

# Maintaining Workflows

5.7

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## CHAPTER 1

# About Workflows in Rhythmyx

A workflow is a business process that defines a sequence of events. Assign a workflow to a Rhythmyx application to define and control the sequence of events that occur in that application.

In Rhythmyx, a workflow consists of *States* (on page 12) (steps in the workflow processing of a content item) and *Roles* (see "[Workflow Roles](#)" on page 6) (groups of individuals who can act on content).

Assign Roles to determine which users can take action on content in each State. Define Transitions to move content from one State to another.

When you create content in a Rhythmyx application that is attached to a workflow, the content is automatically managed by the workflow. The content starts in an *Initial State*, which is the first State the content enters in the workflow. Most commonly, the Initial State is some form of draft state in which the creator actively edits the content. When the draft is complete, the creator initiates a *Transition* to a State, typically some form of approval State, in which a member of another Role reviews the content. Further Transitions may involve additional drafts and approvals. The exact pattern is defined by the combination of States, Roles, and Transitions in the workflow. Eventually, the content reaches a State where it is Publishable, meaning it is eligible to be processed by the Rhythmyx Publisher application, which delivers the final output of the content.

# Maintaining Workflows

When you start Rhythmyx Workflow Editor, Rhythmyx displays the Workflow Editor page.

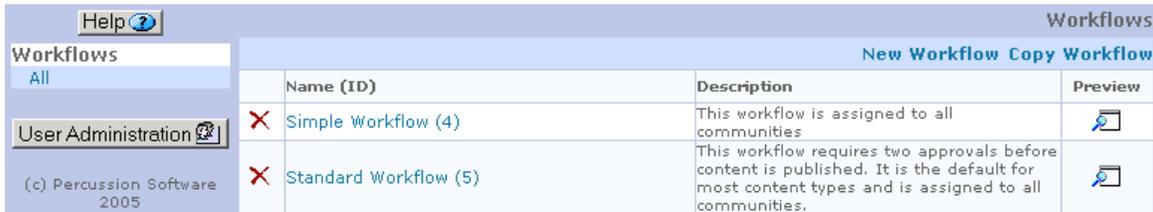


Figure 1: Workflow Editor

Each workflow item listing includes two maintenance buttons. Clicking on a button prompts Rhythmyx to perform a specific function.

Click this button...	To...
	delete the workflow item.
	preview the workflow item.

To edit a Workflow, click on its name.

---

## About the Workflow Administrator

The Workflow Administrator can edit and transition content in any state and has the ability to override the workflow process. The Workflow Administrator role gives assigned users these rights, and is otherwise like any other role.

Normally only the user who has checked out a content item may edit or check in those content items. If that user is unavailable, there is potential for a content item to get stuck in the workflow. Without administration, you would have to modify the content record in the database itself to return the content item to an accessible condition. The Workflow Administrator role assigns designated end users the power to check in content items without manually changing the database.

Any Role assigned as Workflow Administrator must include the internal Member `rxserver`. This is a special Member used in the Aging process. If the Role assigned as Workflow Administrator does not include the Member `rxserver`, Aging Transitions will not occur because Workflow authentication will fail.

---

## Workflow Maintenance Dialogs

In addition to the Workflow Editor, Rhythmyx includes two additional pages to use when maintaining Workflows:

- *Edit Workflow Page* (on page [6](#))
- *Copy Workflow Page* (on page [6](#))

## Edit Workflow Page

Use the Edit Workflow page to maintain workflows.

A new workflow does not include **States** (on page 9), **Roles** (see "Workflow Roles" on page 10), or **Notifications** (on page 10). Therefore, when Rhythmyx displays this page as the New Workflow page, the lists of States, Roles and Notifications are not included.

*Name:	Standard Workflow		
Administrator:	Admin		
Initial State:	Draft		
Description:	This workflow requires two approvals before cor		
<input type="button" value="Save"/> <input type="button" value="Cancel"/>			
<b>States</b>			
<a href="#">New State</a>			
	<b>Name (ID)</b>	<b>Description</b>	<b>Sort Order</b>
<input type="checkbox"/>	Draft (1)	Where draft content is first created	10
<input type="checkbox"/>	Review (2)	Content is reviewed here	20
<input type="checkbox"/>	Pending (4)	Items that have publishing pending	40
<input type="checkbox"/>	Public (5)	Items that are published to production server	50
<input type="checkbox"/>	Quick Edit (6)	Quick editing items from publish state	60
<input type="checkbox"/>	Archive (7)	Unpublished items are stored here	70
<b>Roles</b>			
<a href="#">New Role</a>			
	<b>Name (ID)</b>	<b>Description</b>	
<input type="checkbox"/>	Admin (1)		
<input type="checkbox"/>	Author (2)		
<input type="checkbox"/>	Editor (3)		
<input type="checkbox"/>	QA (4)		
<input type="checkbox"/>	RxPublisher (5)		
<input type="checkbox"/>	Web_Admin (6)		
<b>Notifications</b>			
<a href="#">New Notification</a>			
	<b>Subject (ID)</b>	<b>Description</b>	<b>Body</b>
<input type="checkbox"/>	Reminder Notification (1)	Notification to remind user to act on an item.	A content item has been waiting for your action.
<input type="checkbox"/>	Content archived (2)	Notification for transitions into archive state	A content item has transitioned into the archived...
<input type="checkbox"/>	Content into Review (3)	Notification for transitions into review state	A content item has transitioned into the review s...

Figure 2: Edit Workflow Page

You can access the Edit Workflow page in the following ways:

- On the Workflow Welcome page, click the Name of the workflow you want to edit;
- On the Workflow Welcome page, click Workflow in the New box.

### Edit Workflow Fields

**Name** Mandatory. The name of the workflow.

**Administrator** Optional. The **Workflow Role** (see "Workflow Roles" on page 10) defined as the Administrator of this workflow. For more about the Workflow Administrator, see About Workflow Administrator.

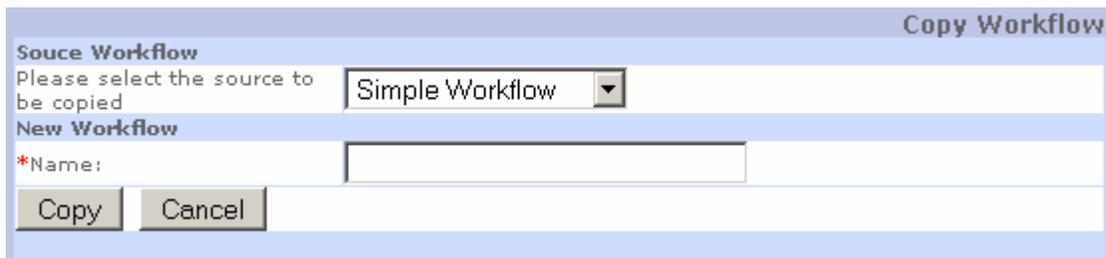
**Initial State** Read only. The numeric identifier of the first *State* (see "[States](#)" on page 10) that an item enters in the workflow. Defaults to 1.

**Description** Optional. Free-form description of the workflow.

## Copy Workflow Page

Use the Copy Workflow page to create a duplicate of an existing Workflow. The new Workflow contains all of the States, Roles, Transitions, Role assignments, and Notifications of the original, but will have a new name, which you will designate when copying the Workflow.

To access the Copy Workflow page, on the Workflow Editor, click [Copy Workflow](#).



The screenshot shows a web form titled "Copy Workflow". It is divided into two main sections. The first section, "Source Workflow", prompts the user to "Please select the source to be copied" and features a dropdown menu currently showing "Simple Workflow". The second section, "New Workflow", is labeled with a red asterisk and the text "\*Name:" followed by an empty text input field. At the bottom of the form, there are two buttons: "Copy" and "Cancel".

*Figure 3: Copy Workflow Page*

### Field Descriptions

**Source Workflow** Drop List

**New Workflow Name** Free-form name of the new Workflow.

---

# Workflow Maintenance Procedures

You can perform the following maintenance operations on Workflows:

- *Create a new Workflow* (see "[Creating a New Workflow](#)" on page 11)
- *Copy an existing Workflow* (see "[Copying a Workflow](#)" on page 11)
- *Editing a Workflow* (on page 12)
- *Deleting a Workflow* (on page 12)

You can also *View* (see "[Viewing a Workflow](#)" on page 12) any Workflow.

## Creating a New Workflow

To create a new Workflow:

- 1 Access the Workflow Editor.
- 2 Click **New Workflow**.
- 3 Rhythmyx displays the New Workflow page, which is a blank version of the Edit Workflow page.
- 4 Enter the **Name** of the new workflow and the **Workflow Administrator Role**. You can also enter a free-form **Description** of the workflow.
- 5 Click [**Save**].

Rhythmyx creates the workflow and returns to the Workflow Editor. Edit the workflow to add *States* (see "[Creating a New State](#)" on page 12) and Roles.

## Copying a Workflow

If you have an established Workflow that you know works (such as the Simple and Standard Workflows provided with FastForward), you may find it easier to create a new Workflow by copying and modifying that Workflow rather than creating a new Workflow from scratch.

To copy a Workflow:

- 1 On the Workflow Editor, click the [Copy Workflow](#) link.  
Rhythmyx displays the *Copy Workflow page* (on page 10).
- 2 In the **Source Workflow** drop list, choose the Workflow you want to copy.
- 3 In the **New Workflow** field, enter a name in the New Workflow field.
- 4 Click the [**Copy**] button.

Rhythmyx copies the Workflow and returns you to the Workflow Editor. The new Workflow includes copies of all the elements of the original Workflow (such as States, Transitions, Roles and Role Assignments, and Notifications). You can now *edit* (see "[Editing a Workflow](#)" on page 12) the new Workflow (such as adding new States and Transitions) to meet your needs.

## Editing a Workflow

A workflow consists of *States* (on page 12) and *Roles* (see "[Workflow Roles](#)" on page 13). You can add States and Roles to a workflow or delete them from the workflow.

To edit a workflow:

- 1 Access the Workflow Editor.
- 2 Click the Name of the Workflow you want to edit.
- 3 Rhythmyx displays the Edit Workflow page.

From the Edit Workflow page you can

- *add a State* (see "[Creating a New State](#)" on page 13);
- *edit a State* (see "[Editing a State](#)" on page 13);
- *delete a State* (see "[Deleting a State](#)" on page 13);
- *add a Role* (see "[Creating a New Role in Rhythmyx Workflow](#)" on page 13);
- *edit a Role*; (see "[Editing a Role in Workflow](#)" on page 13)
- *delete a Role* (see "[Deleting a Role in Workflow](#)" on page 13)
- *add a Notification* (see "[Creating a Notification](#)" on page 13);
- *edit a Notification*;
- *delete a Notification*.

## Deleting a Workflow

To delete a workflow:

- 1 Access the Workflow Editor.
- 2 Click the Delete button  in the row of the workflow you want to delete.  
Rhythmyx displays a confirmation page.
- 3 To confirm the delete action, click [OK]. To abort the delete action, click [Cancel].

## Viewing a Workflow

Rhythmx Workflow Editor can display a graphic representation of each workflow. To view the workflow graphically, click the Preview button  in the row of the workflow you want to view.

Vertical lines represent **States** (on page 13). The name of the State at the bottom of each line is a hyperlink to the Edit State page for that State. To add a new state to the workflow, click the [Add State] button.

Horizontal arrows represent Transitions. The name of each Transition is a hyperlink to the Edit Transition page for that Transition. To add a new Transition to a State, click the New Transition button  under that State. To add a new Aging Transition to a State, click the new Aging Transition button  under that State.

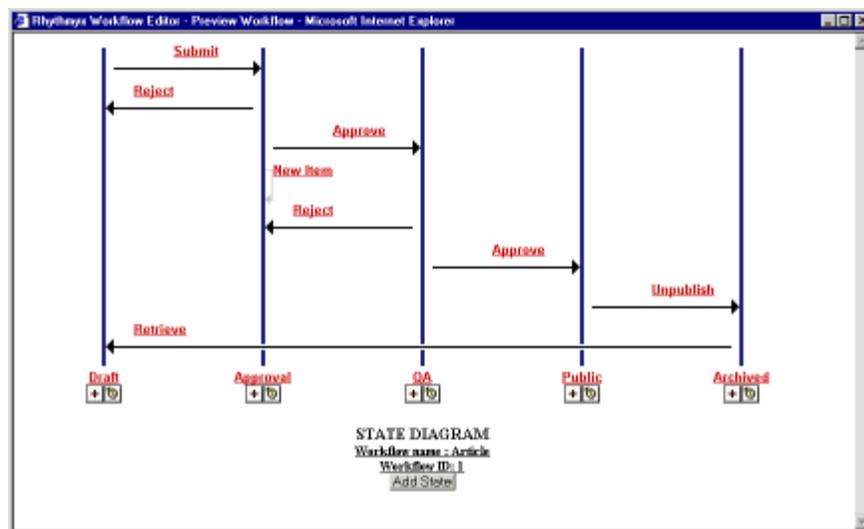


Figure 4: Workflow Preview



## CHAPTER 2

# Workflow Roles

A Role defines a group of individuals that can act on content in a State. The Roles used in a workflow may not correspond to job titles in your company. For example, if you create a marketing workflow, you might create Roles with the names Copywriter, Editor, and Approver. The individuals assigned to the Copywriter Role may carry the job title Copywriter, and the individuals assigned the Editor Role may carry the job title Editor, but the individuals assigned to the Approver Role probably don't have the job title Approver. It is more likely that they carry a job title such as Manager or Director or Vice-President.

Roles allow you define groups that correspond to the needs of the workflow, rather than constraining the workflow to the structure of your organization.

You must define Roles before you can assign them to a State.

You should create separate Roles for Communities and Workflows. You should not assign the Roles that you associate with Communities to Workflows, and you should not associate the Roles that you assign with Workflows to Communities. This allows you to create parallel Workflows, or Workflows that that apply to Content in more than one Community. To transition a Content Item, a user must be in a Role assigned to the Content Item's Community and in a Role assigned to the transition.

---

## Edit Role Page in Workflow

Use the Edit Role page to maintain Roles.



*Figure 5: Edit Workflow Role*

To access the edit Role page:

- On the Edit Workflow page, click **Role** in the New box (displays the page blank as the New Role page);
- On the Edit Workflow page, click the name the Role you want to edit;

### Edit Role Fields

**Name** Mandatory. The name of the Role you want to maintain. Roles must be defined in the Rhythmyx Server Administrator as well as in Workflow in order to function in the workflow. To access Role Maintenance in the Server Administrator, click the **User Administration**  button.

**Description** Optional. A free-form description of the Role.

---

## Creating a New Role in Rhythmyx Workflow

---

NOTE: To function properly, any Role defined in the Workflow Editor must also be defined in the Server Administrator. Defining the Role in the Server Administrator associates individual users with the Role so they can access content items. To access Role Maintenance in the Server Administrator, click the  button. For more details, see "*Maintaining Server Roles*"

---

To create a Role in Rhythmyx Workflow:

- 1 On the Edit Workflow page click **Role** in the New box.  
Rhythmyx displays the New Role for Workflow page, which is a blank version of the Edit Role page.
- 2 Enter the **Name** of the Role and optional **Description**.
- 3 Click [**Save**].

Rhythmyx adds the Role to the workflow.

---

NOTE: To allow a Workflow to apply to more than one Community, do not assign Roles associated with Communities to Workflows. The user assigned to a Workflow Role may have a separate Community Role.

---

## Roles

A Role is a collection of users or groups of users. In Rhythmyx, Roles are used to manage access to specific applications and to manage access to content items in the Workflow.

Access to applications is granted based on the Roles to which a user belongs. Organizing users into Roles helps you manage users that have the same permissions. Instead of managing the permissions for each user, you define a Role and the permissions for it, then assign users to it. Users assigned to that Role have the permissions specified for that Role. When you assign a Role to the Access Control List of an application, the users in that Role have access to that application.

In Workflow, Roles determine which users have access to a content item and can act on it when it is in a particular State. Roles also determine which users are notified when a content item makes a Transition into or out of a State.

Each Role, and each Member in a Role, has a set of properties. Properties are defined by the administrator to provide additional options for customization. For example, a Role might have the property `sys_community`. The value of this property specifies the Community to which the members of the Role belong. Rhythmyx uses this property to implement the Communities feature, filtering the content to which the user has access, the tabs on the Content Explorer that the user can see, and the Content Types and Variants available to the user.

To maintain Roles, use the Roles tab of the Security tab in the System Administrator. Two views are available. You can view a list of Roles and the Members associated with each Role (Members by Role) or you can view a list of Members and the Roles associated with each Member (Roles by Member). Select the option you want from the **View** field.

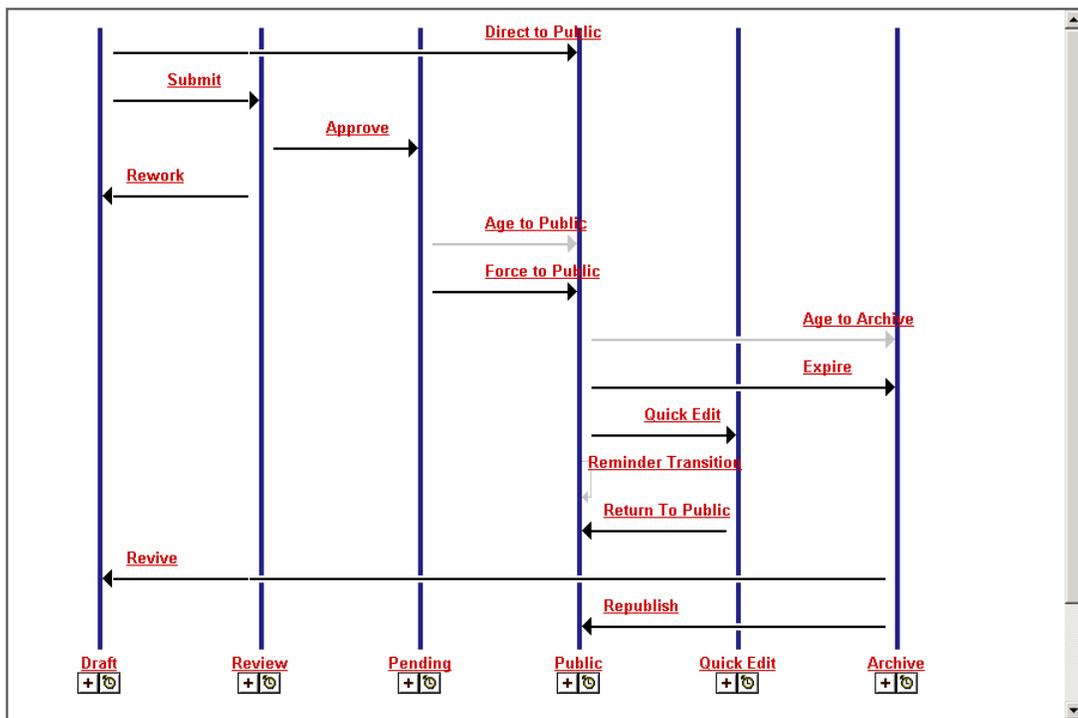


Figure 6: Edit Roles Tab in the Rhythmyx Server Administrator

## Add/Edit Role Dialog

The New Role dialog and Edit Role dialog are identical, but the Name field is unavailable when the dialog is displayed as the Edit Role dialog. Users can edit the properties associated with the Role but not the name of the Role. To change the name of the Role, you must *delete the Role* (see "Deleting a Role" on page 14) and *add a new Role* with the new name.

To access the New Role dialog, click the Security tab of the Rhythmyx Server Administrator, then click Role tab. On the Role tab, click the [Add Role] button.

To access the Edit Role dialog, click the Security tab of the Rhythmyx Server Administrator, then click the Role tab. Select the Role whose properties you want to edit and click the [Edit] button.

The screenshot shows a 'New Role' dialog box with the following components:

- Title Bar:** 'New Role' with a close button (X).
- Name Field:** A text input field labeled 'Name:'.
- Properties Section:** A table with two columns: 'Name' and 'Value'. The table is currently empty.
- Edit Value Area:** A text area labeled 'Edit Value (enter multiple values one per line)' with a vertical scrollbar on the right.
- Buttons:** 'OK', 'Cancel', and 'Help' buttons at the bottom.

Figure 7: New Role Dialog

### Field Descriptions

Name - Mandatory on New Role dialog; read-only on Edit Role dialog. The name of the Role.

Properties - Name Optional. The name of the property.

Properties - Value Read-only. The value of the property.

Edit Value - Free-form field to enter values for the selected property. Enter each separate value on a different line.

## Adding a New Role

To add a New Role:

- 1 In the Rhythmyx Server Administrator, click the Security tab along the top, then the Roles tab along the bottom.
- 2 Click [**Add role**].  
Rhythmyx displays the *Add Role dialog* (see "[Add/Edit Role Dialog](#)" on page 19).
- 3 Enter the Name of the new Role.
- 4 Add any Properties to the new Role. To add a property:
  - a) Click in an empty row under Name.
  - b) Rhythmyx displays a drop list of available properties.
  - c) Select the property you want to assign to the Role.
  - d) To add a value to the property, click in the same row under Value.
    - If values are pre-defined (see Maintaining Role and Member Property Names and Values), Rhythmyx will display the available properties in a drop list. Select the value you want to assign to the property.
    - If values are free-form, Rhythmyx will move your cursor to the Edit Value field, where you can enter the values. Enter each unique value on a separate line.
- 5 Click [**OK**] to save the new Role.

## Editing a Role

You can edit a Role to change the properties associated with that Role.

To edit a Role:

- 1 In the Rhythmyx Server Administrator, click the Security tab along the top, then the Roles tab along the bottom.
- 2 Select the Role whose properties you want to edit.
- 3 Click the [**Edit**] button.  
Rhythmyx displays the *Edit Role dialog* (see "[Add/Edit Role Dialog](#)" on page 19).
- 4 To add a property:
  - 1 Click in an empty row under Name.
  - e) Rhythmyx displays a drop list of available properties.
  - f) Select the property you want to assign to the Role.
  - g) To add a value to the property, click in the same row under Value.

- If values are pre-defined (see Maintaining Role and Member Property Names and Values), Rhythmyx will display the available properties in a drop list. Select the value you want to assign to the property.
  - If values are free-form, Rhythmyx will move your cursor to the Edit Value field, where you can enter the values. Enter each unique value on a separate line.
- 2 To delete a property, right click on the property and select *Clear* from the popup menu.
  - 3 To change the value of an existing property, click in the same row under Value.
    - If values are pre-defined, Rhythmyx will display the available properties in a drop list. Select the value you want to assign to the property.
    - If properties are free-form, Rhythmyx will display the current value of the property in the **Edit Value** field, with the cursor at the end of the last value. You can add a new value on a new line or modify or delete an existing value.
  - 4 Click [OK] to save your changes.

## Deleting a Role

When you delete a Role, you delete all Member associations with that Role.

To delete a Role:

- 5 In the Rhythmyx Server Administrator, click the Security tab along the top, then the Roles tab along the bottom.
- 6 In the **View** field, select Members by Role.
- 7 Select the Role you want to delete. You can select multiple Roles.
- 8 Click the [**Delete**] button.
- 9 Rhythmyx displays a confirmation message. Click [**Yes**] to confirm the delete action or [**No**] to abort the delete action.

## Modify Member List for "Role" Dialog

Use the Modify Member List for <Role> dialog to *add new members to a Role*.

To access the Modify Member List for <Role> dialog, on the Roles tab of the Rhythmyx Server Administrator, select the Role whose Member list you want to modify and click [Add Members].

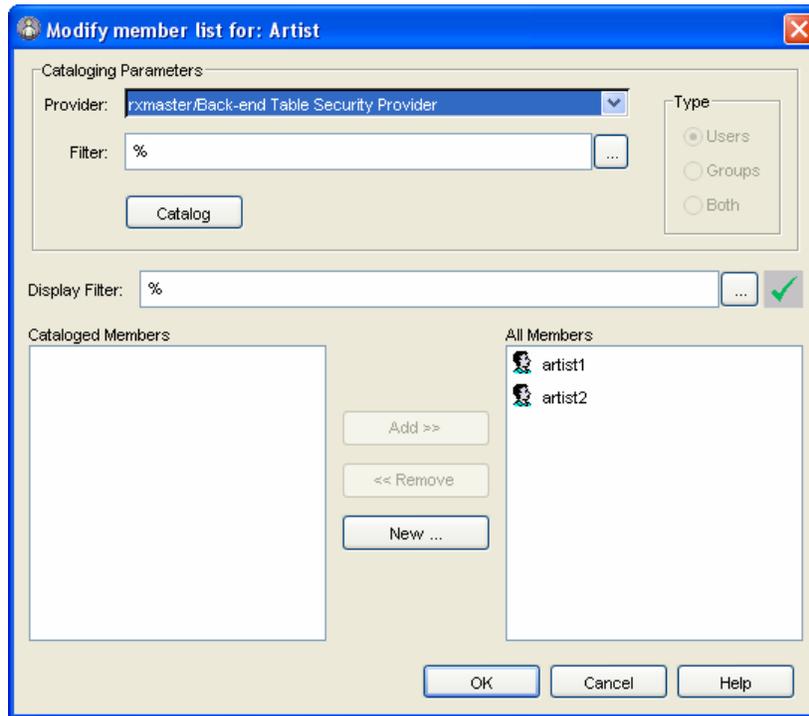
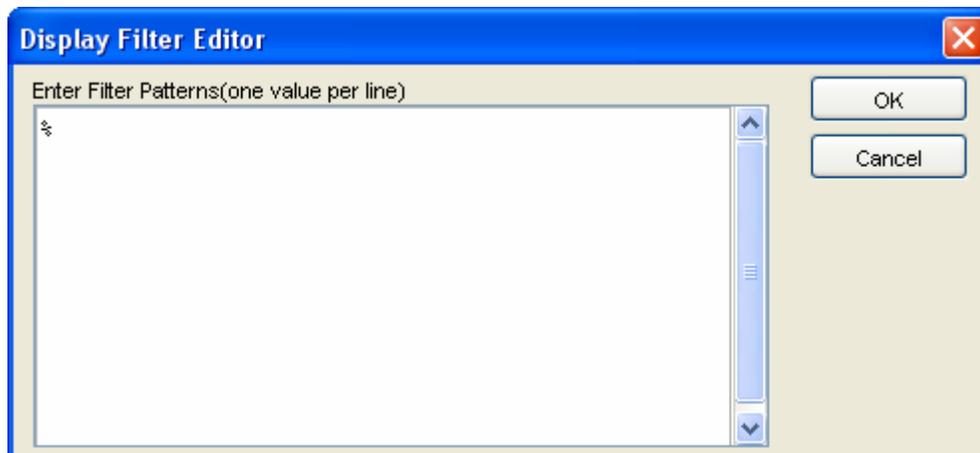


Figure 8: Modify Member List for <Role> Dialog

### Field Descriptions

**Provider** - Drop list of registered security providers.

**Filter** - Optional. Use the  button to display the Catalog Filter Editor dialog:



where you can enter one or more characters to use to filter the return from the security provider.

**Display Filter** - Optional. This field functions in the same fashion as the Filter field, but filters only the cataloged Members displays.

**Cataloged Members** - List of Members returned from the security provider.

**All Members** - List of Members assigned to the Role.

## Adding Existing Members to a Role

You can add members that already exist in a security provider to a Role. The Server Administrator includes a cataloging function that retrieves a list of users associated with a specified security provider.

To add Existing Members to a Role:

- 1 In the Rhythmyx Server Administrator, click the Security tab along the top, then the Roles tab along the bottom.
- 2 Select the Role to which you want to add Members.
- 3 Click [**Add Member(s)**].  
Rhythmyx displays the Modify Member List for <Role> dialog.
- 4 Select the security **Provider** from which you want to select Members.
- 5 Choose the Type of Member you want to add. Options are *Users* (add individual Members), *Groups* (add groups of Members) or *Both* (add both individual Members and groups of Members). NOTE: Not all security providers support Groups. If the security provider you select does not support Groups, no Groups will be retrieved.
- 6 Enter an optional Filter. Use SQL syntax to define the values. Two wildcard characters are available: % matches 0 or more characters, while "\_" matches any single character. (For example, to catalog the name admin1, you would enter *admin1*. This entry would return only admin1. If you wanted to catalog all names that begin admin, you would enter *admin%*. This entry would return *admin1*, *admin2*, etc. If you wanted to return all names that begin with "ad", you would enter *ad%*. This entry would return Adams, Adkins, admin1, admin2, etc. Similarly, if you entered *ols\_n*, Rhythmyx would return Olsen, Olson, and Olsun.

Separate multiple search values with semicolons. You can also use the Catalog Filter Editor dialog to enter a filter:

- a) Click the  button.  
Rhythmyx displays the Catalog Filter Editor dialog.
- b) Enter values. Each value should be entered on a separate line.
- c) Click [**OK**] on the Catalog Filter Editor dialog.
- 7 Click the [**Catalog**] button.
- 8 Rhythmyx displays a list of Members that matches the parameters you defined. You can define a filter for this list in the Display Filter field. The same options are available for this field as for the catalog filter. Click the  button to activate the display filter.
- 9 Select the Members you want to add and click the [**Add>>**] button.

**10** Click **[OK]** to save your edits.

## New Member Dialog

Use the New Member dialog to *add a new Member to a Role without cataloging the Member from a security provider*. The Edit Member Properties dialog is a variation of this dialog.

To access the New Member dialog, click [New] on the *Modify Member List for <Role> dialog*.

Name	Value
sys_email	amyadmin@percussion.com

Figure 9: New Member Dialog

### Field Descriptions

**Member Name** - Mandatory. The name of the Member you are adding to the Role.

**Provider** - Drop list. The security provider for the Member.

**Type** - Radio buttons. Indicates whether the new Member is a Group or an individual User.

**View** - Drop list. Specifies which properties you are viewing and editing. Options are Global (edit all Member properties) and Role (edit only properties associated with a specific Role).

**Role** - Drop list. Only available if the value of View is Role. The Role for which you are viewing and editing properties.

**Name** - The name of the property.

**Value** - The value of the property.

**Edit Value** - Free-form field to enter values for the selected property. Enter each separate value on a different line.

## Adding New Members to a Role

To add a new Member to a Role without Cataloging:

- 1 In the Rhythmyx Server Administrator, click the Security tab along the top, then the Roles tab along the bottom.
- 2 Select the Role to which you want to add Members.
- 3 Click [**Add member(s)**].  
Rhythmyx displays the Modify Member List for <Role> dialog.
- 4 On the Modify Member List for Role dialog, click the [**New**] button.  
Rhythmyx displays the Member Properties dialog.
- 5 Enter the **Name** of the new Member.
- 6 Select a security **Provider** for the new Member.
- 7 Choose the Type of new Member. Options are **Users** (individual Member) or **Group** (group of Members).
- 8 Select the Properties you want to define. Options are *Global* (properties not associated with a specific Role) and *Role* (properties for a specific Role). If you select *Role*, you must select the Role for which you want to define properties. Options for the Role field are all Roles associated with the Member. Note that any Global property will override a property of the same name from the security provider.
- 9 To select a property, click in an empty row under Name and select a property from the drop list.
- 10 To add a value to a property, click in the same row under Value.
  - If values are pre-defined, Rhythmyx will display the available properties in a drop list. Select the value you want to assign to the property.
  - If values are free-form, Rhythmyx will move your cursor to the Edit Value field, where you can enter the values. Enter each unique value on a separate line.
- 11 Click [**OK**] to save the Member record.

## Role and Member Properties

Role and Member properties provide a generic mechanism for storing information about users that Rhythmyx can use for processing. Properties may be associated with a Role globally (Role Properties), with individual users (Member Properties), or with individual users only within a specific Role (Role Member Properties).

In general, Role and Member properties are used either to customize interfaces or to facilitate interactions between the end-user and the Rhythmyx server. The Communities feature is an example of Role Properties used for interface customization. One of the Role Properties is the Community to which that Role is assigned. The content types, content items, workflows, and other interface features available to the users in a Role depend on the value of the Role Property Community. An example of a Member Property used to facilitate interaction between the server and the end-user is the Notification feature of Workflow. The user's e-mail address is defined as a Member Property, and Rhythmyx sends Notifications to this address when a content item makes a Transition into a State to which the user's Role is assigned.

## Editing a Member's Properties

To edit a Member's properties:

- 1 In the Rhythmyx Server Administrator, click the Security tab along the top, then the Roles tab along the bottom.
- 2 Select the Member whose record you want to edit.
- 3 Click the **[Edit]** button.  
Rhythmyx displays the Edit Member Properties dialog (same as New Member dialog).
- 4 Select the **Properties** you want to View. Options are *Global* (view all properties) and *Role* (view properties associated with a specific Role). Note that any Global property will override a property of the same name from the security provider.
- 5 To delete a property, right click on the property and select *Clear* from the popup menu.
- 6 To change the value of an existing property, click in the same row under Value.
  - If values are pre-defined, Rhythmyx will display the available properties in a drop list. Select the value you want to assign to the property.
  - If values are free-form, Rhythmyx will display the current value of the property in the Edit Value field, with the cursor at the end of the last value. You can add a new value on a new line or modify or delete an existing value.
- 7 Click **[OK]**.

## Deleting a Member from a Role

To delete a Member from a Role:

- 1 In the Rhythmyx Server Administrator, click the Security tab along the top, then the Roles tab along the bottom.
- 2 You have two options to delete a Member from a single Role:

- In the **View** field, select *Roles by Member*, expand the Role from which you want to delete the Member, and select the Member.
  - In the **View** field, select *Members by Role*, expand the Member you want to delete from a Role, and select the Role from which you want to delete the Member.
- 3** To delete a Member from all Roles, in the **View** field, select *Roles by Member*, then select the Member you want to delete.
  - 4** Click the [**Delete**] button.
  - 5** Rhythmyx displays a confirmation message. Click [**Yes**] to confirm the delete action or [**No**] to abort the delete action.

---

## Editing a Role in Workflow

---

NOTE: To function properly, any Role defined in the Workflow Editor must also be defined in the Server Administrator. Defining the Role in the Server Administrator associated individual users with the Role so they can access content items. To access Role Maintenance in the Server Administrator, click the  button.

---

To edit a Role:

- 1 Access the Edit Workflow page of the workflow whose Role you want to edit.
- 2 Click the name of the Role you want to edit.  
Rhythmyx displays the Edit Role page.
- 3 Make your changes. You can change the **Name** or **Description** of the Role.
- 4 Click [**Save**].

Rhythmyx saves your changes.

---

## Deleting a Role in Workflow

Deleting a Role also deletes any assignments of the Role to any States in the workflow.

To delete a Role:

- 1 Access the Edit Workflow page.
- 2 Click the Delete button  in the row of the Role you want to delete.  
Rhythmyx displays a confirmation message.
- 3 To confirm the delete action, click **[OK]**. To abort the delete action, click **[Cancel]**.

---

## Maintaining Server Roles

You must define Roles on the Rhythmyx server as well as in your Workflows in order for them to function. If you do not define the Roles on the server, Rhythmyx cannot recognize them and Workflow functionality, such as Transitions, will not be available.

To maintain Roles on the Rhythmyx server, click the **User Administration**  button. Rhythmyx pops up a browser displaying the login to the Rhythmyx Administration Console. Enter your **User ID** and **Password**, then click [**Login**]. Rhythmyx displays the Server Administrator.



## CHAPTER 3

# States

A State is a step in the workflow process of a document. While in a State, a user may be able to modify, review, or approve a document.

## Edit State Page

Use the Edit State page to maintain States.

You can access the Edit State page in the following ways:

- On the Edit Workflow page, click **State** in the New box (accesses as New State page);
- On the Edit Workflow page, click the name of the State you want to edit.

Workflows > Standard Workflow > Draft

\*Name:

Description:

Sort Order:

Publishable:

Save Cancel

Transitions		New Transition	
Label (ID)	To-state		
✗ Direct to Public (3)	Public		
✗ Submit (4)	Review		

Aging Transitions		New Aging Transition	
Label (ID)	To-state		
No entries found.			

Assigned Roles				New Assigned Role	
Role (ID)	Assignment Type	Adhoc Type			
✗ Admin (1)	Assignee	Disabled			
✗ Author (2)	Assignee	Disabled			
✗ Editor (3)	Reader	Disabled			
✗ Web_Admin (6)	Assignee	Disabled			

Figure 10: Edit State Page

### Field Descriptions

**Name** Mandatory. The name of the State.

**Description** Optional. Free-form description of the State.

**Publishable** Drop List. Indicates how to treat content in the State when Publishing content. The default installation of Rhythmyx includes the following values for this property:

Value	Processing
Unpublish	Default. Content in this State is not published, or will be unpublished the next time the Publisher runs.
Publish	Content in this State is published when the Publisher runs.

---

Value	Processing
Ignore	Do not evaluate whether content in this State is eligible to be published. If the content has already been published, it remains Public. Any links to the item will also be published. If it has not yet been published, it will remain unpublished. Links to the item also remain unpublished.

NOTE: You can extend the Publishable property by adding more values to the property. For details, see *Extending Publishable States* (on page [21](#)).

---

## Creating a New State

To create a new State:

- 1 Access the New State page.
- 2 Enter the State **Name** (required) and optional **Description**.
- 3 **Sort Order**: Enter a number to specify the position of this state name in the list of state names displayed for the workflow on the Content Explorer Workflow tab. You can use any integer. Lower numbers are higher in the list as you can see in the list of States for the Simple Workflow shipped with Fast Forward. (The sort order is used only for this list.)
- 4 **Publishable**: Choose a value from this drop list to specify what Rhythmyx should do with content items that are in this state.
  - Choose Unpublish when Rhythmyx should unpublish items in this state.
  - Choose Publish when Rhythmyx should publish items in this state.
  - Choose Ignore when Rhythmyx should not evaluate whether content in this State is eligible to be published. If the content has already been published, the last Public version remains Public. Any links to the item will also be published. If it has not yet been published, it will remain unpublished. Links to the item also remain unpublished. This is useful if an item is in the Quick Edit state; it tells Rhythmyx to ignore the Quick Edit version and to publish the last version that reached the Public state.
- 5 Click [**Save**] to add the State to the workflow.

---

## Editing a State

To edit a State:

- 1 Access the Edit State page for the State you want to edit.
- 2 You can modify any of the three fields in the State.
- 3 Click [**Save**].

Rhythmyx updates the data for the State.

---

## Deleting a State

When you delete a state, you delete all the Transitions, Notifications, and State-assigned Roles associated with the State you are deleting.

To delete a state from a workflow:

- 1 Access the Edit Workflow page for the workflow from which you want to delete a State.
- 2 Click the Delete button  the row of the State you want to delete.  
Rhythmyx displays a confirmation message.
- 3 To confirm the delete action, click **[OK]**. To abort the delete action, click **[Cancel]**.

---

## Extending Publishable States

The values of the Publishable property for States are maintained in the Rhythmyx Keyword Editor on the System tab of the Content Explorer. You can thus add more values to the Publishable property to extend it and make it more flexible.

---

**WARNING!** Do not delete the default values of this Keyword. If you delete any of these default values, Publishing will no longer work correctly.

---

These values are used in the Content List queries that extract content for Publishing from the database. The value of Publishable is stored in the STATES.CONTENTVALID column in the database. When devising the SQL query for your content list, the WHERE clause of the query must include a phrase that selects Content Items in States where the value of STATES.CONTENTVALID equals the value of the Publishable property for the State whose content you want to Publish.

For example, suppose you wanted to implement a staging area where you could evaluate content before publishing it to your live web site. You could add a new value to the Publishable property, s (for staging). You would also create a State in the Workflow (perhaps also called Staging) and would assign S as the value of Publishable for this State.

When creating a Content List to publish content from this state, the WHERE clause would include the phrase

```
WHERE STATES.CONTENTVALID='s'
```

Set the Publishable value for a State using the *Edit State Page* (on page 21). The default Publishable values are:

Value	Processing
N	Default. Content in this State is not published, or will be unpublished the next time the Publisher runs.
Y	Content in this State is published when the Publisher runs.
I	Do not evaluate whether content in this State is eligible to be published. If the content has already been published, it remains Public. Any links to the item will also be published. If it has not yet been published, it will remain unpublished. Links to the item also remain unpublished.



## CHAPTER 4

# Transitions

A Transition is a process that moves a document from one State to another State. A Transition specifies:

- when a document can move from a State;
- the new State to which the document will move.

# Edit Transition Page

Use the Edit Transition page to maintain Transitions.

You can access the Edit Transition page in the following ways:

- On the Edit Workflow page, click **Transition** in the New box (accesses as New Transition page);
- On the Edit Workflow page, click the name of the Transition you want to edit in the Transition box.

Workflows > Article > QA > Approve

ID:	5
*Label:	Approve
Description:	
*Trigger:	Approve
From-State:	QA (3)
To-State:	Public
Approval Type:	Specified Number
*Approvals Required:	1 (Required if Approval Type is set to "Specified Number")
Comment Required:	N
Default Transition:	N
Workflow Action:	None
Transition Role:	- All roles -
<input type="button" value="Save"/>	

Transition Roles  
New Transition Role

Role (ID)
<input type="checkbox"/> Editor (2)
<input type="checkbox"/> QA (3)

Transition Notifications  
New Transition Notification

Subject (Notification ID)	State Role Recipient Type	Additional Recipient List	CC List
No entries found.			

Figure 11: Edit Transition Page

## Edit Transition Fields

**ID** Display only. The identifier associated with this Transition.

**Label** Mandatory. The label for this Transition.

**Description** Optional. Free-form description of the Transition.

**Trigger** Mandatory. The pre-requisite for the Transition. Each Transition in the State requires a unique value in the Trigger field.

**From State** Display Only. The State from which the content is moving in the workflow.

**To State** Drop list. The State to which the content will move in the workflow. It is valid for a Transition to move the content to the same State as it came from. This is known as a *circular transition*.

**Approval Type** Drop List. Specifies whether the Transition requires a specific number of approvals or approvals by specified Roles before the content can make this Transition. Options are *Specified Number* (specific number of approvals required for the Transition; approvals may come from any Role assigned to the current State of the content) and *Each Role* (specific Roles must approve content before it can make this Transition).

**Approvals Required** Required if the value of **Approval Type** is *Specified Number*. Number of approvals required before the content can make this transition.

**Comment Required** Drop list. Whether the user has the option to enter a comment, or is required to make a comment when making this Transition. Choices are *Optional* (Rhythmyx displays the comment popup, but the user can choose not to make a comment), *Required* (user must enter a comment when making the Transition), and *Do Not Show* (Rhythmyx does not display the comment popup).

**Default Transition** Drop list. Specifies whether the Transition is the default Transition used when a Relationship forces a Transition from the State. Options are *No* (default; the Transition is not the default Transition) and *Yes* (the Transition is the default Transition). NOTE: Rhythmyx does not validate that a State has only one default Transition. If multiple Transitions from a State have *Yes* selected in the **Default Transition** field, Rhythmyx uses the first in alphabetical order specified as a default Transition.

**Workflow Action** Drop list. The *Workflow Action* (see "[Workflow Actions](#)" on page 40) associated with the Transition. Default is *None*. Options include all Workflow Actions registered in the system.

**Transition Role** Drop list. Specifies whether a Member of each of the Roles assigned to the State must approve the Content Item before it can make the Transition, or only a Member of specific Roles. Options are *All Roles* (a Member of each of the Roles assigned to the State must approve the content before it can make the Transition) and *Specified Roles* (a Member of each Role specified must approve the content before it can make the Transition.).

If you want to notify users when content makes the Transition, add Transition Notifications.

Transitions Roles are required if you choose *Each Role* in the Approval Type field and *Specified Roles* in the Transition Role field for the Transition. Note that Rhythmyx does not preserve approvals. For example, suppose you have a Transition "Ready for Publish" from the QA State to the Public State, and this Transition requires approval from three Roles, QA, Editor, and Legal Reviewer. The QA and Editor Roles approve the Content Item, but the Legal Review Role rejects it, sending it back to a previous State. When the Content Item returns to the QA State, Rhythmyx does not remember that QA and Editor already approved it. They will have to approve it again before it can make the "Ready for Publish" Transition.

---

## Creating a New Transition

To create a new Transition:

- 1 Access the New Transition page.
- 2 Enter the **Label** (name) of the Transition (this field is mandatory) and **Description** of the Transition.
- 3 Enter a **Trigger** for the Transition. A Trigger is a string Rhythmyx uses to start processing the Transition and is mandatory.
- 4 Select the State the document will move to in the Transition **To State** field.
- 5 Choose the **Approval Type**. Options are *Specified Number* (specific number of approvals required for the Transition; approvals may come from any Role assigned to the current State of the content; if you choose this option, you must specify the number of **Approvals Required**) and *Each Role* (specific Roles must approve content before it can make this Transition; you must specify the Roles the must approve the content).
- 6 If you chose *Specified Number* in the **Approval Type** field, enter the number of **Approvals Required** for the Transition.
- 7 Select an option for **Comment Required**. Choices are *Optional* (Rhythmyx displays the comment popup, but the user can choose not to make a comment), *Required* (user must enter a comment when making the Transition), and *Do Not Show* (Rhythmyx does not display the comment popup).
- 8 If **Workflow Actions** are available, select the action you want to associate with the Transition.
- 9 If you chose *Each Role* in the **Approval Type** field, choose the **Transition Roles** option for the Transition. Options are *All Roles* (default; a Member of each of the Roles assigned to the State must approve the Transition) and *Specified Roles* (a Member of each Role specified must approve the content before it can make the Transition.).
- 10 If you chose *Each Role* in the **Approval Type** field and *Specified Roles* in the **Transition Roles** field, you must add **Transition Roles** (see "[Maintaining Transition Roles](#)" on page 44).
- 11 Add **Transition Notifications** (see "[Notification Assignment](#)" on page 45), if necessary.
- 12 Click [**Save**].

---

## Editing a Transition

To edit a Transition:

- 1 Access the *Edit Transition page* (on page [42](#)) for the Transition you want to edit.
- 2 Make your changes. The **Label**, and **Trigger** fields are mandatory. You cannot change the **ID** or **From State**, but can change all other fields, as well as add or delete Transition Roles and add, modify, or delete Transition Notifications.
- 3 Click [**Save**] to save your changes.

---

## Deleting a Transition

To delete a Transition:

- 1 Access the Edit Workflow page of the workflow from which you want to delete the Transition.
- 2 Click the Delete button  of the row of the Transition you want to delete.  
Rhythmyx displays a confirmation message.
- 3 To confirm the delete action, click **[OK]**. To abort the delete action, click **[Cancel]**.

---

## Maintaining Transition Roles

If you define a Transition to require approvals by specified Roles (in other words, if you chose *Each Role* in the **Approval Type** field and *Specified Roles* in the **Transition Roles** field, you must add Transition Roles to the Transition to specify the Roles that must approve the Content.

To add a Transition Role:

- 1 Click Add Transition Role.
- 2 Rhythmyx displays the Add Transition Role page.
- 3 Choose the **Role** you want to add. Options are all Roles in the Workflow not currently assigned as Transition Roles to this Transition.
- 4 Click [**Save**].

To delete a Transition Role, click the delete button  in the row of the Transition Role you want to delete.

## Aging

Aging is a Rhythmyx Workflow feature that defines the amount of time a content item can reside in a State before Rhythmyx automatically acts on it.

To implement Aging, you assign special Aging Transitions to a State where you want Aging process to take place. When you define the Transition, you specify the type of Aging processing you want to use for the State.

- **Repeated**

A Repeated Aging Transition repeats after an interval specified in the Transition. Repeated Aging Transitions are most commonly used to send the same reminder Notification each time a specified period has passed. To work correctly, the To State of the Transition must be the same as the From State. If the To State of the Transition is different than the From State, the content item will Transition to the new State and the Aging will not repeat.
- **Absolute**

An Absolute Aging Transition occurs once, after a specified period of time has passed. Absolute Aging Transitions are typically used to send escalating reminder Notifications before automatically Transitioning to a new State.
- **System Field**

A System Field Transition occurs once after the specified system date (Start Date, End Date, Reminder Date) passes.

Typically, an Aging Transition also sends an e-mail message that notifies the users in the Role assigned to the Transition that the content item has aged and that some action is necessary.

## Aging Prerequisites

In order for Aging to function, you must complete the following prerequisites:

- Set the mail host and mail domain in the `rxworkflow.properties` file.
- Define user e-mail addresses. User e-mail addresses are specified on the ***user's Member Properties in Role Maintenance*** (see "[Editing a Member's Properties](#)" on page 27). Use the Global property `sys_email` to define the user's e-mail address. The [User Administration](#)  button activates the Role Maintenance dialog of the Server Administrator. The sender of aging e-mail messages is the user `rxserver`. The e-mail address you define for `rxserver` should be the address of the person that should receive notifications of bounced e-mail messages.
- Activate Notification for the Role assignments to each State in which Aging will occur. To activate Notification, set the value of the Notify field on the Role Assignment page to *Y*. Leave notification off for any Role that should not receive notification e-mail messages. For example, the Workflow admin Role generally does not need to receive Aging e-mail messages.

## Setting Aging Agent Parameters

The Java class `com.percussion.server.agent.PSAging` is the Rhythmyx Aging agent and executes the Aging function. The registration entry of this agent in the `agentmanager.xml` (`Rhythmyxroot/rxconfig/Server/requestHandlers /agentmanager.xml`) defines how often Rhythmyx will poll for Aging Transitions.

The default entry for this agent is:

```
<agent name="aging" servicetype="scheduled">
  <class>com.percussion.server.agent.PSAging</class>
  <schedule delay="600" interval="600"/>
</agent>
```

The `<delay>` attribute of the `schedule` element defines the initial delay, the number of seconds after the server starts that must pass before the Aging agent executes the first Aging task. This delay is required to allow all Rhythmyx applications to start. The `<interval>` attribute of the `schedule` element defines the amount of time, in seconds between each execution of the Aging task. The default values specify that the Aging agent makes its first Aging ten minutes after the server starts, and will repeat the poll every ten minutes.

To change the frequency of polling for Aging Transitions, change the value of the `interval` attribute and save the `agentmanager.xml`. To change the amount of time available for your server to complete initialization before polling begins, change the value of the `delay` attribute.

## Creating an Aging Transition

Aging is associated with the Transitions defined for a State. An aging Transition is a Transition that will occur automatically after a specified period if another Transition has not occurred.

In some cases, you may need to define more than one Transition to make your Aging scenario function. For more information, see "*Aging Scenarios* (on page 49)".

To define an Aging Transition:

- 1 In the Rhythmyx Content Explorer, click the **Workflow** tab.  
Rhythmyx displays the Workflow Editor.
- 2 Click on the name of the Workflow to which you want to add an Aging Transition.  
Rhythmyx display the Edit Workflow page.
- 3 Click on the name of the State to which you want to add a Transition.  
Rhythmyx displays the Edit State page.
- 4 Click **New Aging Transition**.

Rhythmyx displays the New Aging Transition page.

ID:	5
*Label:	Age to Public
Description:	ages content to public
*Trigger:	AgeToPublic
From-State:	Pending (4)
To-State:	Public
Workflow Action:	sys_TouchParentItems
Aging Type:	System Field
Aging Interval(min):	(Required for Absolute and Repeated Aging Types)
System Field:	Start Date (Required for System Field Aging Type)
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	
Transition Notifications	
New Transition Notification	
Subject (Notification ID)	State Role Recipient Type Additional Recipient List CC List
No entries found.	

Figure 12: New Aging Transition Page

- 5 Enter the **Label** (name for the Transition; this field is mandatory) and **Description** of the Transition.
- 6 Enter a **Trigger** for the Transition. A Trigger is a string Rhythmyx uses to start processing the Transition and is mandatory.
- 7 Select the State the document will move to in the Transition **To State** field. The To State may be the current State or it may be another State in the Workflow.
- 8 Select the **Aging Type**. Options are:
  - *Absolute*: The Transition will happen after a specified period of time (defined in the **Aging Interval** field) has passed, unless another Transition occurs that supersedes this Transition or moves the content item to another State.
  - *Repeated*: The Transition will repeat each time a specified period of time (defined in the **Aging Interval** field) has passed, until another Transition occurs that supersedes this Transition or moves the content item to another State.
  - *System*: The Transition will occur once a specified system date (either the content item Start Date, the End Date, or the Reminder Date; the date must be specified in the **System Field** field) has passed. The Start Date and End Date are default system fields. If you want to use the Reminder Date, you must define the Reminder Date field in the Content Editor for the Content Type. (NOTE: If the user does not enter a date in the field you specified, the Content Item does not Age. To prevent this problem, you may want to use Field-level Validation to ensure that the field contains a valid date.)
- 9 Click [**Save**] to save the Transition.
- 10 Rhythmyx saves the Transition and return to the Edit State page.
- 11 Create a **Notification** (see "[Creating a Notification](#)" on page 50) and **assign it to the Transition** (see "[Notification Assignment](#)" on page 51).

## Aging Scenarios

The most common aging scenarios are:

- A repeating notice until the content item Transitions to a new State.
- An automatic transition when a system date is reached.
- An escalating series of notices to the user to take action on an item.

### Repeating Notices

Scenario: When a system's article content item enters the Approve State, the Editor Role is reminded every day that action is required.

The implementer creates a single Aging Transition, with the following data:

- The To State is *Approval* (which is the same as the From State; the Transition returns the content item to the same State).
- The Aging Type is *Repeating*.
- The Aging Interval is *1440* (the number of minutes in a day, 60 minutes per hour times 24 hours in a day).

The implementer also creates a Notification to the Members of the Editor Role that the content item needs action, and assigns this Notification to the Transition.

Each day the Members of the Editor Role have not Transitioned a content item to a different State manually, Rhythmyx sends them an e-mail message that the content item needs action.

### Automatic Transition

Scenario: When a content item in the Approve State reaches its Start Date, the system automatically moves it to a Public State so it can be published.

The implementer creates a single Aging Transition, with the following data:

- The To State is *Public* (which is the Public State for this Workflow).
- The Aging Type is *System Field*.
- The System Field is *Start Date*.

When a content item is in the Approve State and its Start Date passes, Rhythmyx automatically Transitions it to the Public State, and it is published on the next run of the Publisher.

## Escalating Notices

Scenario: A Workflow must specify that when a content item enters the approve State, Editors have three days to act on it. Each day they are sent a reminder that they must act on it or it will Transition automatically. If no one has acted on it in three days, the content item automatically moves to the QA State.

To implement escalating Notices, the implementer creates four Transitions:

- The first Transition is the normal Transition to the Approve State. The Notification assigned to this Transition informs the editors that they have three days to approve or reject the content item, or it will automatically be approved.
- The second Transition is an Aging Transition with the following data:
  - The To State is *Approval* (which is the same as the From State; the Transition returns the content item to the same State).
  - The Aging Type is *Absolute*.
  - The Aging Interval is *1440* (the number of minutes in a day, 60 minutes per hour times 24 hours in a day).
  - The Notification assigned to the Transition informs the editors that they have two days to approve or reject the content item or it will automatically be approved.
- The third Transition is an Aging Transition with the following data:
  - The To State is *Approval* (which is the same as the From State; the Transition returns the content item to the same State).
  - The Aging Type is *Absolute*.
  - The Aging Interval is *2880* (the number of minutes in a day, 60 minutes per hour times 24 hours in a day, times 2 for two days after the initial Transition).
  - The Notification assigned to the Transition informs the editors that they have one day to approve or reject the content item or it will automatically be approved.
- The fourth Transition is an Aging Transition with the following data:
  - The To State is *QA* (which is the next State after Approval; the Transition advances the content item in the Workflow automatically).
  - The Aging Type is *Absolute*.
  - The Aging Interval is *4320* (the number of minutes in a day, 60 minutes per hour times 24 hours in a day, times 3 for three days after the initial Transition).

## CHAPTER 5

# Notifications

A Notification is an e-mail message that Rhythmyx automatically sends to a Role when a document enters a State.

---

## Setting the Workflow Configuration Properties for Notification

For Notification to work, you must define the SMTP mail host in the `rxworkflow.properties` file, located in the `Rhythmyxroot\rxconfig\Workflow` directory. Set the value of `SMTP_Host` to the IP address or name of the SMTP mail server. Setting the value to the name of the server is generally preferable. While the IP address of the server may change, it is unlikely that the name of the server will change.

To prevent errors when trying to mail Notifications to users whose e-mail address is not defined in their Member Properties, set the `MAIL_DOMAIN` property to your domain name. If Rhythmyx needs to send a Notification to a user that does not have a value for `sys_email`, it will create an e-mail address by concatenating the user name and the value of the `MAIL_DOMAIN` property.

The aging agent requires host and port definitions to generate the correct links in Notification e-mail messages:

```
RX_SERVER_HOST_NOTIFICATION=<Rhythmyx server name or IP Address>  
RX_SERVER_PORT_NOTIFICATION=<port number>
```

If you enable SSL on your server, you must also set the property

`RX_SERVER_IS_SSLINK_NOTIFICATION` to "yes" to ensure that the links in the Notification e-mail messages use SSL to link to Content Items on your server.

---

## Edit Notification Page

Use the Edit Notification page to maintain the Notifications associated with a Workflow.

You can access the Edit Notification page in the following ways:

- On the Edit Workflow page, click [New Notification](#);
- On the Edit Workflow page, click the name of the Notification you want to edit.

ID:	3
*Subject:	Content into Review
Description:	Notification for transitions into review
Body:	A content item has transitioned into the review state.
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

*Figure 13: Edit Notification Page*

### Edit Notification Fields

**ID** Read Only. Unique identifier of the Notification.

**Subject** Mandatory. The subject line for the Notification e-mail message.

**Body** Optional. The body for the Notification e-mail message.

---

## Creating a Notification

To create a Notification:

- 1 On the Edit Workflow page, click **New Notification**.  
Rhythmyx displays the New Notification dialog.
- 2 Enter the mandatory **Subject** and the optional **Body** of the e-mail sent as the Notification.
- 3 Click [**Save**] to save the Notification.

---

## Editing a Notification

To edit a Notification:

- 1 On the Edit Workflow page, click the name of the Notification you want to edit.  
Rhythmyx displays the Edit Notification page with the current data for the Notification.
- 2 Change the **Subject** or **Body**.
- 3 When you have made your changes, click [**Save**].

---

## Deleting a Notification

To delete a Notification:

- 1 On the Edit Workflow page, click the delete button  of the Notification you want to delete. Rhythmyx displays a confirmation message.
- 2 To confirm the delete action, click **[OK]**. To abort the delete action, click **[Cancel]**.

---

## Including User Comments in Notification E-mail Messages

You may want to include user comments in the Notification e-mail messages. To include user comments enter the macro

```
$wacomment
```

The macro name is case-sensitive, and must be all lower-case. The following graphic shows an example:

Workflows > Article > New Notification	
ID:	
*Subject:	An Article has been Rejected
Description:	Article rejection with comments.
Body:	An Article has been rejected with the following user comments: \$wfcomment
Save	

Figure 14: Example Notification using the \$wfComment macro

This Notification is attached to the Reject Transition from Approval to Article. When the approver rejects the article, Rhythmyx asks for a comment:

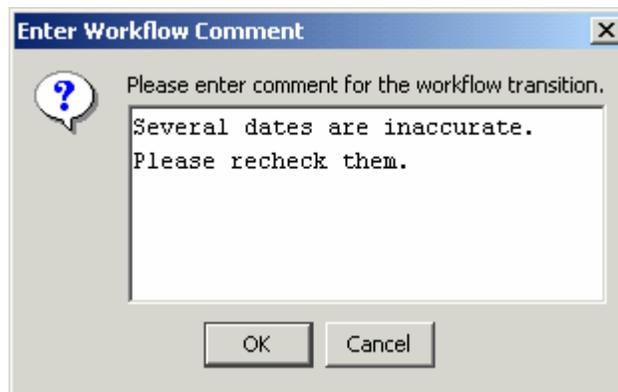


Figure 15: Sample user comment during Transition

This comment results in the following message:

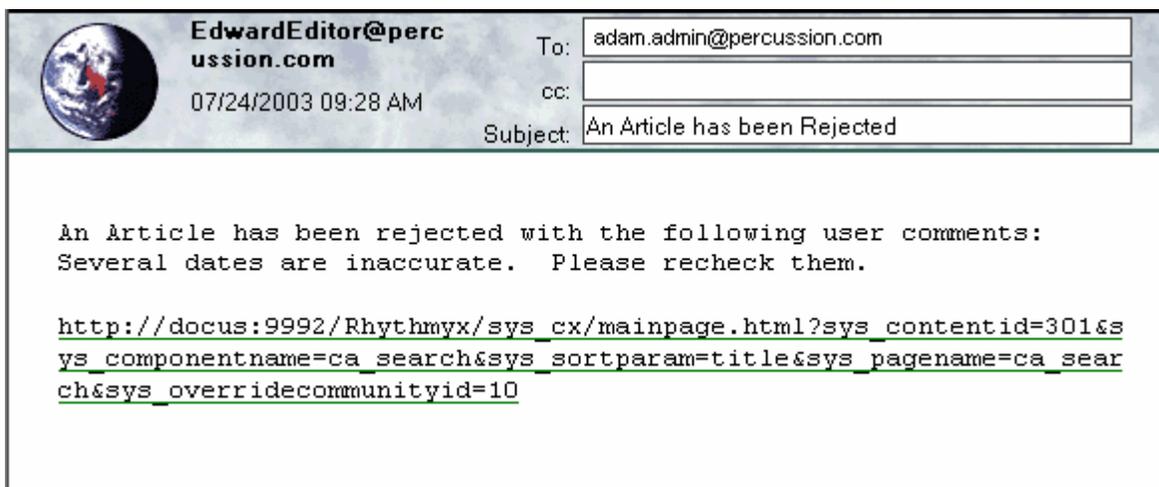


Figure 16: Notification e-mail message showing example comment

You can add the macro to either the subject or the body of the Notification message. The comments will be appended in all locations where you specify the macro.

To set a default value for the comment, add the following line to the workflow configuration properties file (`<rxroot>\rxconfig\workflow\rxworkflow.properties`):

```
wfcomment=defaultcomment
```

Where `defaultcomment` is the comment you want Rhythmyx to include when the user does not specify a comment. Rhythmyx uses this value when the comment field is null or an empty string.



## CHAPTER 6

# Assignment

The Roles assigned to a State determine who can act on the State and who is Notified when a document enters and leaves the State. A Role must already exist in the Workflow before you can assign it to the State.

Notifications must be assigned to Transitions to prompt the system to send the Notification.

# Role Assignment

## Edit Assigned Role Page

Use the Edit Assigned Role page to maintain the association between a Role and a State.

Role:	Admin
Assignment:	Assignee
Ad-hoc:	Disabled
Notify:	No
Show in In-Box:	No
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

Figure 17: Edit Assigned Role Page

### Field Descriptions

**Role** Drop list. The Role assigned to the State. Options are all Roles defined in the Workflow.

**Assignment** Drop list. Defines the access the Role has to content items in the State. Options are *None* (State is not assigned to anyone), *Reader* (Role has read-only access to content items in the State), and *Assignee* (Role has full access to content items in the State). If you choose *None*, the users in this Role cannot view Content Items in this State in the Content Explorer (in Views, Searches, or Folders).

**Ad-hoc** Drop list. Defines the access ad hoc assignees have to the State. Options are *Disabled* (default; ad hoc assignment is not permitted to the State), *Enabled* (ad hoc assignment is allowed to the State), and *Anonymous* (only Anonymous ACL access is permitted to the State).

**Notify** Drop List. Defines whether the Role is eligible to receive Notification e-mails triggered by Transitions to the State. Options are *Y* (default; Notification is allowed) and *N* (Notification is not allowed).

**Show in Inbox** Defines whether to show Content Items in the current State to the Role. Options are *Y* (default; Content in this State will be displayed in the Inbox of users in this Role) and *N* (Content in this State will not be displayed in the Inbox of users in this Role). This option is used primarily to reduce the volume of content displayed in the user's Inbox. For example, Authors should have access to content in the Archive State so they can revive it if necessary, so the Author Role should be assigned to the Archive State. However, you do not want members of the Author Role to see all archived content because their Inbox would become useless. Therefore, in the assignment of the Author Role to the Archive State, the value of **Show in Inbox** is *N*. Archived content will thus not appear in the Inbox of users in the Author Role, but they will still be able to search for the content and can act on it when they find it.

## Ad Hoc Assignment

When a user Transitions a Content Item from one State to another, the item is typically available to all members of the Role or Roles assigned to that State. In some cases, however, you may want to give users the ability to assign the content item to specific individuals. In other cases, you may want to allow users to assign Content Items to individuals that are not in a Role assigned to the State to which the item is Transitioning. Ad hoc assignment provides the flexibility to make these assignments.

To make ad hoc assignment available, on the Edit Assigned Role page assigning the Role to the State, choose *Enabled* or *Anonymous* in the **Ad-hoc** drop list.

If you enable ad hoc assignment, when a user Transitions a Content Item into the State, Rhythmyx will pop up a dialog allowing the user to make an ad hoc assignment. Users can then assign the Content Item to specific individuals. If you choose *Enabled* in the **Ad-hoc** drop list, only users in the Role assigned to the State are eligible to be assigned the Content Item. If you choose *Anonymous* in the **Ad-hoc** drop list, any user in the system is eligible to be assigned the Content Item.

## Assigning a Role to a State

To assign a Role to a State:

- 1 Access the Edit State page.
- 2 Click **New Assigned Role**.  
Rhythmyx will display the New Assigned Role page.
- 3 Select the **Role** you want to assign to the State. Options include all Roles defined for the workflow.
- 4 Select an **Assignment**. Options are *None* (State is not assigned to anyone), *Reader* (Role has read-only access to content items in the State), and *Assignee* (Role has full access to content items in the State).
- 5 Select an option for **Ad-hoc** assignment. Options are *Disabled* (default; ad hoc assignment is not permitted to the State), *Enabled* (ad hoc assignment is allowed to the State), and *Anonymous* (only Anonymous ACL access is permitted to the State).
- 6 Select a **Notify** option. Options are *Y* (default; Notification is allowed) and *N* (Notification is not allowed).
- 7 Select an option for **Show in Inbox**. Options are *Y* (default; Content Items in this State will appear in the Inbox of users in this Role) and *N* (Content Items in this State will not appear in the Inbox of users in this Role). In most cases, you should only choose *N* for when assigning a Role to a State that will have a very large volume of Content Items, such as an Archive State.
- 8 Click [**Update**] to add the Role to the State.

## Editing a Role Assigned to a State

To edit a Role Assigned to a State:

- 1 Access the Edit State page for the State whose Role assignment you want to edit.

- 2 Click the name of the Role whose assignment you want to edit.  
Rhythmyx displays the Role Assignment page.
- 3 You can change the data in all fields.
- 4 When you complete your edits, click [**Update**].

Rhythmyx updates the Role assignment and returns you to the Edit State page.

## Deleting a Role from a State

To delete a Role from a State:

- 1 Access Edit State page of the State from which you want to delete the Role.
- 2 Click the Delete button  in the row of the Role you want to delete.  
Rhythmyx displays a confirmation message.
- 3 To confirm the delete action, click [**OK**]. To abort the delete action, click [**Cancel**].

# Notification Assignment

## Transition Notification Page

Use the Transition Notification page to assign Notifications to Transitions.

Figure 18: Transition Notification Page

### Field Descriptions

**ID** Display Only. The identifier associated with this Notification.

**Notification: Subject** Mandatory. The subject line of the e-mail sent as the Notification.

**State Role Recipients** Mandatory. Defines the users that will receive the Notification e-mail message. Options are *To State Role Recipients Only* (only Members of the To State will receive messages), *From State Role Recipients Only* (only Members of the From State will receive messages), *Both To and From State Role Recipients* (Members of both the From State and the To State will receive messages), or *No State Role Recipients* (messages will not be sent to any Role Members; addresses listed in the Additional Recipients and CC lists will still receive messages).

**Additional Recipient List** Optional. A list of additional e-mail addresses to send the Notification to.

**CC List** Optional. A list of e-mail addresses that will receive a copy of Notification messages.

## Assigning a Notification to a Transition

To assign the Notification to a Transition:

- 1 In Rhythmyx Content Explorer, click the **Workflow** tab.  
Rhythmyx displays the Workflow tab.
- 2 Click the Preview icon for the Workflow to which you want to add the Transition.  
Rhythmyx displays the Preview of that Workflow.
- 3 Click the Transition to which you want to add a Notification.

Rhythmyx displays the Edit Transition page for the Transition you selected.

**4** Click **New Transition Notification**.

Rhythmyx displays Transition Notification page.

**5** Select the **Notification** you want to assign to the Transition. Notifications are identified by Subject and unique identifier.

**6** Select the State Role Recipients Type. Options include:

- *To State Role Recipients Only*: Sends Notification e-mail messages only to Members of the Roles assigned to the State to which the content item is Transitioning.
- *From State Role Recipients Only*: Sends Notification e-mail messages only to Members of the Roles assigned to the State from which the content item is Transitioning.
- *Both To and From State Role Recipients*: Sends Notification e-mail messages to Members of the Roles assigned to the State from which and to which the content item is Transitioning.
- *No State Role Recipients*: Notification e-mails will not be sent based on Roles. E-mail messages will still be sent members of the Additional Recipient and CC lists.

**7** Enter the e-mail address of any additional recipients of the Notifications in the **Additional Recipient List** field or **CC** field. Separate the addresses with comma.

**8** Click [**Save**] to save the Transition Notification.

Rhythmyx returns you to the Edit Transition page for the Transition to which you added the Notification.

## Editing a Notification Assignment

To edit a Notification Assignment:

**1** In the Rhythmyx Content Explorer, click the **Workflow** tab.

Rhythmyx displays the Workflow Editor.

**2** Click the Preview icon for the Workflow to which you want to add the Transition.

Rhythmyx displays the Preview of that Workflow.

**3** Click the Transition whose Notification you want to edit.

Rhythmyx displays the Edit Transition page for the Transition you selected.

**4** Click the name of the Notification Assignment you want to edit.

Rhythmyx displays the Transition Notification page.

**5** You can change the **Notification** assigned to the Transition, change the **State Role Recipients Type**, or add e-mail addresses to the **Additional Recipient List** or **CC** List, or delete e-mail addresses from those lists.

**6** Click [**Save**] to save your changes.

Rhythmyx returns you to the Edit Transition page for the Transition whose Notification assignment you edited.

## Deleting a Notification from a Transition

To delete a Notification from a Transition:

- 1** In the Rhythmyx Content Explorer, click the **Workflow** tab.  
Rhythmyx displays the Workflow Editor.
- 2** Click the Preview icon for the Workflow to which you want to add the Transition.  
Rhythmyx displays the Preview of that Workflow.
- 3** Click the Transition to which you want to add a Notification.  
Rhythmyx displays the Edit Transition page for the Transition you selected.
- 4** Click the delete icon  of the Notification Assignment you want to delete.  
Rhythmyx deletes the Notification and returns you to the Edit Transition page.



# Implementing Quick Edit

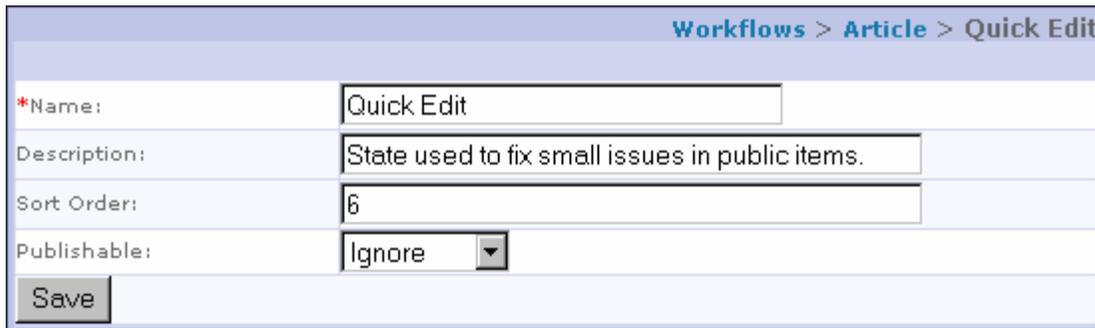
Rhythmyx does not allow users to check out Content Items in a Public State. Therefore, a user must Transition an item from the Public State to an editable State, then check it out, in order to edit the item. This process can be cumbersome if the user only needs to correct a minor misspelling.

To make the process easier for the user, For any Content Item in a Public State, Rhythmyx includes the menu option *Edit > Quick Edit*. This menu option provides a single action that Transitions the Content Item from Public and checks it out to the user. It requires some special implementation in each Workflow, however.

To implement Quick Edit in a Workflow:

- 1 The Workflow must include a Quick Edit State.

To make a State a Quick Edit State, set the Publishable parameter to *i* (Ignore). Any State with this value in the Publishable parameter is a Quick Edit State. A Workflow can include any number of Quick Edit States.



The screenshot shows a web form titled "Workflows > Article > Quick Edit". The form contains the following fields:

*Name:	Quick Edit
Description:	State used to fix small issues in public items.
Sort Order:	6
Publishable:	Ignore

At the bottom left of the form is a "Save" button.

Figure 19: Quick Edit State Definition in Default Article Workflow

- 2 Define a Quick Edit Transition from the Public State to the Quick Edit State.

To make a Transition a Quick Edit Transition, the value in the **Trigger** field must be *Quick Edit*. The server requires this value to activate the Quick Edit processing.

Workflows > Article > Public > Quick Edit	
ID:	8
*Label:	Quick Edit
Description:	Transition to quick edit state.
*Trigger:	Quick Edit
From-State:	Public (4)
To-State:	Quick Edit
Approval Type:	Specified Number
*Approvals Required:	1 (Required if Approval Type is set to "Specified Number")
Comment Required:	N
Default Transition:	N
Workflow Action:	sys_TouchParentItems
Transition Role:	- All roles -
Save	

Figure 20: Quick Edit Transition from the Default Article Workflow

Note that each Public State can have only one Quick Edit Transition because the value of the **Trigger** field for each Transition in the State must be unique. If multiple Transitions share the same Trigger, Rhythmyx cannot determine which to execute.

A Workflow can include multiple Public States, however, and each State may have its own Quick Edit Transition, because Transitions in different States can have the same Trigger.

- 3 Define a Transition from the Quick Edit State back to the Public State. This Transition should have the `sys_TouchParentItems` in the **Workflow Actions** field of the Edit Transition Page to ensure that all related content items are updated with the changes made during Quick Edit.

The following graphic shows an portion of a State diagram of a Workflow in which Quick Edit has been implemented. Note the Quick Edit State, the Quick Edit Transition to the State, and the Publish Transition back to Public.

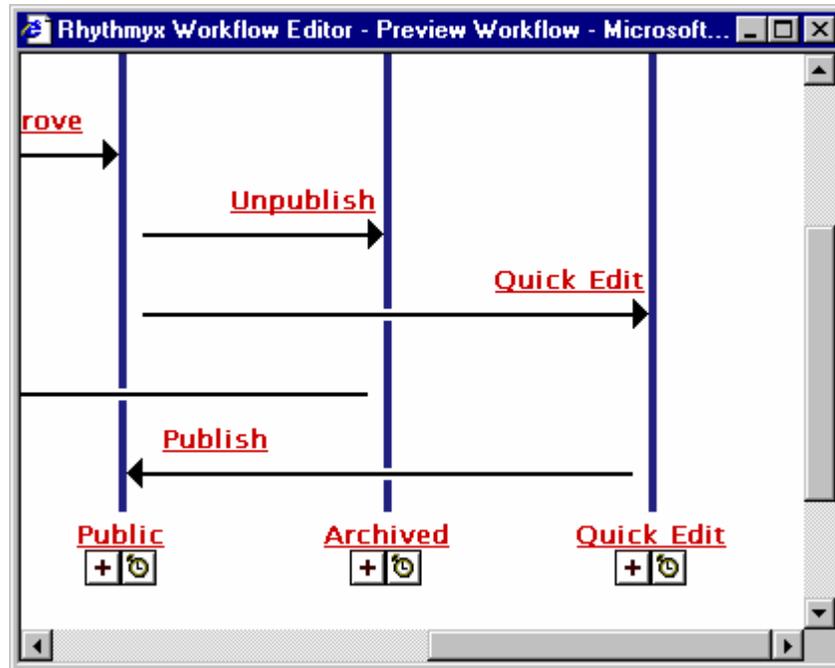


Figure 21: Workflow Diagram Showing Quick Edit

NOTE: If a Content Item is in a Quick Edit State, the default Content List application (rx\_PubContentLists) directs the Rhythmyx Publisher to publish the Content Item's last public revision. If a Content Item is linked to a Related Content Item that is currently in a Quick Edit State, rx\_PubContentLists directs the Rhythmyx Publisher to publish the link to the last public revision of the Related Content Item.

When you create a Content List application, you must be sure to direct the Publisher to publish the correct revisions of content in Quick Edit States. For instructions, see "Mapping a Content List Resource" in the *Rhythmyx Workbench Online Help*.



## CHAPTER 8

# Workflow Actions

A Workflow Action is an automatic action that can be added to a Transition. Rhythmyx executes the Workflow Action when Transitioning a content item from one State to another. For example, when a content item is approved for Transition to a Public State, all other content items that refer to that item need to be "touched" so the Publisher will republish them with updated links. A Workflow Action could be developed and added to the Transition to touch all of the other content items to ensure that they will be updated.

A Workflow Action is an extension of the IPSExtension Java extension. Thus, a Workflow Action extension must follow all of the requirements of Rhythmyx extensions, including thread safety. The Workflow Action extension must include a `performAction` method and implement the `IPWorkflowAction` interface. The `performAction` method has two inputs: the request context and an instance of `IPWorkflowContext`. The code of the `performAction` method defines the actual Workflow Action.

To make the Workflow Action extension available, you must register it in the Rhythmyx Server Administrator. When registering a Workflow Action extension, you must select `com.percussion.extension.IPWorkflowAction` as the **Supported Interface**.

# Workflow Action Processing

## contenteditor

### sys\_TouchParentItems

**Name:**

sys\_TouchParentItems

**Context:**

Java/global/percussion/extensions/general/

**Description:**

This action touches all "parent" (Owner) items of the current item in Relationships whose Category is Active Assembly. It finds all Ancestors of the Content Item in Active Assembly Relationships and updates them by putting the current date/time and current user name in the CONTENTLASTMODIFIEDDATE and CONTENTLASTMODIFIER columns of the CONTENTSTATUS table.

This exit uses the following resources in the sys\_ceDependency application:

- parents.xml query - this resource must have a "pipe name" of parents.
- touchitem.xml - an update resource (with a pipe name of touchitem. this resource updates the CONTENTSTATUS table. The only parameter of touchitem.xml is sys\_contentid. This parameter specifies a list of content IDs as a {link java.util.ArrayList ArrayList} object.

**Class name:**

com.percussion.extensions.general.PSTouchParentItems

**Resource file:**

classes

**Interface:**

com.percussion.extension.IPSWorkflowAction

**Parameters:**

None

# publishing

## sys\_PublishContent

**Name:**

sys\_PublishContent

**Context:**

global/percussion/cms/publisher/

**Description:**

This extension publishes an Edition when a Content Item makes a Transition that is registered with sys\_PublishContent as the Workflow Action. One common example of this is when a user wants all content to publish to a staging server immediately upon approval into a staging state.

The Workflow, Transition and Edition are specified in the file publish.xml. Before running the action, create this file in <Rhythmyx root>/rxconfig/Workflow/ in the format:

```
<?xml version="1.0"?>
  <root>
    <PSXPublish>
      <PSXWorkflowId>5004</PSXWorkflowId>
      <PSXTransitionId>1</PSXTransitionId>
      <PSXEdition>5005</PSXEdition>
    </PSXPublish>
  </root>
```

The Transition Id is unique only within the Workflow, not across Workflows.

If there are many requests to publish the same edition, this extension publishes one edition in addition to the one already running and ignores all other requests.

**Class name:**

com.percussion.extensions.publishing.PSPublishContent

**Interface:**

com.percussion.extension.IPSWorkflowAction

**Parameters:**

None

## relationships

### sys\_createTranslations

**Name:**

sys\_createTranslations

**Context:**

global/percussion/workflow/

**Description:**

This action creates a Translation Content Item of the original Content Item in each Locale in which the original Content Item does not already have a corresponding Translation Content Item. The action uses a configuration file, `sys_createTranslations.properties`, which is located in the directory `<Rhythmyxroot>/rxconfig/i18n`. This file defines the type of Translation Relationship to create between the original Content Item and the Translation Content Item for each Locale. It also defines a list of Locales for which Translation Content Items will not be generated.

**Class Name;**

`com.percussion.workflow.PSCreateTranslations`

**Resource File:**

`rxconfig/i18n/sys_createTranslations.properties`

**Interface:**

`com.percussion.extension.IPSWorkflowAction`

**Parameters:**

None

## Sample Workflow Action

```

/*[ printWfContext.java ]*****
 *
 * COPYRIGHT (c) 2001 by Percussion Software, Inc., Stoneham, MA USA.
 * All rights reserved. This material contains unpublished, copyrighted
 * work including confidential and proprietary information of
Percussion.
 * $Id$
 *
 * Version Labels   : $Name$
 *
 * Locked By       : $Locker$
 *
 * Revision History:
 *     $Log$
 *
 *
 *****
 ****/
package com.percussion.workflow;
import com.percussion.extension.IPSWorkflowAction;
import com.percussion.extension.IPSWorkFlowContext;
import com.percussion.extension.IPSExtensionDef;
import com.percussion.extension.PSExtensionException;
import com.percussion.extension.PSExtensionProcessingException;
import com.percussion.server.IPSRequestContext;
import java.io.File;
/**
 * This <CODE>IPSWorkflowAction</CODE> outputs the values in
 * the workflow context to the console.
 */
public class printWfContext implements IPSWorkflowAction
{
    /* ***** IPSExtension Interface Implementation ***** */
    */

    /**
     * No-op
     */
    public void init(IPSExtensionDef def, File codeRoot)
        throws PSExtensionException
    {}
    /* ***** IPSWorkflowAction Interface Implementation ***** */
    /**
     *
     * @param wfContext the workflow context, specifying information
such
     *                 as workflowID, contentID, revisionNum,
     *                 transitionID, stateID, historyID
     *
     * @param request the request context object
     *
     */

```

```
    */
    public void performAction(IPSWorkFlowContext wfContext,
                             IPSRequestContext request)
        throws PSExtensionProcessingException
    {
        if (null != request && null != wfContext)
        {
            System.out.println(wfContext);
        }
    }
}
```

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