback Links

You can create a conditional **Loopback** link opposite to either a True or False link of an **Evaluate** step. A conditional **Loopback** link takes on the True or False value opposite to the other link. Although you can create only one conditional **Loopback** link, you can create multiple parallel links for the **True** link or for the **False** link.



The criteria defined for the **Evaluate** step determine which path the Workflow Map follows.

For more information on linking, see "Defining Links Between Steps" on page 78.

2.10 Understanding the Workflow Agent

The tasks you define in a **User**, **Initiator**, **Form Task**, or **Item Handler** step can be performed by the Workflow Agent, which causes all step processing to be handled transparently (in the background), without user interaction. If you do not use the Workflow Agent, the step must be sent by the step assignee to complete step processing. By default, the Workflow Agent is configured to gather and perform background tasks every 10 minutes, but the administrator can specify a custom schedule that controls when the Workflow Agent runs. Depending on the configured processing order (FIFO), the Workflow Agent processes tasks or passes the tasks to the Distributed Agent.

Processing Steps in the Background

If you are designing a complex Workflow Map or a step that requires a large amount of non-interactive Content Server processing, step assignees may experience a delay before the next page is displayed after sending the step. If you want to prevent users from having to wait for processing to complete after sending a step, you can specify that the step be processed in the background. When a step is processed in the background, the system sends the step and immediately returns control to the assignee, as well as sets the step status to **Ready** for Workflow Agent. The Workflow Agent is a Workflow feature that transparently (in the background) processes Workflow tasks and sends the Workflow on to the next step.

By default, the Workflow Agent is configured to gather and perform background tasks every 10 minutes, but the administrator can schedule when it should run.

Viewing Error Reports

If the Workflow Agent encounters an error during processing, it sends the step to the **Assignments** page of the user assigned to the step. Content Server also attempts to send an email message that alerts Workflow managers and the step assignee that outlines the error and requests action to correct the problem. In order to send error messages, the Workflow Agent requires the following:

- The administrator must specify the email server's SMTP settings and the sender's email address.
- Workflow managers and step assignees must specify their email address in their Content Server profiles.

When steps are processed, locks are set on the Workflow instance. For parallel paths or sub Workflows, this can lead to contention issues. If the Workflow Agent or the Distributed Agent encounter a lock contention issue, the process will retry during the next run. The step will not be sent to the **Assignments** page or sent an email message.

Specifying the Step Assignee

When the Workflow Agent processes a step, it impersonates the user assigned to the step. The audit path for all items affected by the step will show the user's name even though the user does not initiate the Content Server operations. Also, you must be sure that the step assignee has the required privileges to complete all requests defined in the step or else errors will occur. For example, if you create an **Item Handler** step that moves a document from one folder to another folder that the user does not have privileges to update, the move document request fails.

The administrator must grant the Agent Performers permission to Workflow Map users in order to be assigned steps that are to be processed in the background. If a user account assigned to a step to be executed in the background does not have Agent Performers permission, the step will not be executed automatically. The user must manually send on the step to process it.

For more information about configuring access to the **Item Handler** step and Workflow Agent, contact your administrator or see “Administer Access to the Workflow Agent and Item Handler Step” in the *Content Server Admin Online Help*.

Chapter 3

Understanding Dates and Priorities

You can assign dates and priorities to the Workflow and its steps to define when work is to be completed.

3.1 Specifying Dates

Workflow participants can schedule and monitor the progress of an executing Workflow if you configure the Workflow and its steps to use durations (due dates) and start dates. You can also set Content Server to recalculate the due date for the Workflow at the completion of any **Initiator**, **User**, **Evaluate**, or **Item Handler** step.

Specifying Due Dates

Content Server calculates a step due date at Workflow initiation by adding the step durations you specify in **Initiator**, **User**, **Item Handler**, and **Sub-Workflow** steps to the Workflow start date. For example, if a Workflow contains three **User** steps, each given a duration of one day, a Workflow started on September 22 will have a due date of September 25. **Milestone** and **Process** steps execute automatically and do not have durations.

If the Workflow includes one or more **Evaluate** steps, Content Server calculates the due dates for all branches from each **Evaluate** step and uses the greater date as the Workflow's due date.

If you include an explicit start date for a Workflow step, Content Server includes the time before the step is set to start in its due date calculations. If you do not set an explicit start date, Content Server calculates due dates from the time the step arrives on a user's **Assignments** page.

Notes

- You can indicate that Content Server must calculate the step task due date using a standard work week (that is, exclude weekends) in the Workflow Map general properties. For more information on general properties, see “Defining General Properties” on page 37.
- Users with appropriate permissions can modify due dates in an executing Workflow instance on Workflow status pages. For more information about management permissions, see “Setting Management Permissions” on page 38. For more information about monitoring Workflows, see *OpenText Content Server - Workflows (LLESWFW-UGD)*.

Automatically Recalculating the Due Date

You can specify that Content Server must automatically recalculate the Workflow due date after **Initiator**, **Evaluate**, **Sub-Workflow**, **Item Handler**, and **User** steps are completed. For example, if a **User** step is completed in less time than specified for its duration, Content Server recalculates the Workflow due date by subtracting the amount of time left in the step's duration.

Note: If you specify the recalculate due date option on a step, but do not specify a duration, the system cannot calculate the Workflow due date and the step due date. If you do not specify the step duration, the Workflow displays <None> or <No Due date> as the due date.

Specifying a Start Date

You can specify a start date, which is an explicit date when work on the step is scheduled to begin, for **Initiator**, **User**, and **Item Handler** steps. A step does not appear in the assignee's **Assignments** page until the start date is reached.

Calculating Due Dates with Sub-Workflows

When a Workflow is initiated, due dates for the main Workflow and Sub-Workflow are calculated based on the duration and start date values you provide on all steps. Whenever a step is completed (sent on), the Workflow engine looks for any non-completed step that is configured to use the re-calculate due dates option. Therefore, steps in a Sub-Workflow can affect the due dates of steps in the main Workflow if they are configured to use the re-calculate due dates option. For example, if the steps in a Sub-Workflow that take longer to complete, then their expected durations cause the start and due dates of remaining tasks in the main Workflow to be revised to later dates.

Calculating Due Dates with Multiple Evaluate Steps

If you set the due date for the Workflow to be calculated by Content Server, and the Workflow includes one or more **Evaluate** steps, Content Server calculates the due dates for both branches of each **Evaluate** step and sets the later date as the Workflow's due date.

3.2 Using Step Priorities

You can assign a priority value to describe the importance of a **User**, **Initiator**, or **Item Handler** step. Also, you can use a priority to automatically route the Workflow or to determine a **User** step assignee. The priority values you can select are:

- High
- Medium
- Low

Workflow managers and participants can view step tasks by priority. For example, they can configure their **Assignments** tab to display only high priority steps. Also, they can view steps in ascending or descending order by priority.

Chapter 4

Working with Workflow Maps

You create Content Server Workflow Maps in Workflow Map items. You can work with Workflow Maps in a similar way that you use other Content Server items. Also, you can backup, move, and copy Workflow Map items by importing and exporting them.

4.1 Managing Workflow Maps

To create a Workflow Map, first you add a Workflow Map item and then define the Workflow Map using the Workflow Designer. You can add a Workflow Map in any Content Server location where you have permissions to do so. The location of the Workflow Map and its permissions determine who can access and initiate it. For more information about permissions, see *OpenText Content Server - Get Started (LLESRT-UGD)*.

Once you have added a Workflow Map, you can work with it the way you work with other Content Server items. For example, you can delete, rename, copy, or move it; make a shortcut to it; make it a News item; or add it to your **Favorites** page. Also, you can make a Generation of a Workflow Map. For more information about working with Content Server items, see *OpenText Content Server - Get Started (LLESRT-UGD)*. For more information about News items, see *OpenText Content Server - Working with Channels and News (LLESCHN-UGD)*.

Versioning a Workflow Map

Workflow Maps are versionable items. Each time you save a Workflow Map, Content Server automatically creates a version of it. You can edit, export, initiate, or delete a version, or view a version's properties. If you want to protect a version from being overwritten, you can lock it. If you want to remove multiple versions, you can purge as many as you want in one operation.

4.1.1 To Work with Workflow Maps

To…	Do the following…
Add a Workflow Map	On the **Add Item** menu, choose **Workflow Map**.
Edit a Workflow Map	On the Workflow Map's **Functions** menu, choose **Edit**.
Delete a Workflow Map	On the Workflow Map's **Functions** menu, choose **Delete**.
Make a generation of a Workflow Map	On the Workflow Map's **Functions** menu, choose **Make Generation**. On the **Add Generation** page, supply a generation name, specify the version of the Workflow Map you want to make a generation, and then click **Add**.

For information related to this procedure, see "Managing Workflow Maps" on page 27.

4.1.2 To Manage Workflow Map Versions

To manage Workflow Map versions:

1. On the Workflow Map's **Functions** menu, choose **Properties**, and then click **Versions**.
2. Modify any of the settings as described in the following table.

To…	Do the following…
Edit a Workflow Map version	Click the **Functions** menu next to the version you want to edit, and then click **Edit**.
Export a Workflow Map version	Click the **Functions** menu next to the version you want to export, and then click **Export**.
Initiate a Workflow Map version	Click the **Functions** menu next to the version you want to initiate, and then click **Initiate**.
Lock or unlock a Workflow Map version	Click the **Functions** menu next to the version you want to lock or unlock, and then click **Lock** or **Unlock**.
Delete a Workflow Map version	Click the **Functions** menu next to the version you want to delete, and then click **Delete**.
Purge Workflow Map versions	On the Workflow Map's **Functions** menu, choose **Properties**, and then click **Versions**. In the **Purge all versions except the most recent** field, type the number of the most recent versions you want to keep, and then click **Purge Versions** to remove the other versions.

For information related to this procedure, see "Managing Workflow Maps" on page 27.

4.2 Importing and Exporting Workflow Maps

You can export a Workflow Map definition to a file on your computer's file system when you want to create a backup copy of it or move it from one Content Server to another. After you export a Workflow Map, you can import the Workflow Map when you want to create a Workflow Map based on the exported Workflow Map.

You can also use the Transport feature to export a Workflow Map from your Content Server source system to a target system. For more information, see "Exporting and deploying a Workflow Map using the Transport feature" on page 29.

Importing a Workflow Map

When you want to create a Workflow Map by importing a Workflow Map definition, you must first add an empty Workflow Map or use an existing Workflow

Map that you do not want to save. The import process overwrites the existing Workflow Map data with the definition from the imported file. If you are importing a Workflow Map from the old Workflow Map Designer, you may need to reposition the steps and links because the new steps are larger than the old steps and they may overlap one another. For more information about adding a Workflow Map, see “Managing Workflow Maps” on page 27. For information on repositioning steps, see “Defining Links Between Steps” on page 78.

If the imported Workflow Map contains attachments, you must manually add attachments. For more information about adding attachments, see “Defining Attachments” on page 42.

Also, you need to decide whether to maintain the same users assigned to steps in the imported Workflow Map or to reset all user assignments. If you reset the user assignments, you must edit the Workflow Map to add Workflow Map participants.

Exporting a Workflow Map

When you export a Workflow Map, the Workflow Map definition is saved as a file (with a .map file extension) on your computer's file system. Attachments are not exported with a Workflow Map. If the Workflow Map has attachments that you want to save with it, save the attachments separately.

Exporting and deploying a Workflow Map using the Transport feature

You can use the Transport feature in Content Server to package a Workflow Map from your current instance of Content Server, download it as a ZIP file, and then import and deploy the Workflow Map to a different instance of Content Server. From a Workbench in the Transport Warehouse, you can also deploy an updated version of a Workflow Map that you previously exported to a target system. For information on how to use the Transport feature, see *OpenText Content Server - Transport (LLESTRP-UGD)*.

Notes

- When you deploy a Workflow Map or you deploy an update to an existing Workflow Map, two Versions of the map are created on the target system. To view the Workflow Map Versions, on the target system, click the **Functions** menu for the Workflow Map, choose **Properties**, then choose **Versions**.
- The Transport feature is separate from the import and export functionality available in Workflow.

4.2.1 To Import a Workflow Map

To import a Workflow Map:

1. Add a Workflow Map.
2. Click the Workflow Map's **Functions** icon, and then choose **Import**.
3. Click **Browse**, navigate to an exported Workflow Map on your computer or network file system and then select it.
4. Click one of the following radio buttons:
   - **Maintain Performers**
   - **Reset Performers**
5. Click **Import**.

For information related to this procedure, see “Importing and Exporting Workflow Maps” on page 28.

4.2.2 To Export a Workflow Map

To export a Workflow Map:

1. Click the Workflow Map's **Functions** icon, and then choose **Export**.
2. Do one of the following:
   - If you are using a Microsoft Internet Explorer browser, click the **Save this file to disk** radio button in the **File Download** dialog box. In the **Save As** dialog box, navigate to the location where you want to save the exported Workflow Map, and then click **Save**.
   - If you are using a Netscape browser, navigate to the location where you want to save the exported Workflow Map, and then click **Save** in the **Save As** dialog box.

For information related to this procedure, see “Importing and Exporting Workflow Maps” on page 28.

Chapter 5

Exploring the Workflow Map Designer

The Workflow Map Designer is the graphical authoring tool that allows you to define a Workflow Map.

5.1 Editing Workflow Maps

When you edit a Workflow Map, you can use the following tools:

- The Workflow Map Designer, which allows you to create a graphical representation of a work process.
- The **Map** menu, which allows you to define general Workflow Map properties, specify the work package, and perform Workflow Map operations.

Using the Workflow Map Designer

The Workflow Map Designer is the authoring tool you use to create and maintain Workflow Maps. The Workflow Map Designer is a dotted grid area that displays when you edit a Workflow Map. You can add, duplicate and delete steps, assign step performers, as well as create links between steps. For more information about working with steps and links, see “Defining Steps and Links“ on page 55.

By default, the Workflow Map Designer contains items:

- The **Start** step icon in the dotted grid area
- The Step Palette in the left pane
- The Zoom View in the left pane
- Icons to print and zoom the Workflow Map Designer

Scroll bars on the Workflow Map Designer let you extend the Workflow Map beyond the currently visible area.

Using the Step Palette

The Step Palette displays all of the steps that are available for the modules you have installed. By placing the mouse over a step, a larger thumbnail view of the step appears.

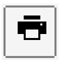
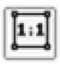
Using the Zoom View

The Zoom View shows a bird's-eye view of the Workflow Map, and it allows you to navigate to a portion of the Workflow Map that is not visible in the Workflow Map Designer.

Using the Workflow Map Designer Icons

The Workflow Map Designer icons are located above the Step Palette in the left frame.

Table 5-1: Workflow Map Designer Icons

Icon	Description
	The **Print** icon lets you print the Workflow Map.
	The **1:1** icon lets you quickly view the Workflow Map at 100% based on the size of your browser.
	The **Zoom In** icon lets you zoom into an area on the Workflow Map Designer. This action is similar to dragging the bottom-right corner of the blue rectangle in the Zoom View to the left.
	The **Zoom Out** icon lets you zoom into an area on the Workflow Map Designer. This action is similar to dragging the bottom-right corner of the blue rectangle in the Zoom View to the right.

Using the Map Menu

When you display the Workflow Map Designer, the **Map** menu appears next the to the global menus at the top of your **Content Server** page. It contains the following options:

- **Designer**, which allows you to navigate back to the Workflow Map Designer from another page.
- **General**, **Attributes**, **Attachment**, **Management**, **Roles**, which allow you to define the work package and general Workflow Map settings. **Roles** only appears if you specified **Map Based** role implementation in the Workflow Map General properties. For more information about Workflow Map settings, see “Configuring Workflow Maps“ on page 37
- **Edit Map Performers**, which allows you to assign steps to particular users or groups. For more information about setting performers, see “Setting Workflow Map Performers” on page 42.
- **Verify Map Definition**, which allows you to ensure that the Workflow Map does not contain any errors. For more information about verifying a Workflow Map, see “Verifying Workflow Maps” on page 33.
- **Initiate**, which allows you to initiate the Workflow Map. For more information about initiating a Workflow Map based on your Workflow Map, see “Initiating Workflow Maps” on page 33.
- **Save** and **Save As**, which allow you to save the Workflow Map. For more information about working with Workflow Maps, see “Managing Workflow Maps” on page 27.

5.1.1 To Edit a Workflow Map

To…	Do the following…
Duplicate a step	Right-click the step, and then click **Duplicate**.
Delete a step	Right-click the step, and then click **Delete**.
Assign the step	Right-click the step, and then click **Choose performer**.
Navigate with the Zoom View	Drag the blue rectangle in the Zoom View region to display the area of the Workflow Map that you want to view. To make the displayed area larger or smaller, drag the rectangle in the bottom right corner.
Expand or shrink the Step Palette	Drag the bottom and/or right edge of the Step Palette region.
Expand or shrink the Zoom View	Drag the top and/or right edge of the Zoom View region.

For information related to this procedure, see “Editing Workflow Maps” on page 31.

5.2 Verifying Workflow Maps

You can verify a Workflow Map definition to ensure that the Workflow Map is logically formed. If your Workflow Map contains logic errors, omissions, or other problems that would prevent a Workflow Map from executing properly, the verification process reports the problems so that you can correct them.

5.2.1 To Verify a Workflow Map

To verify a Workflow Map:

- On the **Map** menu, choose **Verify Map Definition**.

For information related to this procedure, see “Verifying Workflow Maps” on page 33.

5.3 Initiating Workflow Maps

You can initiate a Workflow Map based on your Workflow Map from the Workflow Map Designer. Typically, users will not initiate a Workflow Map from the Workflow Map, but this option is helpful when you are editing a Workflow Map and want to test it. For more information about how users can initiate Workflow Maps, see *OpenText Content Server - Workflows (LLESWFW-UGD)*.

5.3.1 To Initiate a Workflow Map From a Workflow Map

To initiate a Workflow Map:

- On the **Map** menu, choose **Initiate**.

For information related to this procedure, see "Initiating Workflow Maps" on page 33.

5.4 Saving Workflow Maps

OpenText strongly encourages you to frequently save your Workflow Map. If you leave the Workflow Map Designer or close the browser window without saving the Workflow Map, the modifications you have made since the last time you saved the Workflow Map are lost. When you save a Workflow Map, you can choose to save it as a new Workflow Map item.

5.4.1 To Save a Workflow Map

To…	In the Workflow Map, do the following…
Save the Workflow Map	Choose **Save** on the **Map** menu.
Save as a new Workflow Map item	Choose **Save As**, on the **Map** menu. Type a name for the Workflow Map in the **New Map Name** box, click **Browse Content Server** and navigate to the location you want to save the new Workflow Map, and then click **Save Map**.

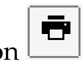
For information related to this procedure, see "Saving Workflow Maps" on page 34.

5.5 Printing Workflow Maps

You can print a hard copy of the Workflow Map for editing. The print layout is scaled to 70%, but you can increase this valuing using the **Scaling Settings** in the **Print Settings** dialog. If the print cannot be scaled correctly to the configured number of pages, the number of pages is automatically reduced to a valid number of pages.

5.5.1 To Print a Workflow Map

To print a Workflow Map:

1. In the Workflow Map Designer, click the **Print** icon .
2. Optional In the **Paper Settings** area, alter the page size and orientation.
3. Optional In the **Scaling Settings** area, select the **Scale up to the given number of pages** check box and enter the number of pages in the **Pages** text box.
4. Optional Click **Preview** to view the print settings before sending the print job to the printer.
5. Click **Print**.

For information related to this procedure, see “Verifying Workflow Maps” on page 33.

Chapter 6

Configuring Workflow Maps

You can configure a Workflow Map to define options and information used throughout the Workflow Map process.

6.1 Defining General Properties

When you create a Workflow Map, you can define the following general characteristics of the Workflow Map and its work package:

- Define general information associated with the Workflow Map, such as its title and description.
- Configure the Workflow Map to use Workflow Map roles (map-based implementation). For more information about roles, see “Using Roles” on page 41.
- Determine whether Content Server archives or deletes the executing instances of a Workflow Map when they are completed.
- Specify how weekends are considered when calculating Workflow Map due dates.
- Choose to display a standard or custom message (that can include basic HTML code) when a Workflow Map is initiated.
- Select the type of information you want to include in the work package, including Attributes, Attachments, Comments, and Forms.

Notes

- Some optional modules offer a different Workflow Map type. If your administrator has created a custom Workflow Map type, you must specify the Workflow Map type with which you want to work in the **Workflow Type** list. The default Content Server Workflow Map type is **Standard**.
- To be able to add Attributes and Form Attributes in Workflow steps that are configured to display in Content Server Smart View, you must enable Attributes and Forms in the work package. Workflow Fields, which are predefined Workflow Attributes, are available on the Smart View tab by default.

6.1.1 To Define General Properties

To define general properties:

1. On the **Map** menu, choose **General**.
2. On the **Settings** page, modify any of the settings as described in the following table.

To…	Do the following…
Rename the Workflow Map	Type a name in the **Title** field.
Describe the Workflow Map	Type a description in the **Description** field.
Enable the Workflow Map to use roles	In the **Role Implementation** list, click **Map Based**.
Specify the Workflow Map completion setting	In the **Completion Actions** list, click one of the following: • **None**, which allows the Workflow Map manager to choose how to complete the Workflow Map. • **Archive On Completion**, which automatically changes the status of completed Workflow Maps to **Archived**. • **Delete On Completion**, which automatically deletes completed Workflow Maps and all information associated with them.
Specify how to handle weekends in due dates	Select the **Skip weekends in due date calculations** check box to count only week days in due date calculations, or clear the check box to include weekends in due date calculations.
Specify a custom message on initiation	Click the **Custom Message** radio button, and type your message in the field.
Enable items in the work package	Select the check box next to the items you want to make available in the work package.

For information related to this procedure, see “Defining General Properties” on page 37.

6.2 Setting Management Permissions

A Workflow Map manager can monitor an executing instance of a Workflow Map to ensure that it proceeds properly. A manager with the appropriate permissions can stop, suspend, or modify the Workflow Map when necessary. The Workflow Map's Master Manager (by default, the Workflow Map initiator) has full management permissions for the Workflow Map, which are:

- **See Details**, which allows the Workflow Map manager to see the Workflow Map on the **Workflows** page, but not modify it. For more information about the **Workflows** page, see *OpenText Content Server - Workflows (LLESWFW-UGD)*.
- **Suspend**, which allows the Workflow Map manager to temporarily stop the Workflow Map, removing the current step from the **Assignments** page of the

Workflow Map participants assigned that step. Suspended Workflow Maps, unlike stopped Workflows, can be resumed.

- **Stop**, which allows the Workflow Map manager to permanently stop the Workflow Map.
- **Delete**, which allows the Workflow Map manager to remove the Workflow Map instance and its audit trail from Content Server.
- **Archive**, which allows the Workflow Map manager to archive completed Workflow Maps.
- **Change Permissions**, which allows the Workflow Map manager to modify permissions for an executing Workflow Map.
- **Change Data**, which allows the Workflow Map manager to edit the work package's attachments, attributes, and comments.
- **Change Route**, which allows the Workflow Map manager to modify a suspended Workflow Map's work process (the path the Workflow Map follows).

By default, the Workflow Map initiator is the Master Manager; however, you can assign any combination of management permissions to other users or groups. For more information about monitoring Workflow Maps, see *OpenText Content Server - Workflows (LLESWFW-UGD)*.

Notes

- Only one user can be the Master Manager. You cannot assign more than one Master Manager at the same time.
- You cannot remove the Initiator from the Manager List, although you can remove the Initiator's management permissions.
- If you enable Notifications for Workflow Map events, all Workflow managers are notified when the Workflow Map is late, but only the Master Manager receives a notification email message when the Workflow Map is complete. Contact your administrator if Notifications are not available.

You can change the Workflow Map manager and set permissions for the Initiator and other Workflow Map managers. You may, for example, want the Initiator to be able to edit all aspects of the Workflow Map instance except the path that the work process follows. In this case, you give the Initiator all permissions except **Change Route**.

6.2.1 To Set Management Permissions

To set management permissions:

1. On the **Map** menu, choose **Management**, click the **Edit Management Permissions** icon .
2. On the **Workflow Management** page, modify the settings as described in the following table.

To...	Do the following...
Assign the Master Manager	Click the **Set Master Manager** icon and then find and click the user's **Select** link.
Reset the initiator as the Master Manager	Click the **Set Master Manager** icon and then click the Initiator's **Select** link.
Add a Manager	Click the **Add Manager** icon , search for the user you want to add as a manager, select the user's **Grant Access** check box, and then click **Add to Workflow Definition**.
Set permissions for a Manager	Click the name link of the Workflow Map manager whose permissions you want to set, select the check boxes of the permissions you want to assign to the manager, and then click **Update**.
Remove a Manager	Click the name link of the Workflow Map manager you want to remove and then click **Remove**.

Note: Management permissions appear nested on the **Edit Management Permissions** page, showing their dependencies. You cannot assign a nested permission without assigning the permission upon which it depends.

For information related to this procedure, see "Setting Management Permissions" on page 38.

6.3 Using Roles

You can use Workflow Map roles to help you assign users and groups to steps. After you add a role, you can assign it to steps in a Workflow Map so that when you assign a user or group to the role, the steps assigned to the role are sent to that user or group. For example, if you create a Workflow Map for a publications group, you can define a role called Reviewer. When you assign a user to the role, that user will be responsible for completing all the steps assigned to Reviewer.

You can add and manage roles only if you specified **Map Based** role implementation in the Workflow Map General properties. For more information about the Workflow Map's General properties, see “Defining General Properties” on page 37.

6.3.1 To Manage Roles

To manage roles:

1. On the **Map** menu, choose **Roles**.
2. On the **Settings** page, modify the settings as described in the following table.

To…	Do the following…
Add a role	Type a name in the **Role** box, click **Add Role**, and then click **Add to Workflow Definition**.
Remove a role	Click the role, click **Delete** , and then click **Add to Workflow Definition**.
Organize the roles	Click the role, click **Up Arrow** or **Down Arrow** to move the role in the list, and then click **Add to Workflow Definition**.

Note: The **Roles** tab is available only if you specified **Map Based** in the **Role Implementation** list on the Workflow Map's **General** page.

For information related to this procedure, see “Using Roles” on page 41.

6.4 Setting Workflow Map Performers

When you set the performers for a Workflow Map, you can assign users, groups, or roles to all **User**, **Initiator**, and **Item Handler** steps in the Workflow Map at one time. You can also assign users, groups, or roles to an individual step.

6.4.1 To Set Workflow Map Performers

To set Workflow Map performers:

1. On the **Map** menu, choose **Edit Map Performers**, and then click the **Action** icon of the step you want to edit.
2. On the **Edit Map Performers** page, modify the settings as described in the following table.

To…	Do the following…
Assign a step to a User or Group	Find the user or group, click the **Select** link next to the user or group you want to assign to this step, and then click **Add to Workflow Definition**.
Assign a step to the Initiator or a role	Click the Initiator or role's **Select** link, and then click **Add to Workflow Definition**.

For information related to this procedure, see “Setting Workflow Map Performers” on page 42.

6.5 Defining Attachments

A Workflow Map attachment is a Content Server item or a file that contains information related to the Workflow Map. Workflow Map participants may be instructed to review, edit, or add Workflow Map attachments. For example, an attachment may be a document that contains task instructions or a spreadsheet that a step assignee needs to fill out to complete work defined on the step.

When an attachment is added to the Workflow Map, Content Server places a copy of the item in the Attachments folder. Workflow Map designers and participants add, view, modify, and perform other operations on attachments in the same way they do with items located elsewhere in Content Server.

You cannot work with attachments until you enable them in the Workflow Map's General properties. For more information about enabling attachments in a Workflow Map, see “Defining General Properties” on page 37.

Workflow Map attachments can be any of the following:

- Content Server items you create in the Attachments folder
- Items copied from Content Server to the Attachments folder
- Files you add from your computer or a network file system

Note: If you prefer that Workflow Map participants work with the original item, add a Shortcut to the Attachments folder. A Shortcut provides direct access to the original item.

Specifying Permissions

When an item is added as an attachment, it inherits the permissions of the Workflow Map Attachments folder, which by default is full permissions. All users can search on Workflow Map attachments even if they do not have permissions on the Workflow Map. You may change attachment permissions in a Workflow so that only those users or groups who will use or participate in the Workflow Map have permission to access the item. Also, the administrator can set attachment permissions for each active or suspended Workflow Map.

Note: Users who have not been given the **See** permission to an attachment will not be able to initiate the Workflow Map, or participate in any Workflow Map steps sent to them through the Delegate or Send for Review options.

6.5.1 To Create an Item Attachment

To create an item attachment:

1. Choose **Attachments** on the **Map** menu.
2. On the **Attachments** page, choose an item on the **Add Item** menu.
3. On the **Add** page for the item type, specify the item's settings, and then click **Add**.

For information related to this procedure, see “Defining Attachments” on page 42.

6.5.2 To Copy an Item as an Attachment

To copy a Content Server item as an attachment:

1. Choose **Attachments** on the **Map** menu.
2. On the **Attachments** tab, do one of the following:
   - Click the **Copy item from Content Server** link.
   - Click a location in the navigation list to browse Content Server or the **Attachments** folder.
3. Select the **Select** check box next to the item you want to add.
4. Click **Submit**.

For information related to this procedure, see “Defining Attachments” on page 42.

6.5.3 To Add a File Attachment

To add a file attachment:

1. Choose **Attachments** on the **Map** menu.
2. Click the **Add Document** icon .
3. On the **Add: Document** page, click **Browse**, and then navigate to and select a file stored on your computer or network file system.
4. Specify any other general item settings and then click **Add**.

For information related to this procedure, see “Defining Attachments” on page 42.

6.6 Defining Attributes

You define attributes to gather information from participants and store the information you want to track throughout the work process. For example, an attribute can be a way to record responses to a question or issue. These responses can be displayed in later Workflow Map steps or used as criteria to determine the execution path of a Workflow Map in an **Evaluate** step.

You cannot work with Attributes until you enable them in the Workflow Map. For more information about enabling attributes in a Workflow Map, see “Defining General Properties” on page 37.

You can define an Attribute as a field, popup field, or a check box, which allows you to determine the best input method for Workflow Map participants. For example, if you want to track whether Workflow Map participants want embossed or printed business cards, you would define a check box attribute called `Printed` and design the Workflow Map so that users can select the check box if they want printed cards or clear the box if they want embossed cards.

After you define attributes for a Workflow Map, the attributes are available on each step in the Workflow Map. You choose whether to set the attribute as Not Available, Editable, Entry Required, or Read Only on each step.

Attribute Type	Use
Date: Field	A date field.
Date: Popup	A list of dates.
Document ID Field	A member of regulated categories, this field automatically generates a unique, read-only value based on the document type and prefix. This attribute is available when the optional eSign module is installed.
Flag: Checkbox	A check box that indicates a True condition if selected or a False condition if not selected.

Attribute Type	Use
Integer: Field	An integer field. This attribute type cannot include values with decimals. If you want to include values with decimals, use the Real Field attribute type.
Integer: Popup	A list of integers. This attribute type cannot include values with decimals. If you want to include values with decimals, use the Real Popup attribute type.
Item Reference	A reference to a Content Server item (the item's Content Server node ID). When you add an attribute of this type to a Workflow Map step, users can browse Content Server to select an item as the attribute's value.
Real: Field	A real number field. This attribute type can include values with decimals. If you want to include only whole numbers, use the Integer Field attribute type.
Real: Popup	A list of real numbers. This attribute type can include values with decimals. If you want to include only whole numbers, use the Integer Popup attribute type.
Release Number Field	A user-generated value that identifies an object. This attribute is available when the optional eSign module is installed.
Signer Field	A signing authority field that has the ability to search and select Content Server Signing Authorities and Signing Groups. This attribute is available when the optional eSign module is installed.
Text: Field	A single line text field.
Text: MultiLine	A multiline text field.
Text: Popup	A list of text values.
Text: Table Key Lookup	A list of database values.
User: Field	A user name field that includes the ability to search and select Content Server users.
User: Popup	A list of user names of Content Server users.

Notes

- An Item Reference attribute cannot refer to a folder definition. For more information about folder definitions, see “Creating Folders” on page 91.
- If step in the Workflow Map is configured to display in Content Server Smart View, the **Attributes** tab will be hidden and any information previously set on this tab will be reset. You select the attributes you want to display on the **Smart View** tab.

Setting Default Attribute Values

After you define an attribute, you can set its default value.

Specifying Attribute Properties

When you define an attribute, you specify values for the attribute's properties. Some properties are found in more than one attribute and others are unique to an attribute. For example, all attributes include a **Name** property, but a date field attribute is the only type to feature the **Include Time Field** property. The following table explains all Workflow Map attribute properties and which attribute-type definitions include them.

Property	Value	Attribute	Specifies
Name	Text	All	The attribute name.
Locked	Check box	All except Flag Check Box	If selected, allows users to add rows for the attribute. If cleared, rows are fixed.
Max. #	Integer	All except Flag Check Box	The maximum number of rows in the field.
Default #	Integer	All except Flag Check Box	The default number of rows in the field.
Order	List	All	The order in which the attribute is displayed.
Show in Search	Check box	All except Flag Check Box and Item Reference	Allows Content Server to search attribute values. Workflow attributes are rarely used in search queries. For most applications, leaving this value unchecked is appropriate. Checking this value will associate this attribute with the Workflow item in the search index. A System Administrator will also need to implement configuration changes in order to make this value searchable.
Required	Check box	All except Flag Check Box	Users must provide a value in the field
Include Time Field	Check box	Date Field	If selected, includes a field where users can specify an hour
Valid Values	List	All popup attribute types	A list of selectable values displayed in the field
Selectable Items	List	Item Reference	The Content Server item types that users can select in the field
Length	Integer	Text Field	The maximum number of characters in a field. The maximum value is 254.
Display Length	Integer	Text Field	The display length of the field value
Rows	Integer	Text Multiline	The field height
Columns	Integer	Text Field	The field width

Property	Value	Attribute	Specifies
Include Groups	Check Box	User Field	If selected, a group is a valid value for the field

Disabling Versioning

By default, Content Server displays the current value of Workflow Map attributes, but it stores the current and all previous versions of attribute values in the Content Server database. If you want to view previous versions of an attribute value (for example, if you want to audit a Workflow Map instance), you can create a LiveReport to retrieve all versions on an attribute value from the Content Server database. If you want Content Server to store only the current value, you can disable versioning for Workflow Map attributes.

6.6.1 To Add Attributes

To add attributes:

1. On the **Map** menu, click **Attributes**.
2. On the Workflow Map **Attributes** tab, select an attribute type in the **Add Attribute** list.
3. Specify the attribute properties.
4. Click **OK**.
5. Optional Select the **Disable Versioning** check box to prevent Content Server from storing attribute value versions.
6. Click **Add to Workflow Definition**.

For information related to this procedure, see "Defining Attributes" on page 44.

6.6.2 To Edit Attributes

To edit attributes:

1. On the **Map** menu, click **Attributes**.
2. On the Workflow Map **Attributes** tab, click an **Attribute Items** name link.
3. On the **Edit Attributes** page, modify the attribute properties.
4. Click **OK**.
5. Optional Select the **Disable Versioning** check box to prevent Content Server from tracking attribute value versions.
6. Click **Add to Workflow Definition**.

For information related to this procedure, see "Defining Attributes" on page 44.

6.6.3 To Remove an Attribute

To remove an attribute:

1. On the **Map** menu, click **Attributes**.
2. On the Workflow Map **Attributes** tab, click an **Attribute Items** name link.
3. Click **Remove**.
4. In the confirmation dialog box, click **OK**.

For information related to this procedure, see “Defining Attributes” on page 44.

6.7 Email-Enabling Workflow Map Initiation

If you want to allow users to initiate Workflow Maps by email message, you can email-enable a Workflow Map. When you email-enable a Workflow Map, Content Server assigns the following email address to it:

Workflow Map_Name@eLink_Server

where *Workflow Map_Name* is the Workflow Map name you supply (the name value does not have to be the same as the name of the Workflow Map) and *eLink_server* is the name of the eLink Server. For example, the default email address of an email-enabled Workflow named `My_Workflow Map` on a Content Server that uses an eLink Server named `eLink_Server.MyCompany.com` is My_Workflow Map@eLink_Server.MyCompany.com.

The administrator can prevent you from email-enabling Workflow Maps by disabling the feature in the OpenText eLink module. For more information about enabling or disabling the email initiation feature, see your administrator.

Important
Content Server cannot initiate a Workflow Map through email if the **Start** step requires any of the following information:

- Attributes values
- Form field values
- Authentication

After you email-enable a Workflow Map, you can make the Workflow Map's email address available to users who can initiate a Workflow Map by sending a request email message to the Workflow Map's email address. Information in the user's message is transferred to the Workflow Map package. For example, the email message's subject line becomes the Workflow Map name, attachments are copied to the Workflow Map Attachments folder, and text in the body of the message becomes **Start** step comments.

Note: Users can use the same methods to initiate an email-enabled Workflow Map as a Workflow Map that has not been email-enabled.

For more information about initiating a Workflow Map by email, see *OpenText Content Server - Workflows (LLESWFW-UGD)*.

6.7.1 To Email-Enable Workflow Map Initiation

To email-enable Workflow Map initiation:

1. Click a Workflow Map's **Functions** icon, and then choose **E-mail Enable**.
2. On the **Enable eLink** page, in the **E-mail Alias** field, type the Workflow Map email address.
3. Click **Enable**.

Tip: To disable email interaction for a Workflow Map, click a Workflow Map's **Functions** icon, and then click **E-mail Disable**.

For information related to this procedure, see “Email-Enabling Workflow Map Initiation” on page 48.

6.8 Configuring Workflow Map Initiation from an Item

You can configure a Workflow to be initiated directly from the **Functions** menu of certain Item types in Content Server, for example, a Document or a Folder. Workflows initiated in this way include the Item as an attachment. You can also specify that the Workflow can only be initiated from an Item type that has specific Category Attributes or Classifications. For more information, see “Configuring Workflow Map Initiation” on page 50.

You can use custom event scripts that perform actions on the Item associated with the Workflow. Event scripts work for Workflows that are started from the **Initiate <*Item*> Workflow** option on the **Functions** menu. For more information, see “Configuring event scripts ” on page 50.

In addition, you can use Workflow replacement tags associated with the above features. For more information, see “Configuring Workflow replacement tags” on page 52.

6.8.1 Configuring Workflow Map Initiation

To configure when a Workflow Map can be initiated from an Item:

1. On the Workflow Map's **Functions** menu, choose **Properties**, then choose **Initiation**.

2. On the **Initiation** tab for the Workflow Map, in the **Item Types** area, select one or more Item types that you want to be able to launch this Workflow from using the Functions menu.

   Tip: The Item types that are available depend on the Content Server modules that are installed.

3. Optional To restrict the availability of the Workflow to Items that are assigned a particular Category Attribute or Classification, do any of the following:

   - In the **Categories** area, select the check box for the one or more Categories that are assigned to the Workflow, then select one or more Attributes in the list.

   - In the **Classifications** area, select the **One of the classifications below** check box, and then click **Browse Classifications** to select one or more Classifications.

4. Click **Update**.

6.8.2 Configuring event scripts

You can configure event scripts for the User and Initiator steps, Milestone step, Item Handler step, Sub-workflow step, Process step, and Form Task step in a Workflow Map. Event scripts work for Workflows that are started from the **Initiate** <*Item*> **Workflow** option on the **Functions** menu.

“Initiate Workflow from an Item event scripts” on page 50 lists event scripts that are available from the **Event Scripts** tab for steps in a Workflow Map.

Table 6-1: Initiate Workflow from an Item event scripts

Event script	Description
Review Result: Approved	Writes an entry to the audit trail of the Item attached to the Workflow that includes the name of the person who approved the Workflow, if the Workflow is approved. This event script requires that an administrator enable the **Review Result: Approved Event Type** on the **Set Auditing Interests** administration page.

Review Result: Rejected	Writes an entry to the audit trail of the Item attached to the Workflow that includes the name of the person who rejected the Workflow, if the Workflow is rejected. This event script requires that an administrator enable the **Review Result: Rejected Event Type** on the **Set Auditing Interests** administration page.
Complete RM Disposition Review Process RM Data on Step Done Assign RM Disposition Reviewers RM - Deletion Denied RM - Delete Object RM - Date Record Officer Approved RM - Record Officer RM - Set Record Manager Group	These event scripts are for internal use only.

Enabling event scripts

To enable an event script in a Workflow Map step:

1. In the Workflow Designer, right-click the step you want to enable an event script for, then click **Edit**.
2. Click the **Event Scripts** tab.
3. Optional Select a script from the lists for any of the following events:
   - **Step Becomes Ready –** The selected event script runs when the Workflow reaches the current step.
   - **Before Send On –** The selected event script runs after the user clicks **Send On** in the current step but before the step is sent to the next step in the Workflow. This option is available for steps that have the Send On action.
   - **Step Is Done –** The selected event script runs when the current step is complete.

   Note: Click **Add another script** to configure more than one script for an event.
4. Click **Add to Workflow Definition**, then click **Save** on the **Map** menu.

6.8.3 Configuring Workflow replacement tags

You can use a custom dynamic replacement tag in a Workflow Map that is initiated from an Item in Content Server to show the name of the attached Item, or the value of any other column in the DTree database table for the Item. The tag can be inserted anywhere that any standard dynamic replacement tag can be inserted. The dynamic replacement tag has the following format:

<DataType_12_1_Name>

In the above example, the dynamic replacement tag represents the Name of the Item. You can replace Name with another DTree column name, as the following example shows:

<DataType_12_1_CreateDate>

For more information, see “Using Dynamic Replacement Tags” on page 82.

Enabling Workflow replacement tags

To enable replacement tags:

1. On the Workflow Map's **Functions** menu, choose **Edit**.
2. In the Workflow Designer, click **General** on the **Map** menu.
3. In the **Packages** area, select the **Initiate Workflow from Item Replacement Tags** check box.
4. Click **Add to Workflow Definition**.
5. Click **Save** on the **Map** menu.

6.9 Specifying Workflow Map Event Preferences

OpenText recommends that you encourage users who are managing or participating in Workflow Maps to use OpenText eLink settings to help them monitor Workflow Maps. For example, users can configure an eLink event to send them an email alert each time a step assigned to them is ready for work to begin. Content Server provides email notification processing for the following Workflow Map events:

- A Workflow Map you manage is completed or late.
- A step assigned to you is ready or late.

For more information about configuring Workflow Map event preferences, see *OpenText Content Server - Workflows (LLESWFW-UGD)*.

In addition, the administrator can control eLink settings for Workflow Maps event preferences by configuring eLink global Workflow Map settings. The administrator's eLink global Workflow Map settings override user eLink settings. For example, even if users disable an eLink setting to receive an email message when a Workflow Map step assigned to them is late, the administrator can configure a global eLink setting to ensure that all users receive an email message. For more information about administering global Workflow Map event preferences, see your administrator or refer to “Administer eLink Global Workflow Settings” in the *Content Server Admin Online Help*.

Important

The administrator must configure eLink global Workflow Map settings or users must configure their local eLink Workflow Map settings in order to receive email messages for Workflow Map events from email-enabled Workflow Maps.

Chapter 7

Defining Steps and Links

You define Workflow Map steps to specify the work, events, and participants in a Workflow Map process. You use links to control the order in which steps are processed. For more information about the steps and links, see “Understanding Steps and Links“ on page 9. For a list of standard steps, see “Choosing Steps” on page 6.

7.1 Defining a Start Step

When you define a **Start** step, you must specify the following information:

- General information, which includes the step name, Initiator options, and general instructions.
- Comments instructions, if Comments have been enabled for the Workflow Map work package on the **Workflow General Settings** page.
- Attribute access and instructions, if Attributes have been enabled for the Workflow Map work package on the **Workflow General Settings** page.
- Attachments instructions, if Attachments have been enabled for the Workflow Map work package on the **Workflow General Settings** page.
- Form template, if Forms have been enabled for the Workflow Map work package on the **Workflow General Settings** page and if the step is configured to be initiated from Content Server Classic View.
- Smart View Attributes and Workflow Fields, if the step is configured to be initiated from Content Server Smart View.

For more information about the **Start** step, see “Understanding the Start Step” on page 10.

For more information about defining the **Start** step for use in the Content Server Mobile app, see “Understanding Workflow steps in the Content Server Mobile app” on page 9.

Specifying General Information

The general information you can specify for a **Start** step includes a step name, instructions displayed on the **General** page of the **Initiate** page, and the following step options:

- **Display at initiation**, which causes the step to be displayed in Content Server Classic if you select it. The **Start** step is always displayed at initiation in Content Server Smart View.

- **Prompt for title at initiation**, which requires the Initiator to provide a name for the Workflow Map in the **Initiate As** field on the **General** window. This option is supported by Workflow Maps initiated in Content Server Classic.
- **Initiator can specify workflow due date**, which allows the Initiator to specify the Workflow Map due date in the **Due Date** field on the **General** window. This option is supported by Workflow Maps initiated in Content Server Classic.
- **Authenticate**, which requires the Initiator to authenticate the action by providing a valid Content Server password. **Start** step authentication uses Content Server login policies in the same way as **User** or **Initiator** steps. For more information about Content Server login policies, see “Understanding User and Initiator Steps” on page 11. This option is supported by Workflow Maps initiated in Content Server Classic.
- **Initiate in Smart View**, which configures the Workflow Map to be initiated from Content Server Smart View.

Specifying Comments Page Instructions

If comments are enabled for the Workflow Map work package, you can provide instructions that are displayed on the **Comments** window of the **Initiate** page. For more information about defining instructions, see “Defining Instructions” on page 87.

Specifying Attribute Access and Instructions

If attributes are enabled for the Workflow Map work package, you can provide comments that are displayed on the **Attributes** window of the assignee's Workflow Map step page. Also, you can specify how each attribute is displayed and whether it can be modified on the step.

For more information about defining attribute access, see “Defining Attribute Access” on page 88. For more information about defining instructions, see “Defining Instructions” on page 87.

Specifying Smart View Form Sections

When you select the **Initiate in Smart View** option, the **Attributes** tab is hidden for the **Start** step and the **Smart View** tab is displayed. To prevent inconsistent Attribute settings for the start step, any settings you might have configured on the **Attributes** tab are reset to the default settings.

On the **Smart View** tab, you can create one or more Smart View Form sections to collect or display information before initiating the Workflow. A Smart View Form section can contain the following:

- Attributes you define from the **Attributes** option on the **Map** menu and predefined Workflow system attributes (Workflow Fields). For more information about defining Attributes, see “Defining Attributes” on page 44.

- Form Attributes defined in a Form Template, if Forms are enabled for the Workflow Map. For more information, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

Smart View Form sections can have a title, but the title is optional. Each Smart View Form section can contain one or more Attributes and Workflow Fields. Each section can also contain Form Attributes, if Forms are enabled for the Workflow Map.

When you select an Attribute or Workflow Field to add to a Smart View Form section, a default display name appears. You can change the display name. If the Attribute is required, the Attribute will be set to **Entry Required** on the **Smart View** tab. By default, most Attributes are editable and most Workflow fields are read-only. If the Attribute behavior is not predefined, you can set the desired behavior of the field. Available behaviors include the following:

- **Editable**, which means the step assignee can enter a value for the field, but providing a value is optional.
- **Entry Required**, which means the field is required and the step assignee must enter a value for the label.
- **Read Only**, which means the field displays on the Form but the step assignee cannot enter or change the value of the field.

By default, the layout of Smart View Form sections is a single column. You can change the layout of a section to display the fields in two columns. If you have more than one Smart View Form section, each section can use a different layout. If you choose the two-column layout, in the Workflow Designer, the fields in the Smart View Form section continue to display in a single column. However, the fields will be displayed in two columns when the Workflow assignee opens the Workflow step.

For more information about Smart View Form sections, see "To Make Attributes and Workflow Fields Available in a Smart View Start Step" on page 59.

Specifying Attachments Page Instructions

If attachments are enabled in the Workflow Map work package, you can provide instructions that are displayed on the **Attachments** page of the **Initiate** page. For more information about defining instructions, see "Defining Instructions" on page 87.

7.1.1 To Define the Start Step

To define the Start step:

1. In the Workflow Map Designer, double-click the **Start** step.
2. On the **General** tab, specify a step name, select step options, provide instructions that will display in the **General** window, and then click **Add to Workflow Definition**. For more information about defining general options, see “Specifying General Information” on page 55.
3. Optional If attachments are enabled for the Workflow Map, click the **Attachments** tab, provide Attachments window instructions, and then click **Add to Workflow Definition**.
4. Click the **Comments** tab, provide Comments window instructions, and then click **Add to Workflow Definition**.
5. Optional If attributes are enabled for the Workflow Map, click the **Attributes** tab, provide Attributes window instructions, specify an access option for each attribute, and then click **Add to Workflow Definition**. If the step is configured to be initiated in Smart View, the **Attributes** tab does not appear and any settings you might have set on the **Attributes** tab before selecting the Smart View display option are reset.
6. Optional If forms are enabled for the Workflow Map, click the **Forms** tab, select the Form and Form View, and then click **Add to Workflow Definition**. If the step is configured to be initiated in Smart View, the **Forms** tab does not appear.
7. Optional If the step is configured to be initiated from Content Server Smart View, click the **Smart View** tab to configure one or more Smart View Form sections, and then click **Add to Workflow Definition**. For information on how to configure Form sections on the **Smart View** tab, see “To Make Attributes and Workflow Fields Available in a Smart View Start Step” on page 59.
8. Save the Workflow Map.

For information related to this procedure, see “Defining a Start Step” on page 55.

7.1.2 To Make Attributes and Workflow Fields Available in a Smart View Start Step

To make Attributes and Workflow Fields available in a Smart View Start step:

1. In the Workflow Designer, double-click a Start step.
2. Click the **Smart View** tab.
3. To add a Smart View Form section, do one of the following:
   - Click **Add form section** to add a blank section.
   - Click the **Duplicate** icon in an existing section to copy and modify the section.
4. Optional In the **Form** area, type a title for the Smart View Form section and select a column layout.
5. Select an Attribute or Workflow Field to add to the section in the **Label** list. If required, change the display text that will appear in the Workflow step, and, if available, select the expected behavior of the field.
6. Do any of the following to modify a Smart View Form section:
   - Click **Add** to add another Attribute or Workflow Field.
   - Click **Delete** to delete a row.
   - Click the **Multilingual** icon to add localized text for the section title and section labels.
7. Do any of the following:
   - Click **Move Down** or **Move Up** to change the order of the Smart View Form sections in the Workflow step.
   - Click **Delete** to delete a section from the Workflow step.
8. Click**Add to Workflow Definition**.
9. Save the Workflow Map.

7.2 Defining a User or Initiator Step

When you define a **User** or **Initiator** step, you must specify the following information:

- General information, which includes the step name, instructions, date and priority settings, background processing preferences, an email action option, and display settings.
- Assignees, which includes the user or group assigned to the step.
- Step permissions.
- Attachments instructions, if attachments are enabled for the Workflow Map work package.
- Comments instructions.
- Attribute conditions and instructions, if attributes are enabled for the Workflow Map work package.

For more information about **User** and **Initiator** steps, see “Understanding User and Initiator Steps” on page 11.

For more information about defining the **StartUser** and **Initiator** steps for use in the Content Server Mobile app, see “Understanding Workflow steps in the Content Server Mobile app” on page 9.

Specifying General Information

The general information you must specify for **User** and **Initiator** steps includes a step name, instructions displayed on the **General** window of the Workflow Map step page, a user or group assigned to the step, email interaction, and the following date, priority, and display settings:

- The amount of time (duration) in which the step should be completed.
- A start date, which is when you want work on the step to begin.
- Whether Content Server recalculates the Workflow Map due dates after the step is processed.
- Whether the step is processed in the background by the Workflow Agent after the step assignee sends on the step.
- The display of the Workflow Map step as a standard double frame view (default), single page view, or Smart View. When the **Smart View** option is selected, the Workflow step is completed in Content Server Smart View. When the **Single Page View** option is selected, you choose which packages in the Workflow Map work package to display, and the order in which to display them in the Workflow Map step. For more information on the work package, see “Working with the Work Package” on page 7.

For more information about dates and priorities, see “Understanding Dates and Priorities“ on page 25.

Using the Standard View Display Option

With the standard view, the Workflow displays in a double frame in Content Server Classic. If the step assignee selects the Workflow step on the **My Assignments** tile in Content Server Smart View, the Workflow opens in Content Server Classic View.

With the standard view, all of the packages in the Workflow Map work package are displayed to the step assignee.

Using the Single Page View Display Option

With the single page view, the Workflow displays in Content Server Classic View, even when the step assignee selects the Workflow on the **My Assignments** tile in Content Server Smart View.

With the single page view, you choose which packages in the Workflow Map work package to display to the step assignee and the order in which to display them. To add or remove a package in the display, highlight the package and then click the left or right arrow buttons. To order the displayed packages, highlight a package in the **Display Packages** region and then click the up or down arrow buttons to adjust the location of the package.

The packages in the Workflow Map work package consist of the following:

- **General**, which could provide instructions and general details about the Workflow.
- **Attachments**, which are documents, files, and any Content Server item related to the Workflow. Assignees may be instructed to review, edit or add Workflow attachments.
- **Comments**, which are text fields where assignees can read previous participants thoughts and comments.
- **Attributes**, which are fields and values to gather information from assignees.
- **Forms**, which are forms, PDF forms, or eForms to collect data. PDF Forms and eForms are available only if the optional product modules are installed.

Notes

- Attachments, comments, attributes and forms must be enabled in the Workflow Map work package in order for these packages to display in the single page view **Packages** list.
- If your Workflow contains attachments or requires mandatory attributes for approval, you must display these packages in the step assignment.

Using the Smart View Display Option

With the Smart View display option, the Workflow step displays in Content Server Smart View, even when the step assignee selects the Workflow assignment from Content Server Classic View. All of the packages in the Workflow Map work package are displayed to the step assignee, including the following:

- **General**, which can provide instructions and general details about the Workflow.
- **Attachments**, which are documents, files, and any Content Server item related to the Workflow. Assignees may be instructed to review, edit, or add Workflow attachments.
- **Comments**, which are text fields where assignees can read comments made by previous participants in the Workflow.
- **Smart View**, which are Attributes and Workflow Fields that display data and collect information from the Workflow assignee.

Specifying Smart View Form Sections

When you select the **Smart View** display option, the **Attributes** tab is hidden for the User or Initiator step and the **Smart View** tab is displayed. To prevent inconsistent Attribute settings for the step, any settings you might have configured on the **Attributes** tab are reset to the default settings.

On the **Smart View** tab, you can create one or more Smart View Form sections to collect or display information on the User or Initiator step of the Workflow. A Smart View Form section can contain the following:

- Attributes you define from the **Attributes** option on the **Map** menu and predefined Workflow system attributes (Workflow Fields). For more information about defining Attributes, see “Defining Attributes” on page 44.
- Form Attributes defined in a Form Template, if Forms are enabled for the Workflow Map. For more information, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

Smart View Form sections can have a title, but the title is optional. Each Smart View Form section can contain one or more Attributes and Workflow Fields. Each section can also contain Form Attributes, if Forms are enabled for the Workflow Map.

When you select an Attribute or Workflow Field to add to a Smart View Form section, a default display name appears. You can change the display name. If the Attribute is required, the Attribute will be set to **Entry Required** on the **Smart View** tab. By default, most Attributes are editable and most Workflow fields are read-only. If the Attribute behavior is not predefined, you can set the desired behavior of the field. Available behaviors include the following:

- **Editable**, which means the step assignee can enter a value for the field, but providing a value is optional.
- **Entry Required**, which means the field is required and the step assignee must enter a value for the label.
- **Read Only**, which means the field displays on the Form but the step assignee cannot enter or change the value of the field.

By default, the layout of Smart View Form sections is a single column. You can change the layout of a section to display the fields in two columns. If you have more than one Smart View Form section, each section can use a different layout. If you choose the two-column layout, in the Workflow Designer, the fields in the Smart View Form section continue to display in a single column. However, the fields will be displayed in two columns when the Workflow assignee opens the Workflow step.

For more information about Smart View Form sections, see "To Make Attributes and Workflow Fields Available in a Smart View User or Initiator Step" on page 67.

Specifying a User Step Assignee

The **User** step allows you to assign the task defined on the step to:

- A specific user or group.
- Multiple users or groups.
- The assignee from a previous Workflow Map step.
- An assignee specified in an attribute.
- Users or groups based on one or more conditional statements you create using the Expression Builder.
- A Workflow Map role.

Tip: OpenText recommends using "Multiple Users/Groups" for maximum flexibility.

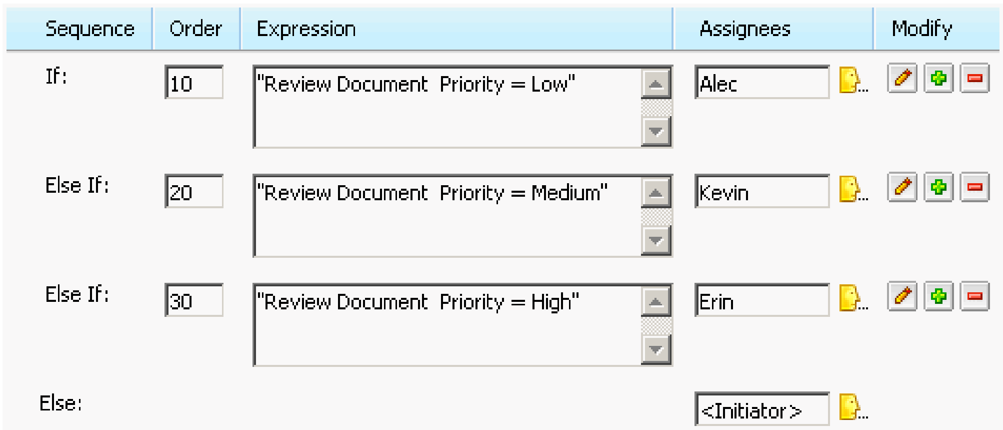
Specifying the Group Assignment Method

If you assign the step to multiple users or groups, you must indicate how members of the group accept and complete the task by selecting one of the following group assignment methods:

- **Member Accept**, which requires only one member of the group to perform the task. When ready, the task appears on the **Assignments** page of all group members. When one member accepts the task, the task is removed from the **Assignments** page of the other members of the group.
- **Member Accept (Maintain)**, which requires only one member of the group to perform the task. If a Loopback occurs to make that step ready again, the step is assigned to the same user who worked on the step initially.
- **One Level Expand**, which requires each member of the group to perform the task. If the group contains one or more subgroups, only one member from the subgroup is required to perform the task. After a member of a subgroup accepts the task, it is removed from the **Assignments** page of other members of the subgroup.
- **Full Expand**, which requires each member of the group and any of the subgroups within that group to perform the task. Until every member of the group and its subgroups completes the task, the Workflow Map does not move on to the next step.

Using Conditional Statements to Assign a User Step

You can define a series of conditional statements and `If`, `Else If`, and `Else` tests that determine a **User** step assignee by assigning it to the first conditional statement that evaluates as true. For example, the following series of conditional statements use the priority of another step named "Review Document" to determine which user will be assigned to the current **User** step.



You can change the order of the conditional statements by changing the Order numbers.

Specifying Step Permissions

You can specify any of the following step permissions on a **User** or **Initiator** step that allow step assignees to perform the following actions:

- See all comments
- Send the step for review
- Delegate the step
- Authenticate the step
- Use dispositions

For more information about step permissions, see "Understanding User and Initiator Steps" on page 11.

Specifying Localized Dispositions

If your Content Server installation includes language packs, you can enter localized text for each disposition in the Workflow. If your Content Server installation does not include additional language packs, you can use the localize disposition feature to create a display name for a disposition.

Using Dispositions with Group Assignees

Assigning the step to a group and using dispositions requires two steps. In the **Assignees** tab, you must select the group option of **One Level Expand** or **Full**

Expand. In the **Permissions** tab, you must then select one of the following group tabulation settings to determine how to calculate the group's preference:

- For a unanimous disposition, use the **Set disposition by unanimous choice** setting. If the dispositions are not unanimous, the default disposition prevails.
- For the most popular disposition, use the **Set disposition by most popular choice** setting. If there is a tie, the default disposition prevails.

Specifying Comments Instructions

If comments are enabled in the Workflow Map work package, you can provide comments that are displayed on the **Comments** page of the assignee's Workflow Map step page. For more information about defining instructions, see "Defining Instructions" on page 87.

Specifying Attachments Page Instructions

If attachments are enabled in the Workflow Map work package, you can provide instructions that are displayed on the **Attachments** page of the **Initiate Workflow Map** page. For more information about defining instructions, see "Defining Instructions" on page 87.

Specifying Attribute Access and Instructions

If attributes are enabled for the Workflow Map work package, you can provide comments that are displayed on the **Attributes** window of the assignee's Workflow Map step page. Also, you can specify how each attribute is displayed and whether it can be modified on the step.

For more information about defining attribute access, see "Defining Attribute Access" on page 88. For more information about defining instructions, see "Defining Instructions" on page 87.

7.2.1 To Define a User or Initiator Step

To define the User or Initiator step:

1. In the Workflow Map Designer, double-click a **User** or **Initiator** step.
2. On the **General** tab, specify the following information and then click **Add to Workflow Definition**.
   - In the **Step Name** box, type a name for the step.
   - In the **Instructions** box, provide instructions that will display in the **General** window.
   - In the **Assignee** area, click **Choose User or Group** to select a step assignee.
   - Select a group requirement in the **Group Options** list. For more information, see "Specifying the Group Assignment Method" on page 63.

- Select and type the date and priority settings. For more information, see "Understanding Dates and Priorities" on page 25.
- Select the **Recalculate Due Dates** check box to set this step to recalculate the due date of the Workflow Map at the time of its completion.
- Select the **Allow the Workflow Agent to perform 'Send On' processing** check box to enable background processing.
- Select the **Enable Action E-mail** check box to send an email to the step assignee advising them of the Workflow Map assignment.
- Select a **Display** option to determine the layout of the Workflow and whether the Workflow opens in Content Server Classic View or Content Server Smart View. Select **Standard View** to display all packages in the map package in a double pane view in Content Server Classic View. Select **Smart View** to display all of the packages in the map package in Content Server Smart View. Select **Single Page View** to display only the packages you select in a single page in Content Server Classic View. For more information, see "Understanding the Display of the User and Initiator Step" on page 11

3. Click the **Assignees** tab, do one of the following, and then click **Add to Workflow Definition**:

   - Click the **User or Group** option, click **Choose User or Group** , and then find and select the user or group to which you want to assign the step.
   - Click the **Multiple Users/Groups** option, click **Choose User or Group** , and then find and select the users or groups to which you assign the step.
   - Click the **Assignee from Prior Step** option, and then click a step name in the list.
   - Click the **Assignee from Attribute** option, if available, and then click an attribute in the list.
   - Click the **Expressions** option, define the conditional statements used to determine the step assignee, click **Choose User or Group** , and then find and select the users or groups you want to assign the step to if the conditional statement is true.

     Tip: To create the conditional statements using the Expression Builder, click **Edit Expression** .

4. Click the **Permissions** tab, do any of the following, and then click **Add to Workflow Definition**:

   - In the **Allow user to** area, select the necessary permissions.
   - In the **Disposition** area, select the **Require Disposition** check box, type the required dispositions, and then click the disposition option that you want to be the default action for the step. Click the **Multilingual** icon beside each disposition to add localized text for the disposition. If you do not have other

languages installed, you can add a custom display name for the disposition. Dispositions must be unique.

- In the **Group Step Tabulation** area, select how to calculate a group's preference if you are assigning a disposition step to a group.

5. If the step is configured to be initiated from Content Server Smart View, click the **Smart View** tab to configure one or more Smart View Form sections, and then click **Add to Workflow Definition**. For information on how to configure Form sections on the **Smart View** tab, see "To Make Attributes and Workflow Fields Available in a Smart View User or Initiator Step" on page 67.

6. If attachments are enabled for the Workflow Map, click the **Attachments** tab, provide Attachments window instructions, and then click **Add to Workflow Definition**.

7. Click the **Comments** tab, provide Comments window instructions, and then click **Add to Workflow Definition**.

8. If attributes are enabled for the Workflow Map, click the **Attributes** tab, provide Attributes window instructions, specify an access option for each attribute, and then click **Add to Workflow Definition**. If the display option is set to Smart View, the **Attributes** tab does not appear and any settings you might have set on the **Attributes** tab before selecting the Smart View display option are reset.

9. Optional If forms are enabled for the Workflow Map, click the **Forms** tab, select the Form and Form View, and then click **Add to Workflow Definition**. If the step is configured to be initiated in Smart View, the **Forms** tab does not appear.

10. Save the Workflow Map.

Note: For more information about the Expression Builder, see "Working with the Expression Builder" on page 80.

For information related to this procedure, see "Defining a User or Initiator Step" on page 60.

7.2.2 To Make Attributes and Workflow Fields Available in a Smart View User or Initiator Step

To make Attributes and Workflow Fields available in a Smart View User or Initiator step:

1. In the Workflow Designer, double-click a User or Initiator step.
2. Click the **Smart View** tab.
3. To add a Smart View Form section, do one of the following:
   - Click **Add form section** to add a blank section.
   - Click the **Duplicate** icon in an existing section to copy and modify the section.

4. Optional In the **Form** area, type a title for the Smart View Form section and select a column layout.
5. Select an Attribute or Workflow Field to add to the section in the **Label** list. If required, change the display text that will appear in the Workflow step, and, if available, select the expected behavior of the field.
6. Do any of the following to modify a Smart View Form section:
   - Click **Add** to add another Attribute or Workflow Field.
   - Click **Delete** to delete a row.
   - Click the **Multilingual** icon to add localized text for the section title and section labels.
7. Do any of the following:
   - Click **Move Down** or **Move Up** to change the order of the Smart View Form sections in the Workflow step.
   - Click **Delete** to delete a section from the Workflow step.
8. Click**Add to Workflow Definition**.
9. Save the Workflow Map.

7.3 Defining an Evaluate Step

When you define an **Evaluate** step, you must by specifying the following information:

- A step name.
- Whether Content Server must recalculate the Workflow Map due dates after the step is processed.
- The conditional statements you create in the Expression Builder that the step uses to determine how to route the Workflow.

For more information about Evaluate steps, see “Understanding Evaluate Steps” on page 16. For more information about Workflow Map due dates, see “Understanding Dates and Priorities“ on page 25. For more information about the Expression Builder, see “Working with the Expression Builder” on page 80.

7.3.1 To Define an Evaluate Step

To define an Evaluate step:

1. In the Workflow Map Designer, double-click a **Evaluate** step.
2. Specify a step name.
3. To set this step to recalculate the due date of the Workflow Map at the time of its completion, select the **Recalculate Due Dates** check box.
4. Click **Edit Expression** and use the Expression Builder to create the conditional statements that are evaluated at each step to route Workflow Map.
5. In the **Step** list, click the name of the step to which the processing is routed if the expression is evaluated as true.
6. Click **Add to Workflow Definition**.
7. Save the Workflow Map.

Note: For more information about the Expression Builder, see "Working with the Expression Builder" on page 80.

For information related to this procedure, see "Defining an Evaluate Step" on page 68.

7.4 Defining a Milestone Step

You define a **Milestone** step by specifying the step name and the target date.

Specifying the Target Date

You can either have Content Server calculate the milestone target date or enter the date manually. When Content Server calculates the target date, it bases the target date on the total duration of the steps before the milestone or the due date of the step immediately preceding the milestone. If you enter the target date manually, you must specify the target month, day, year, and hour.

7.4.1 To Define a Milestone Step

To define a Milestone step:

1. In the Workflow Map Designer, double-click a **Milestone** step.
2. Specify a step name.
3. Do one of the following:
   - Click the **Calculate Target Date** radio button.
   - Click the **Enter Target Date** radio button, and then specify the target month, day, year, and hour.

4. Click **Add to Workflow Definition**.

5. Save the Workflow Map.

For information related to this procedure, see "Defining a Milestone Step" on page 69.

7.5 Defining an Item Handler Step

When you define an **Item Handler** step, you must specify the following information:

- General information, which includes the step name, instructions, step assignee, priority, duration, date and processing preferences.
- Comments instructions.
- Attribute access and instructions, if attributes have been enabled for the Workflow Map work package.
- Item Handler operations.

For more information about **Item Handler** steps, see "Understanding Item Handler Steps" on page 17.

Note: The administrator must give you permission to create and modify **Item Handler** steps before you can add an **Item Handler** step to your Workflow Map. Also, the administrator has the ability to control which Item Handler features are available in the step. For more information about the **Item Handler** step features available in your Content Server site, contact your administrator.

Specifying General Information

The general information you can specify for **Item Handler** steps includes a step name, instructions displayed on the **General** window of the Workflow Map step page, a user or group assigned to the step (user steps can take advantage of advanced assignee options), and the following date and priority settings:

- A step priority.
- A start date, which is when you want work on the step to begin.
- The duration, which is the amount of time required to complete the step.
- Whether Content Server must recalculate the Workflow Map due dates after the step is processed.
- Whether the step must be processed by the Workflow Agent without assignee interaction.

For more information about dates and priorities, see "Understanding Dates and Priorities" on page 25.

Specifying Comments Page Instructions

If comments are enabled in the Workflow Map work package, you can provide comments that are displayed on the **Comments** page of the assignee's Workflow Map step page. For more information about defining instructions, see “Defining Instructions” on page 87.

Specifying Attribute Access and Instructions

If attributes are enabled for the Workflow Map work package, you can provide comments that are displayed on the **Attributes** window of the assignee's Workflow Map step page. Also, you can specify how each attribute is displayed and whether it can be modified on the step.

For more information about defining attribute access, see “Defining Attribute Access” on page 88. For more information about defining instructions, see “Defining Instructions” on page 87.

Specifying Item Handler Step Operations

Content Server automatically performs any of the following operations you define on the **Item Handler** tabs:

- **Folder Definitions**, which allows you to create folders in an Content Server container or in the Workflow Map attachments volume. For more information about creating folders with the **Item Handler** step, see “Creating Folders” on page 91.
- **Categories**, which allows you to add, modify, or delete categories and attributes on Content Server items or update the current value of Workflow Map attributes. For more information about using the **Item Handler** step to work with categories and attributes, see “Working with Categories and Attributes in Workflow Maps” on page 103.
- **Versioning**, which allows you to perform versioning operations on documents and compound documents. For more information about using the **Item Handler** step to perform versioning operations, see “Performing Versioning Operations” on page 98.
- **Move/Copy**, which allows you to move or copy Workflow Map attachments or Content Server items. For more information about using the **Item Handler** step to move or copy Content Server items, see “Moving or Copying Items” on page 93.

Operation Processing Order

The **Item Handler** step processes the operations in the following order:

- Folder Definitions
- Categories
- Versioning

- Move/Copy

If you specify more than one type of operation on the same step, verify that your operations do not conflict with the tab order processing. For example, you cannot create a version of a document if the document does not exist in the target location until a move or copy request on the **Move/Copy** tab is executed.

7.5.1 To Define an Item Handler Step

To define an Item Handler step:

1. In the Workflow Map Designer, double-click an **Item Handler** step.
2. On the **General** tab, specify a step name, provide instructions that will display in the **General** window, specify date and priority settings, a step assignee, and the Workflow Agent processing option, and then click **Add to Workflow Definition**.
3. Optional If attachments are enabled for the Workflow Map, click the **Attachments** tab, provide Attachments window instructions, and then click **Add to Workflow Definition**.
4. Click the **Comments** tab, provide Comments window instructions, and then click **Add to Workflow Definition**.
5. Optional If attributes are enabled for the Workflow Map, click the **Attributes** tab, provide Attributes window instructions, specify an access option for each attribute, and then click **Add to Workflow Definition**.
6. On the **Folder Definitions**, **Categories**, **Versioning**, and **Move/Copy** tabs, specify the operations you want to perform.
7. Save the Workflow Map.

For more information about Item Handler operations, see “Defining Item Handler Step Operations“ on page 91.

For information related to this procedure, see “Defining an Item Handler Step” on page 70.

7.6 Defining a Sub-Workflow Step

When you define **Sub-Workflow** steps, you must specify the following information:

- General information, which includes the step name, the Workflow Map you want to embed, an initiate name, duration, and date calculation preference.
- Data availability and mappings, which determines how work package information, such as comments, attributes, and attachments, and other data are shared between the main Workflow Map and the Workflow Map you are embedding.

For more information about **Sub-Workflow** steps, see “Understanding Sub-Workflow Steps” on page 17.

Specifying General Information

The general information you can specify for a **Sub-Workflow** step includes the following:

- The step name.
- The Workflow Map you want to embed in the main Workflow Map.
- The name assigned to an instance of the Sub-Workflow when it is initiated.
- The amount of time (duration) in which you want the Sub-Workflow to be completed (in days or hours).
- Whether Content Server should recalculate the Workflow Map due dates after the step is completed.

For more information about durations and due dates, see “Understanding Dates and Priorities“ on page 25.

Specifying Data Availability and Mappings

You must specify how the work package and other main Workflow Map data is shared with the embedded Workflow Map. For example, if the main Workflow Map contains an attribute named “Title” and the Sub-Workflow uses an attribute called “Document Name”, you can create a mapping between the attributes so that the value from the main Workflow Map is available in the embedded Workflow Map attribute. The embedded Workflow Map can modify the attribute value. Depending on the information enabled in the Workflow Map package, you can specify the availability and mappings for the following information types:

- Roles
- Attachments
- Comments
- Attributes
- Forms

Exchanging Roles

If the main and embedded Workflow Maps use roles, you can specify how a role in one Workflow Map corresponds to a role in the other by creating a role mapping. For example, if the main Workflow Map contains a role named “Manager” and the embedded Workflow Map has a similar role named “Leader”, you can create a mapping between the two roles.

Note: All roles in the main Workflow Map must be mapped to a role in the embedded Workflow Map.

Exchanging Comments

You can control whether participants in the main and embedded Workflow Map can view the comments made in either workflow.

Exchanging Attributes

You can map attributes in the main Workflow to attributes in the Sub-Workflow so that attribute values pass between the two Workflow Maps. When the Sub-Workflow ends, the values of its mapped attributes pass back to the main Workflow Map.

When you map attributes, the data type of each attribute in the main Workflow Map must be compatible with the data type of the Sub-Workflow attribute to which you map it. The Sub-Workflow must also have at least one defined attribute type.

Exchanging Attachments

If you want participants in the embedded Workflow Map to have access to the attachments in the main Workflow Map, Content Server creates a Shortcut to the Attachments folder of the main Workflow Map in the Attachments folder of the embedded Workflow Map. Items placed in the folder represented by the Shortcut during the embedded Workflow Map processing are accessible from the main Workflow Map; items outside the folder are not available in the main Workflow Map. If you select individual items, Content Server creates a Shortcut in the Attachments folder of the embedded Workflow Map.

Tip: An efficient way to organize the attachments exchanged between Workflow Maps is to create a folder that will contain only those attachments to be exchanged in the Attachments folder of the main Workflow Map, and then make that folder available in the embedded Workflow Map.

Exchanging Forms

You can map Form fields in the main Workflow Map to Form fields in the Sub-Workflow so that field values pass between the two Workflow Maps. When the Sub-Workflow ends, the values of its mapped fields pass back to the main Workflow Map.

For more information about using forms in Workflow Maps, see *OpenText Content Server - Workflow Forms (LLESFWF-UGD)*.

7.6.1 To Define a Sub-Workflow Step

To define a Sub-Workflow step:

1. In the Workflow Map Designer, double-click a **Sub-Workflow** step.
2. On the **General** tab, type the step name in the **Step Name** box.
3. Click **Browse Content Server**, locate the Workflow Map that you want to embed in the main Workflow Map, and then click its **Select** link.
4. In the **Initiate As** box, type the name applied to each Workflow Map instance based on the Sub-Workflow.
5. In the **Duration** field, click the **Days** or **Hours** radio button, type the number of days or hours needed to complete the embedded Workflow Map, and then select the **Recalculate Due Dates** check box to have Content Server recalculate the due date of the main Workflow Map at the completion of the embedded Workflow Map.
6. Click **Add to Workflow Definition**.
7. On each work package and data type tab configured for your map, specify data availability and mappings, and then click **Add to Workflow Definition**.
8. Save the Workflow Map.

To…	Do the following…
Exchange attachments between Workflow Maps	Click the **Attachments** tab, and then do one of the following: • Click the **None** radio button to prevent attachments from being exchanged. • Click the **All** radio button to exchange all attachments. • Click the **Selected Items** radio button, select the check box of the attachments you want to exchange, and then type the Shortcut name you want to use in the **Alias** box.
Automatically create a mapping between attributes with the same type and name	Click the **Attributes** tab, and then click **AutoLink**.
Exchange attributes between Workflow Map	Click the **Attributes** tab, and then in the attribute list next to each main Workflow Map attribute, click the **Sub-Workflow** attribute to which the attribute is mapped.
Share comments between Workflow Maps	Click the **Comments** tab, and then select the **Comments pass from main workflow to sub-workflow** check box, select the **Comments pass from sub-workflow to main workflow** check box, or both.

To…	Do the following…
Map roles between Workflow Maps	Click the **Roles** tab, and then in the list next to each Sub-Workflow role, click the main Workflow Map role to which the role is mapped.

For information related to this procedure, see "Defining a Sub-Workflow Step" on page 72.

7.7 Defining a Process Step

When you define a **Process** step, you must specify the following:

- A step name
- Comments instructions
- Process step operations

Specifying Comments Page Instructions

If comments are enabled in the Workflow Map work package, you can provide comments that are displayed on the **Comments** page of Workflow Map step page. For more information about defining instructions, see "Defining Instructions" on page 87.

Specifying Process Step Operations

Content Server automatically performs any of the operations you define on the following tabs:

- **General**, which allows you to address and compose an email message that is sent when Workflow Map processing reaches the step.
- **Attachments**, which allows you to copy and rename Workflow Map attachments to a Content Server container. When you copy an attachment, you must choose whether the copied item maintains the original categories and attributes assigned to it, inherits the categories and attributes in the destination item, or has both sets of categories and attributes merged.
- **Attributes**, which allows you to choose Workflow Map attributes you want to update and provide the new values.

7.7.1 To Send an Email Message

To send an email message:

1. In the Workflow Map Designer, double-click a **Process** step.
2. On the **General** tab, specify the following information:
   - **To**, the email address of the user who will receive the message.
   - **Subject**, the email message subject.
   - **Message**, the email message.
3. Click **Add to Workflow Definition**.
4. Save the Workflow Map.

For information related to this procedure, see “Defining a Process Step” on page 76.

7.7.2 To Modify Workflow Map Attributes

To modify Workflow Map attributes:

1. In the Workflow Map Designer, double-click a **Process** step.
2. Click the **Attributes** tab.
3. For each attribute you want to modify, select the check box next to the attribute, and then specify a value in the attribute **Value** field.
4. Click **Add to Workflow Definition**.
5. Save the Workflow Map.

For information related to this procedure, see “Defining a Process Step” on page 76.

7.7.3 To Copy an Attachment

To copy an attachment:

1. In the Workflow Map Designer, double-click a **Process** step.
2. Click the **Attachments** tab.
3. Click **Add Attachment**  to create a copy request.
4. In the **File** box, click **Browse Attachments**, and then click the **Select** link of the Workflow Map attachment you want to add to this step.
5. In the **Copy to** field, click **Browse Content Server**, navigate to the location to which you want to copy the item, and then click its **Select** link.
6. Type the name under which you want Content Server to save the copy of the attachment in the **Name of Copy** box.

7. Specify the method used to process categories and attributes on the copied item.
8. Click **Submit**.
9. Click **Add to Workflow Definition**.

For information related to this procedure, see “Defining a Process Step” on page 76.

7.7.4 To Edit a Copy Attachment Request

To edit a copy attachment request:

1. In the Workflow Map Designer, double-click a **Process** step.
2. Click the **Attachments** tab.
3. Click the **Edit** link in the **Actions** column.
4. In the **Copy to** box, click **Browse Content Server**, navigate to the location to which you want to copy the item, and then click its **Select** link.
5. Type the name under which you want Content Server to save the copy of the attachment in the **Name of Copy** box.
6. Specify the method used to process categories and attributes on the copied item.
7. Click **Submit**.
8. Click **Add to Workflow Definition**.

For information related to this procedure, see “Defining a Process Step” on page 76.

7.8 Defining Links Between Steps

When you want to define the order in which Content Server executes steps, you define the execution path by defining one of the following types of links between steps:

- Serial
- Parallel
- Rendezvous
- Conditional
- Loopback
- Conditional Loopback

When you create a link between two steps, the link appears with a blue square at the start and end of the link, as well as with one or more green squares along the link. Each step has four docking points which can be used to define where a link should leave or enter a step. If the link is only dropped on the shape the Workflow Map Designer decides where the connection enters or leaves the shape. If the connection is dropped on one of the docking points the connection always enters or leave the step on this point. You can reposition the link by clicking the link and dragging any of these squares to the new location.

When you use a **Conditional** or **Conditional Loopback** link, you can set it as True or False. When you no longer need a particular link in a Workflow Map, you can delete it. For more information about links, see “Understanding Links” on page 18.

7.8.1 To Define Links Between Steps

To…	In the Workflow Map Designer, do the following…
Create a link	Place your mouse over a step and drag the arrow that appears onto the step to which you want to link. A green box appears when you place the mouse over the target step. Releasing the mouse key creates the link.
Create a link to a docking point	Place your mouse over a step and drag the arrow that appears onto the step to which you want to link. A green box appears when you place the mouse over the target step. To snap the link to one of the four docking points, drag the arrow to the middle of the top, bottom, right or left edge of the step. The green box disappears from around the target step and the docking point is highlighted when selected. Releasing the mouse key creates the link.
Set conditional links as True or False	Right-click the link and then click **True** or **False**.
Delete a link	Right-click the link you want to delete and then click **Delete**.

For information related to this procedure, see “Defining Links Between Steps” on page 78.

7.8.2 To Reposition Links and Steps

To…	In the Workflow Map Designer, do the following…
Move a link to a docking point	Click a link, select the blue square at the start or end of the link and drag it to the middle of the top, bottom, right or left edge of the step.
Reposition a link	Click a link, select any of these squares that appear and drag them until you’re satisfied with the shape of the link.
Reposition a step	Click a step and drag it to the new location. As you drag the step, a horizontal and vertical ruler appears to help you align the step with steps in the Workflow Map Designer.

For information related to this procedure, see “Defining Links Between Steps” on page 78.

7.9 Working with the Expression Builder

The Expression Builder allows you to build conditional statements and complex expressions to do the following:

- Specify how the **Evaluate** step routes the Workflow Map.
- Conditionally assign a **User** or **Form** step.

For example, if an earlier **User** step in a Workflow Map has a high priority, you can define an expression in an **Evaluate** step that routes the Workflow Map along the true path to another **User** step. If the step has a medium or low priority, you can define an expression that routes the Workflow Map along the false path to an **Initiator** step. You can define expressions based on the following criteria:

- General, which is the status of the previous step, the last **Milestone** step, or the Workflow Map in general (valid status values are OK, Step Late, Milestone Late, and Workflow Late).
- Priority, which is the priority of any previous **User** step that has a priority.
- Disposition of an earlier step.
- Attributes, which are the Workflow Map attribute values. The Attributes option appears only if one or more attributes are defined for the Workflow Map.
- Forms, which are fields values in a Form added to the work package or in a **Form** step.

For more information about Evaluate steps, see “Defining an Evaluate Step” on page 68. For more information about User steps, see “Defining a User or Initiator Step” on page 60. For more information about using dispositions, see “Understanding User and Initiator Steps” on page 11. For more information about attributes, see “Defining Attributes” on page 44.

Note: The Executing status returns Workflow Maps and Sub-Workflow Maps that have a status of Executing. The OK status returns Workflow Maps and Sub-Workflow Maps that are executing and not late.

You can use left and right parentheses to define complex expressions. For example, the following expression evaluates to true if the Workflow Map status is OK and an attribute named “Title” contains the word `Research`, but not if an attribute named “Author” contains the name `Smith`.

1

You can also define complex expressions using the following search elements:

- Value Delimiters
  - = (Equal to)
  - <> (Not equal to)

    - < (Less than)
    - > (Greater than)
- Text Delimiters
    - `starts with`
    - `ends with`
    - `contains`
    - `is empty`
    - `is undefined`
- Statement Delimiters
    - `AND`
    - `OR`
    - `AND NOT`
    - `OR NOT`

7.9.1 To Define An Expression

To define an expression:

1. Double-click an **Evaluate**, **User**, or **Form Task** step.
2. If you double-clicked a **User** or **Form Task** step, click the **Assignees** tab.
3. Click **Expression Builder** .
4. Click a Workflow Map search criterion or parenthesis (if you are creating a complex expression) in the **Add New Row** list.
5. Specify the expression using the Expression Builder.
6. Optional To specify other criteria, repeat steps 2 and 3.
7. Click **Submit**.

For information related to this procedure, see “Working with the Expression Builder” on page 80.

7.10 Using Dynamic Replacement Tags

You can use dynamic replacement tags in a Workflow Map to individualize initiated Workflows.

Example: Place the <Initiator /> tag in the title of a Workflow so that it appears as "John's Workflow Map" after initiation, by typing <Initiator />'s Workflow Map in the Workflow Map's **Title** field on the **General Settings** page.

The following dynamic replacement tags are available:

<Initiator />
Shows the Initiator's display name.

<InitiatedDate />
Shows the date when the Workflow is initiated.

<InitiatorMail />
Shows the Initiator's email address.

<WorkflowTitle />
Shows the Workflow title.

<WorkID />
Shows the Workflow's number.

<ParentTitle />
Shows the title of a Sub-Workflow's main Workflow.

<SubInitiatedDate />
Shows the date when a Sub-Workflow is initiated.

<SubWorkTitle />
Shows the Sub-Workflow title.

<DataType_1_3_AttrName />
This is a multi-value attribute data type substitution tag. For example, if you have an attribute named Languages that is assigned the values French, German, and English, you can use it in the same way that other tags are used. The syntax for a single value attribute is the same: <DataType_1_3_AttrName />.

Tag	Result
<DataType_1_3_Languages[3] />	English
<DataType_1_3_Languages[*] />	French, German, English
<DataType_1_3_Languages />	French, German, English

Dynamic replacement tags can be typed only as shown above.

Note: <SubWorkID /> replacement tags are not currently supported.

Important

Dynamic replacement takes place at the time a Workflow is initiated, and replacement values are not updated during the course of Workflow processing, even if the base values are changed by users or system events. For dynamic replacement to succeed, the dynamic replacement tag must refer to a variable that has a value when the workflow is initiated.

Example: You use a `<DataType_1_3_AttrName />` tag in the Workflow Process Comments. The dynamic replacement does not succeed if the attribute value is null when the Workflow is started and a value is assigned to the attribute only during the course of Workflow execution. The value must exist before the Workflow is started.

The following table explains where tags can be used in main Workflows and Sub-Workflow areas:

Workflow Area	Tag
Workflow Initiation Message [1 on page 85]	• `<Initiator />` • `<InitiatedDate />` • `<InitiatorMail />` • `<WorkflowTitle />` • `<WorkID />`
Workflow Title [1 on page 85]	• `<Initiator />` • `<InitiatedDate />` • `<InitiatorMail />` • `<WorkID />`
Workflow Package Description [1 on page 85]	• `<Initiator />` • `<InitiatedDate />` • `<InitiatorMail />` • `<WorkflowTitle />`
Step Names [2 on page 85]	• `<Initiator />` • `<InitiatedDate />` • `<InitiatorMail />` • `<WorkflowTitle />` • `<ParentTitle />`[3 on page 85] • `<SubInitiatedDate />` [3 on page 85] • `<SubWorkTitle />` [3 on page 85] • `<DataType_`*`<x>`*`_`*`<y>`*`_`*`<AttrName>`*` />`

Workflow Area	Tag
User Step Instructions	• <Initiator /> • <InitiatedDate /> • <InitiatorMail /> • <WorkflowTitle /> • <ParentTitle />[3 on page 85] • <SubInitiatedDate />[3 on page 85] • <SubWorkTitle />[3 on page 85] • <DataType_<x>_<y>_<AttrName> /> • <WorkID />* * The <WorkID /> is not applied at Start step. It is only available for the general instructions and not the package instructions such as Comments, Attributes, and Attachments.
User Package Description	• <Initiator /> • <InitiatedDate /> • <InitiatorMail /> • <WorkflowTitle /> • <ParentTitle /> [3 on page 85] • <SubInitiatedDate /> [3 on page 85] • <SubWorkTitle /> [3 on page 85]
Process Comments	• <DataType_<x>_<y>_<AttrName> /> • <Initiator /> • <InitiatedDate /> • <InitiatorMail /> • <WorkflowTitle /> • <WorkID /> • <ParentTitle /> [3 on page 85] • <SubInitiatedDate /> [3 on page 85]
Process Message	• <DataType_<x>_<y>_<AttrName> /> • <Initiator /> • <InitiatedDate /> • <InitiatorMail /> • <WorkflowTitle /> • <WorkID /> • <ParentTitle /> [3 on page 85] • <SubInitiatedDate /> [3 on page 85]

Workflow Area	Tag
Process Subject	• <DataType_*<x>*_*<y>*_*<AttrName>* /> • <Initiator /> • <InitiatedDate /> • <InitiatorMail /> • <WorkflowTitle /> • <WorkID /> • <ParentTitle /> [3 on page 85] • <SubInitiatedDate /> [3 on page 85]
Item Handler Functions [4 on page 85]	• <DataType_*<x>*_*<y>*_*<AttrName>* /> • <Initiator /> • <InitiatedDate /> • <InitiatorMail /> • <WorkflowTitle /> • <WorkID /> • <SubInitiatedDate /> [3 on page 85]

[1] Available in main Workflow only, not Sub-Workflow.

[2] Applies to Start, User, Initiator, and Sub-Workflow steps.

[3] Tags available in Sub-Workflows only.

[4] Tags can be used in Item Handler fields that allow you to specify a name, including name override fields.

Working with Multi-value Attribute Data Type Substitution Parameters

Multi-value attribute data type substitution tags use the following syntax:

```
<DataType_<x>_<y>_<AttrName> />
```

where <*x*> is the type, <*y*> is the subtype, and <*AttrName*> is the name of the attribute. The value of type for all Workflow Map data packages (for example, Attachments, Comments, Attributes, and Forms) is always 1. The subtype identifies the data type. For example, the subtype value for Workflow Map Attributes is 3 and the subtype value for a Form field is 4.

Working with Form Fields

If you are working with Form fields, the multi-value attribute data type substitution tags use the following syntax:

```
<DataType_<x>_<y>_<z>_<FieldName> />
```

where <*x*> is ordinal number of the Form in the Workflow Map, <*y*> is 4, and <*z*> identifies the Form. For example, if a Workflow Map includes three Forms, the valid values for z are 1, 2, and 3. Also, if a Workflow Map contains one Form and that Form contains a field named “Author”, the data replacement tag is <DataType_1_4_1_Author />.

Chapter 8

Defining Supporting Step Information

When you define some types of steps, you can define instructions, allow step participants to view comments, and view or modify attributes displayed on the step. For more information about defining steps and links, see “Defining Steps and Links“ on page 55.

8.1 Defining Instructions

You can add instructions to **Start**, **User**, **Initiator**, **Item Handler**, and **Process** steps that explain what actions you want step assignees to complete on the **Overview**, **Comments**, **Attributes**, and **Attachments** step pages. For example, if users are required to attach a document, you can provide instructions that display a note at the bottom of the step's main and **Attachments** page. Comments, attributes, and attachments must be enabled in the Workflow Map before you can add instructions for them.

Note: The instructions you provide can include basic HTML formatting codes. If you use special characters, you may be required to use HTML character codes so that the special characters are not interpreted as HTML. For example, if you want to use less than or greater than symbols (< or >), you must enter the HTML character codes for each symbol (< or >).

8.1.1 To Define Instructions

To define instructions for…	Double-click the step, and then do the following…
The step	Click the **General** tab, and then type the instructions in the **Instructions** box.
Attachments	Click the **Attachments** tab, and then type the instructions in the **Instructions** box.
Attributes	Click the **Attributes** tab, and then type the instructions in the **Instructions** box.
Comments	Click the **Comments** tab, and then type the instructions in the **Instructions** box.

Note: You can define instructions for **Start**, **User**, **Initiator**, **Item Handler**, and **Process** steps.

For information related to this procedure, see “Defining Instructions” on page 87.

8.2 Allowing Users to View Comments

If you enable comments in the Workflow Map's “Defining General Properties” on page 37, step assignees can add comments about the work they are performing to the step's **Comments** tab. By default, **User** and **Initiator** step assignees cannot view comments made on steps not assigned to them, but you can allow them to view all Workflow Map comments. For more information about general properties, see “Defining General Properties” on page 37.

8.2.1 To Allow Users to View Comments

To allow users to view all comments:

1. Double-click a **User** or **Initiator** step.
2. Click the **Permissions** tab.
3. Select the **See all comments** check box.
4. Click **Add to Workflow Definition**.

Note: If the **Single Page View** check box is selected in the **General** tab, ensure the **Comments** package is listed in the **Display Packages** area.

For information related to this procedure, see “Allowing Users to View Comments” on page 88.

8.3 Defining Attribute Access

If you have enabled attributes in the Workflow Map, you can specify how attributes are displayed on a **Start**, **User**, **Initiator**, or **Item Handler** step's **Attribute** page. You can assign one of the following settings for each attribute:

- **Not Available**, which hides the attribute.
- **Editable**, which allows the step assignee to modify the value of the attribute.
- **Entry Required**, which requires the step assignee to modify the attribute.
- **Read Only**, which allows the step assignee to view the attribute and its value.

8.3.1 To Configure Attribute Access

To configure attribute access:

1. Double-click a **Start**, **User**, **Initiator**, or **Item Handler** step.
2. Click the **Attributes** tab.
3. For each attribute, click an access setting in the list next to the attribute.
4. Click **Add to Workflow Definition**.

Note: If the **Single Page View** check box is selected in the **General** tab, ensure the Attributes package is listed in the **Display Packages** area.

For information related to this procedure, see "Defining Attribute Access" on page 88.

Chapter 9

Defining Item Handler Step Operations

The **Item Handler** step provides a powerful environment in which you can configure Content Server operations to be automatically performed when a Workflow Map reaches the step. For more information about the **Item Handler** step, see "Understanding Item Handler Steps" on page 17.

9.1 Creating Folders

You can configure a Workflow Map to automatically create folders in a Content Server container item or the Workflow Map Attachments folder. Also, you can create a subfolder definition within a folder definition. When Workflow Map processing reaches an **Item Handler** step, it creates the folders you define on its **Folder Definitions** tab. Each request to create a folder is called a *folder definition*. Optionally, you can use folder definitions as the target and source for other **Item Handler** step operations. For example, you can configure a move or copy request in an **Item Handler** step that moves or copies a Content Server item into a folder created as a result of a folder definition. For more information about configuring the **Item Handler** step to move or copy items, see "Moving or Copying Items" on page 93. After you create a folder definition, you can modify it.

Notes

- The **Item Handler** step may not process folder definitions in the order that they appear on the **Folder Definitions** tab.
- Folders created by the **Item Handler** step do not inherit the Categories of the Content Server container in which they are created. For more information about Content Server Categories and Attributes, see *OpenText Content Server - Working with Categories and Attributes (LLESWAT-UGD)*.

Working with Existing Folders

You must specify how the **Item Handler** step should respond if it encounters an existing folder with the same name as the one to be created in a folder definition. You can choose one of the following actions:

- **Reuse existing folder of same name**, which indicates that the step will use the existing folder rather than create a folder.
- **Create new folder with appended number**, which creates the folder and appends a number (the system starts numbering at 2 and increments by 1) to make a unique folder name.

Choosing the Folder Target

The folder target is the location where you want the **Item Handler** step to create a folder. A folder target can be any of the following:

- The Workflow Map Attachments folder or a folder in the Workflow Attachments folder.
- A Content Server container, such as a workspace, project, or folder.
- A folder definition defined on the same step.
- An Item Reference attribute that refers to a Content Server container.

Notes

- Folder definitions are available as targets only when you have one or more folder definitions defined for the same step.
- An Item Reference attribute is available as a target only if you have configured one or more attributes that refer to a Content Server container for the Workflow Map. Also, an Item Reference attribute specified as a target cannot contain more than one value.

9.1.1 To Add or Modify a Folder Definition

To add or modify a folder definition:

1. Double-click an **Item Handler** step.
2. Click the **Folder Definitions** tab.
3. Do one of the following:
   - Click **Add Folder Definition** to create a folder definition.
   - Click a folder definition name link to edit the folder definition.
   - Click the **Add Sub-folder** link to create a folder within a folder.
4. Type the name of the folder in the **Name** box.
5. In the **Name Collision Option** region, click the radio button of the action to perform if an existing folder is found.
6. In the **Target** section, do one of the following to specify where to create a folder:
   - Click the **Workflow Attachment** radio button, click **Browse Attachments** to browse the Workflow Map Attachments volume, and then click the **Select** link for the folder where the folder will be created.
   - Click the **Content Server Container** radio button, click **Browse Content Server** to browse Content Server, and then click the **Select** link for the container where the folder will be created.

- Click the **Folder Definition** radio button, click **Browse Folder Definitions** to browse the folder definitions you have configured on the **Folder Definitions** tab, and then click the **Select** link for a folder definition.
- Click the **Item Reference Attribute** radio button, and then click the Item Reference attribute in the list that refers to the Content Server container where the folder will be created.

7. Click **Add** or **Update**.

Tip: You can create multiple folder definitions within an **Item Handler** step.

For information related to this procedure, see "Creating Folders" on page 91.

9.2 Moving or Copying Items

You can configure a Workflow Map to automatically move or copy Content Server items and Workflow Map attachments to a Content Server container, such as a folder or project. When Workflow Map processing reaches an **Item Handler** step, it moves or copies attachments and items based on the requests you define on its **Move/Copy** tab, which are called *move or copy definitions*. After you create move or copy definitions, you can modify them if you want to change them.

A move or copy definition is comprised of two parts: the Move/Copy source, which is the item you want the **Item Handler** step to move or copy, and the Move/Copy target, which is the Content Server container where you want the **Item Handler** step to move or copy the source item.

The source can be any of the following:

- A Workflow Map attachment, including the Workflow Map Attachments folder.
- A Content Server item.
- A folder definition defined on the same step. For more information about folder definitions, see "Creating Folders" on page 91.
- An Item Reference attribute that refers to a Content Server item.

The target can be any of the following container items:

- The Workflow Map Attachments folder or a folder in the Workflow Map Attachments folder.
- A Content Server container item, such as a workspace, project, or folder.
- A folder definition defined on the same step.
- An Item Reference attribute that refers to a Content Server container item.

Notes

- Folder definitions are available only if you have one or more folder definitions defined for the same **Item Handler** step.

- An Item Reference attribute is available as a target only if you have configured one for the Workflow Map.

Specifying Source Options

You can specify the way the step moves or copies a container item, and how it names the items it creates as a result of the request.

Working with Workspaces as Sources

You cannot move or copy the Enterprise Workspace or Personal Workspace, but you can select them as sources in an **Item Handler** step move or copy request if you want to perform operations on their contents only. For example, if you select the Personal Workspace as the source item in a move or copy request and specify that you want the operation to apply to only the items it contains (but not the Personal Workspace itself), the **Item Handler** step will move or copy the contents of the Personal Workspace to the target container you specify.

Working with the Workflow Map Attachment Folder as a Source

You can specify the Workflow Map Attachments folder in an **Item Handler** step move or copy request, but the move operation produces the same result as a copy operation. The Workflow Map Attachment folder is a fixed container available for all Workflow Maps, so Content Server does not permit you to move it. If you specify the Workflow Map Attachments folder as the source item in a move request, the system creates a copy of the Workflow Map Attachments folder in the container item you specify.

Working with Container Contents

If the source item is a Content Server container, such as a folder or workspace, you can specify that only the contents of the container be moved or copied.

Renaming a Moved or Copied Item

You can specify a different name for the item being created by the move or copy operation.

Note: You cannot rename Content Server items if you choose to move or copy the contents of a container.

Synchronizing Containers

If you are moving or copying a container item, you can have the target container's contents synchronized. This ensures that the latest version of each item that exists in both the source and target containers are added to the target container. For example, if a document exists in the source and target location, the source document will be added as a new version of the target document. In addition, any document that exists in the source container but does not exist in the target location is either moved or copied to the target location, depending on the transfer operation you specify.

Creating Major Versions of Documents

You can configure a move or copy request to create major versions of documents that use advanced versioning in the target container, as long as your request includes the following operations:

- Synchronizing containers
- Moving or copying container contents only

For example, imagine that you want to synchronize the contents of two folders, named “Folder 1” (the source container) and “Folder 2” (the target container) that contain among other items a document named “FinalReport” that uses advanced versioning. If you configure the move or copy request to create major versions, the system adds the current version of “FinalReport” in “Folder 1” as a major version of “FinalReport” in “Folder 2” each time the step is processed.

Specifying Permissions

You must choose one of the following methods to indicate what permissions are assigned to moved or copied items:

- **Original**, which maintains the permissions found on the source item.
- **Destination**, which causes items to inherit the permissions found on the target container.

Note: When using the **Item Handler** step to move a folder within the Workflow package to a folder inside the Enterprise Workspace using the **Destination** permissions option, the **Item Handler** step will only inherit permissions to the first folder level.

For more information about permissions, see *OpenText Content Server - Get Started (LLESRT-UGD)*.

Managing Categories

You must choose one of the following methods to indicate how Content Server Categories and Attributes are managed on moved or copied items:

- **Original**, which maintains the categories found on the source item.
- **Destination**, which causes items to inherit the categories found on the target item.
- **Merged**, which combines the categories found on the source item with the categories found on the target item.

Note: If a category exists on the source item and the target item, the source category replaces the target category.

For more information about categories and attributes, see “Working with Categories and Attributes in Workflow Maps” on page 103.

Working With Multiple Value Item Reference Attributes

If the Workflow Map contains an Item Reference attribute, you may be able to use it as a source or target in move or copy requests. However, you cannot use multiple value Item Reference attributes as the source and target in the same request. For example, if you specify an Item Reference attribute that contains references to five documents and choose a folder as the target, the step moves or copies the five documents into the target folder. If you specify the same Item Reference attribute as the source, but then specify another Item Reference attribute that refers to multiple folders as the target, an error will occur.

Also, if you specify a multiple value Item Reference attribute as the target in a move request, the source item will be moved to each item referred to by the source attribute until it reaches the last item where it will be stored. For example, if you specify a document as the source and an Item Reference attribute that refers to three folders as the target, the step first moves the document to the first folder, then immediately moves it to the second folder, and then finally moves the document to the third folder before step processing is complete. The document's audit trail will show that it was moved to each of the folders and each folder will reflect an update, but only the third folder contains the source document.

For more information about Item Reference attributes, see “Defining Attributes” on page 44.

Copying Attachments with a Process Step

You can use the **Process** step to copy a Content Server Attachment to a Content Server Container. You specify the attachment and the Content Server container on the step's **Attachments** tab.

You must specify the permissions to use when creating the copied item in the Content Server Container.

Note: OpenText strongly recommends that you use the **Item Handler** step to copy attachments. You can copy attachments using the **Process** step, but the **Process** step may not be supported in future releases.

9.2.1 To Add or Modify a Move or Copy Definition

To create or modify a move or copy definition:

1. Double-click an **Item Handler** step, and then click the **Move/Copy** tab.
2. Do one of the following:
   - Click **Add Move/Copy Definition** to add a move or copy definition.
   - Click the **Edit** link next to the move or copy definition that you want to modify.
3. In the **Source** section, do one of the following to specify the item to move or copy:
   - Click the **Workflow Attachment** radio button, click **Browse Attachments** to browse the Workflow Map Attachments folder, and then click the **Select** link for a Workflow Map attachment or folder.
   - Click the **Content Server Item** radio button, click **Browse Content Server** to browse Content Server, and then click the **Select** link for a Content Server item.
   - Click the **Folder Definition** radio button, click **Browse Folder Definitions** to browse the folder definitions on the **Folder Definitions** tab, and then select click the **Select** link for a folder definition.
   - Click the **Item Reference Attribute** radio button, and then click the Item Reference attribute in the list that identifies the item.
4. In the **Target** section, do one of the following to specify the location where the item is to be moved or copied:
   - Click the **Workflow Attachment** radio button, click **Browse Attachments** to browse the Workflow Map Attachments folder, and then click the **Select** link for a Workflow Map attachment or folder.
   - Click the **Content Server Container** radio button, click **Browse Content Server** to browse Content Server, and click the **Select** link for a Content Server container.
   - Click the **Folder Definition** radio button, click **Browse Folder Definitions** to browse the folder definitions on the **Folder Definitions** tab, and then click the **Select** link for a folder definition.

     Note: The **Folder Definition** radio button is available only if you have one or more folder definitions defined for the step. For more information about configuring folder definitions, see “Creating Folders” on page 91.
   - Click the **Item Reference Attribute** radio button, and then click the Item Reference attribute in the list that identifies the item.

5. In the **Transfer Type** area, click the radio button next to the type of operation to perform.
6. In the **Permissions** area, specify the permissions applied to the moved or copied item.
7. In the **Categories** area, specify how categories are processed on the moved or copied item.
8. Click **Add** or **Update**.

Tip: To select all attachments, click the **Select** link for the **Attachments** list.

To…	Do the following…
Move or copy only the contents of a container	Select the **Contents ONLY** check box.
Rename the moved or copied item	Select the **Rename source to** check box, and then type a name to apply to the moved or copied item.
Synchronize the target container contents with the source container contents	Select the **Synchronize Container contents** check box.
Create major versions of documents in the target container	Select the **Create major Version** check box. You can select this check box only if you have also selected the **Synchronize Containers contents** and **Contents ONLY** check boxes.

For information related to this procedure, see "Moving or Copying Items" on page 93.

9.3 Performing Versioning Operations

You can configure your Workflow Map to automatically perform versioning operations on documents or compound documents in Content Server or the Workflow Map Attachments folder. When Workflow Map processing reaches an **Item Handler** step, it performs the versioning operations you define on its **Versioning** tab. For example, if you add a document to the Workflow Map Attachments folder and that document is modified during Workflow Map execution, you can configure the step to return the modified document as a version of the original document.

For documents and compound documents added to Workflow Maps as attachments from Content Server, the step can perform versioning operations on the original Content Server items in a global manner, using the Workflow Map attachments as the sources. Also, the step can perform versioning operations on specific documents or compound documents added as Workflow Map Attachments or stored in Content Server. In both cases, for any explicitly specified versioning option that involves a document, the step always implicitly creates a version of the document.

In addition, you can configure the step to create any of the following:

- Generations of documents or compound documents
- Revisions or releases of compound documents
- Major versions of documents that use advanced versioning

Also, you can unreserve the original documents or compound documents.

For more information about versioning documents and compound documents, see *OpenText Content Server - Documents and Text Documents (LLESWBD-UGD)* and *OpenText Content Server - Documents and Text Documents (LLESWBD-UGD)*.

Notes

- You cannot create a generation of a compound document that does not have a release or revision.
- When you manually make a generation of a document or compound document in Content Server, you must explicitly specify the target location where the generation will be created. The **Item Handler** step, however, creates the generation in the container in which the selected target item is stored.

Working With Compound Documents

When you perform operations on compound documents, the **Item Handler** step performs operations on elements that have identical names. For example, if a source compound document named “MyDocuments” contains “DocumentA.doc”, “DocumentB.doc”, and “DocumentC.doc”, and the target is a compound document with the same name that contains “DocumentA.doc”, “DocumentB.doc”, and “DocumentX.doc”, the step performs the versioning request on “DocumentA.doc” and “DocumentB.doc”, but ignores “DocumentC.doc” and “DocumentX.doc”.

If you want to create a version of “DocumentX.doc” using “DocumentC.doc”, you can specify that operation as a specific target.

Creating Major Versions

When you use the **Item Handler** step to create versions of a document, you can configure the step to create a major version if the document uses advanced versioning. The document you specify as the source in a major versioning request can use either standard or advanced versioning, but the document identified as the versioning target must use advanced versioning. If you configure the step to add a major version to a document that uses standard versioning, the **Item Handler** step ignores the major versioning request and creates a standard version.

For example, if Document A uses advanced versioning and Document B uses standard versioning, you can add Document B as a major version of Document A. However, if you want to add Document A as a version of Document B, the **Item Handler** step can add Document A as a standard version only, because Document B does not use advanced versioning. Also, you cannot use the **Item Handler** step to change a document's versioning type.

For more information about advanced versioning, see *OpenText Content Server - Documents and Text Documents (LLESWBD-UGD)*.

By default, the advanced versioning feature is enabled in Content Server, but the feature can be disabled by the administrator. Even if the advanced versioning feature is disabled, the **Versioning** tab displays the **Create major Version** check box, which allows you to specify major version requests. If Content Server processes an **Item Handler** step that contains a major version request when advanced versioning is disabled, the system creates standard versions instead of major versions.

Note: Before the **Item Handler** step can create a major version of a document, the Content Server user account assigned to process the step must have Edit permission for the document.

Configuring Versioning Operations on Workflow Map Attachments

You specify versioning operations for the documents and compound documents you have added from Content Server to the Workflow Map Attachments folder. For all document and compound document attachments, you can specify the following options:

- **None**, to indicate that no document or compound document is returned to Content Server as a new version of the original.
- **If Modified**, to indicate that only modified documents or compound documents are returned to Content Server as new versions of the originals.
- **All**, to indicate that all documents and compound documents are returned to Content Server as new versions of the originals.

In addition, you can specify that the **Item Handler** step creates a generation of all documents and performs one of the following operations for all compound documents:

- **None**, which performs no compound document operations.
- **Make Release**, which creates a release of compound documents.
- **Make Revision**, which creates a revision of compound documents.
- **Make Generation**, which creates a generation of compound documents.
- **Make Release and Generation**, which creates a release and generation of compound documents.
- **Make Revision and Generation**, which creates a revision and generation of compound documents.

Configuring Versioning Operations on Specific Targets

You can configure the **Item Handler** step to perform versioning operations on specific documents or compound documents added as Workflow Map attachments or stored in Content Server. You configure a versioning request for each document or compound document you want to process.

A versioning request consists of the source item, which is the document or compound document that represents the version, and a target item, which is the document or compound document to which the source is applied as a version. The source and target can be any of the following:

- Workflow Map attachments
- Content Server item
- Item Reference attribute

Unreserving Targets

You can unreserve the target item if it is reserved when the operation is performed.

Creating Generations

You can make a generation of the source item in addition to a version. Also, you can specify a name for the generation by overriding the default generation name.

Creating Releases or Revisions

You can make a release or revision of a compound document source item in addition to a version or generation. If you want to override the default release or revision name, you can specify a name for the release or revision.

9.3.1 To Configure Versioning Operations on Workflow Map Attachments

To configure versioning operations on Workflow Map attachments:

1. Double-click an **Item Handler** step.
2. Click the **Versioning** tab and modify any of the settings as described in the following table.

To…	Do the following...
Create a version of a document or compound document added as a Workflow Map attachment added from Content Server	In the **Add Version to Content Server Original** list, select the versioning method.
Unreserve the original documents or compound documents	Select the **Unreserve Originals** check box.

To…	Do the following…
Create a major version of all or modified documents added as Workflow Map attachments	Select the **Create major Version** check box.
Make a generation of documents	In the **Documents** list, click **Make Generation**.
Make a release, revision, or generation of compound documents	In the **Compound Documents** list, select the type of versioning the step should perform.

For information related to this procedure, see "Performing Versioning Operations" on page 98.

9.3.2 To Configure Versioning Operations on Specific Targets

To configure versioning operations on specific targets:

1. Double-click an **Item Handler** step.
2. Click the **Versioning** tab, and then click the **Specific Targets** link.
3. On the **Specific Targets** tab, do one of the following:
   - Click **Add Versioning Definition**  to create a versioning request.
   - Click the **Edit** link to modify a versioning request.
4. In the **Source** area, specify the document or compound document on which the versioning operation will be performed.
5. In the **Target** area, specify the document or compound document on which the versioning operation will be performed.
6. Click **Add** or **Update**.

To…	Do the following…
Unreserve target items	Select the **Unreserve** check box.
Add a source document as a major version of a target document	Select the **Create major Version** check box.
Make a generation of a compound document target	Select the **Make Generation** check box, and then type the generation name in the **Override Default Generation Name** box.

To…	Do the following…
Make a release or revision of a compound document target	Click **Make Revision** or **Make Release** in the list, and then type the release or revision name in the **Override Default Release/Revision Name** box.

For information related to this procedure, see “Performing Versioning Operations” on page 98.

9.4 Working with Categories and Attributes in Workflow Maps

You can configure a Workflow Map to automatically perform category and attribute operations on Content Server items, Workflow Map attachments, Workflow Map attributes, and fields in Forms that have been added to the Workflow Map. When Workflow Map processing reaches an **Item Handler** step, it performs the category and attribute operations you define. The actions you can perform include:

- Add, delete, or modify categories and attributes on a Content Server item.
- Modify the current values of Workflow Map attributes or fields in a Form added to the Workflow Map.

The operations you define are based on a mapping between the values in a Content Server Category attribute and a Workflow Map attribute or Form field, not the attribute definitions. The data transfer actions you specify apply only to the values contained in each instance of the attribute or field. For example, imagine that a Workflow Map contains the following attribute of type Integer popup:

Name	Legal Values
Price	5, 10, 15, 20, 25, 30

Next, imagine that your Content Server contains a category attribute of type Integer popup:

Name	Legal Values
Cost	0, 10, 20, 30

You can create a mapping definition between the Price and Cost attributes, but the operations you perform can apply only to the common legal values in each attribute (10, 20, 30). You cannot specify an operation that will change the Cost attribute to accept the value 5. In addition, if the attributes do not have common values, you can define a mapping, but you cannot perform an operation between the attributes.

Set attributes can be selected in the mapping dialogs. They are displayed in the format <*SetName*>.<*AttributeName*>. Only mapping of attributes is possible. Mapping of complete sets is not supported.

Choosing Categories and Attributes and Configuring Mappings

When you want to define category operations in your Workflow Map, you must complete the following task:

- Choose the Content Server Categories with which you want to work. The categories you choose are displayed on the **Definitions** tab.

If you want to define attribute operations, you must complete these additional tasks:

- Choose the category attributes with which you want to work. You can choose one or more attribute from each category.
- Define a mapping between the category attributes you have selected and the Workflow Map attributes or Form fields.

Defining a Mapping Between Category Attributes and Workflow Map Attributes or Form Fields

After you choose the categories and attributes with which you want to work, you create a relationship between each category attribute and a Workflow Map attribute or Form field, called a *mapping*. You can select only those Workflow Map attributes or Form fields that have the same attribute type as the category attribute type. For example, if the type of category attribute is Text Popup, you can create a mapping only to those Workflow Map attributes or Form fields that are of type Text Popup.

Specifying the Item and Operation

After you have selected categories and attributes, you must specify the item on which the data transfer operation is performed and the type of operations the step will perform. The item on which the data transfer operation is performed can be one of the following:

- A Workflow Map attachment, a Content Server item, a folder created by a folder definition on the same step, or an Item Reference attribute that refers to a Content Server item.
- The Workflow Map attributes or Form fields, which causes the values of Workflow Map attributes or Form fields to be updated with the values of the category attributes to which they are mapped.

For more information about folder definitions and Item Reference attributes, see “Creating Folders” on page 91 and “Defining Attributes” on page 44.

Notes

- Folder definitions are available only if you have one or more folder definitions defined for the same **Item Handler** step.
- An Item Reference attribute is available only if you have configured one for the Workflow Map.

After you specify an item, you select the data transfer operations you want the step to perform. You can perform the following operations:

- **Update Workflow Map Attribute or Form Field Values**, which updates Workflow Map attributes or Form fields with the values of the category attributes to which they are mapped.
- **Remove Categories**, which deletes the categories and attributes you selected from the item you specify.
- **Add Categories**, which adds the categories and attributes you selected to the item you specify.
- **Set attribute values**, which updates the category attribute values with the values of the mapped Workflow Map attributes or Form fields.

For example, if you want to update a Workflow Map attribute with the value of the category attribute to which you have created a mapping, you can specify a document as the item, and then choose Workflow Map attributes as the data operation. If you want to add the categories and attributes that you have selected, you specify the document as the item, and then choose the **Add Categories** operation.

9.4.1 To Choose a Category

To choose a category:

1. Double-click an **Item Handler** step.
2. Click the **Categories** tab, and then click the **Definitions** link.
3. On the **Definitions** tab, click **Add Category** .
4. In the **Select Category** window, click the **Select** link of a category.

For information related to this procedure, see “Working with Categories and Attributes in Workflow Maps” on page 103.

9.4.2 To Choose an Attribute

To choose an attribute:

1. Double-click an **Item Handler** step.
2. Click the **Categories** tab, and then click the **Definitions** link.
3. On the **Definitions** tab, click one of the following links next to the category that contains the attribute you want to choose:
   - **Add Attributes**, to choose attributes from a category for the first time.
   - **Edit Attributes**, to modify an attribute you have already chosen.

4. In the **Select Category Attributes** window, select the check box for each attribute you want.

5. Click **Submit**.

For information related to this procedure, see “Working with Categories and Attributes in Workflow Maps” on page 103.

9.4.3 To Define an Attribute Mapping

To define an attribute mapping:

1. Double-click an **Item Handler** step.

2. Click the **Categories** tab, and then click the **Definitions** link.

3. On the **Definitions** tab, click one of the following links:

   - **Add Mapping**, to define a mapping.
   - **Edit Mapping**, to modify a mapping.

4. In the **Select Mapping Data Type** window, click the **Select** link for Workflow Map attributes or the form that contains the field to which you want to create a mapping.

5. In the **Select Mapping Field** window, click the **Select** link for the Workflow Map attribute or Form field to which you want to map the category attribute.

For information related to this procedure, see “Working with Categories and Attributes in Workflow Maps” on page 103.

9.4.4 To Specify the Item and Operation

To specify the item and operation:

1. Double-click an **Item Handler** step.

2. Click the **Categories** tab.

3. Click the **Operations** link.

4. On the **Operations** tab, do one of the following:

   - Click **Add Operation**  to specify a new item and operation.
   - Click the **Edit** link next to an item and operation definition to modify it.

5. In the **Item** section, do one of the following to specify the item on which the operation is performed:

   - Click the **Workflow Attachment** radio button, click **Browse Attachments** to browse the Workflow Map Attachments folder, and then click the **Select** link of a Workflow Map attachment.

- Click the **Content Server Item** radio button, click **Browse Content Server**, and then click the **Select** link of an item. If the target browse window displays categories, click **Content Server** in the navigation list to move to Content Server.
- Click the **Folder Definition** radio button, click **Browse Folder Definitions** to browse the folder definitions you have configured on the **Folder Definitions** tab, and then click the **Select** link of a folder definition.
- Click the **Item Reference Attribute** radio button, and then click the Item Reference attribute in the list that identifies a Content Server item.

6. In the **Update Options** area, click one of the following radio buttons to specify the data operations to be performed:
   - **Attribute or Field Values**, to update mapped Workflow Map attributes of Form fields.
   - **Item**, to update the item, and then specify which update actions the step will perform.
7. Click **Add** or **Update**.

For information related to this procedure, see “Working with Categories and Attributes in Workflow Maps” on page 103.

9.5 Using the Item Handler Browse Window

An Item Handler browse window allows you to navigate Content Server and select items used in **Item Handler** step operations. An Item Handler browse window is similar to the Content Server target browse window, which you use to navigate and select items in Content Server, the Workflow Map Attachments folder, and the Content Server Categories volume. However, an Item Handler browse window allows you to select only those items that are valid for the operation you are defining on the **Item Handler** step. Also, an Item Handler browse window uses a function-specific title when you display it. For example, if you are adding Content Server category attributes to a category and attribute operation, the window title is “Select category attributes” and the only items you can select are the attributes in the selected category. Item Handler browse windows include the following:

- **Select Folder Definition** window, which allows you to select folder definitions you have defined as a source item in a move/copy operation, a target in a category or move/copy operation, or another folder definition.
- **Select Category Attributes** window, which allows you to select attributes from the selected category to be processed in a categories and attributes operation.
- **Select Mapping Data Type** window, which allows you to select the type of attribute mapping you want to define. Content Server currently supports Workflow Map attribute and Form field mappings.
- **Select Mapping Field** window, which allows you to select the Workflow Map attribute or Form field to which the selected Content Server Category attribute is

mapped. Only those Workflow Map attributes or Form fields that are of the same type as the selected category attribute are displayed.

For more information about folder definitions and working with categories and attributes, see “Creating Folders” on page 91 and “Working with Categories and Attributes in Workflow Maps” on page 103.