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Chapter 1

INTRODUCTION

OVERVIEW

This section covers the following topics:

- About This Guide (page 1-1)
- New Features (page 1-2)

ABOUT THIS GUIDE

This System Administration Guide provides conceptual, reference, and step-by-step task information for all of the administrative functions of Oracle Collaboration Manager.

- Audience (page 1-1)
- Conventions (page 1-1)

Audience

This guide is for people who administer Oracle Collaboration Manager and for everyone to whom the system administrator assigns sub administrator rights.

Conventions

- The notation <install_dir>/ is used to refer to the location on your system where Content Server is installed.
Forward slashes (/) are used to separate the directory levels in a path name. This is true when referring to files on a Windows file system or on a UNIX system. A forward slash will always appear after the end of a directory name.

Notes, technical tips, important notices, and cautions use these conventions:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Note" /></td>
<td><strong>Note:</strong> Brings special attention to information.</td>
</tr>
<tr>
<td><img src="image" alt="Tech Tip" /></td>
<td><strong>Tech Tip:</strong> Identifies information that can be used to make your tasks easier.</td>
</tr>
<tr>
<td><img src="image" alt="Important" /></td>
<td><strong>Important:</strong> Identifies a required step or required information.</td>
</tr>
<tr>
<td><img src="image" alt="Caution" /></td>
<td><strong>Caution:</strong> Identifies information that might cause loss of data or serious system problems.</td>
</tr>
</tbody>
</table>

**NEW FEATURES**

The `EnableForcedACLSecurity` configuration variable can be used to enhance your security settings. See [Altering Security with EnableForcedACLSecurity](#) for details.
Most of the administration functions in Collaboration Manager are based on Content Server technology. However, some features of the Collaboration Manager are significantly different from the Content Server, and therefore require different administration. This section provides an overview of the Collaboration Manager administration features that are different from those in Content Server.

Note: This guide is intended to supersede information in the administration guides provided with Content Server only when features are different than standard Content Server features. For most administrative functions, see the administration guides.

This section includes these topics:
- Product Overview (page 2-2)
- Software Requirements (page 2-2)
- Terminology (page 2-3)
- Administrator Responsibilities (page 2-3)
- Security (page 2-4)
- Workflow Wizard (page 2-4)
- Collaboration Projects Administration (page 2-4)
- User Information Fields (page 2-5)
- Subscriptions (page 2-5)
PRODUCT OVERVIEW

Collaboration Manager enables project groups to create a content development environment. Users can easily create and remove ad-hoc project teams to create content in a secure fashion.

For an overview of Collaboration Manager features and information on the user interface, see the Collaboration Manager User Guide.

SOFTWARE REQUIREMENTS

Collaboration Manager can run on the same operating systems and is compatible with the same third-party software products as Content Server 10gR3, with the following exceptions:

- Collaboration Manager does not support the Classic view. Either the Trays or Top Menus view must be used in the Content Server client user profile.
- The current version of the Folders component is required for Collaboration Manager 10gR3. The current version of the Folders component is shipped as an extra with Content Server 10gR3.
- This version of Collaboration Manager does not support Records Manager or Governance, Risk, and Compliance Manager.
- The Folders and Threaded Discussions components must be installed before the Collaboration Manager. If the Collaboration Manager is installed first, project notifications and the Active Workflows page may not function correctly.
- Collaboration Manager 10gR3 supports the following add-on products:
  - Inbound Refinery
  - PDF Converter
  - Dynamic Converter
  - Desktop Outlook Integration
  - Desktop WebDAV Client

Other add-on products require Consulting Services to customize the user interface.
**TERMINOLOGY**

The following table lists terminology usage in Collaboration Manager and Content Server:

<table>
<thead>
<tr>
<th>Content Server</th>
<th>Collaboration Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>alias</td>
<td>group</td>
</tr>
<tr>
<td>permission</td>
<td>access or permission</td>
</tr>
<tr>
<td>workflow</td>
<td>route or workflow</td>
</tr>
<tr>
<td>reviewer/contributor</td>
<td>editor or contributor</td>
</tr>
<tr>
<td>consumer</td>
<td>consumer</td>
</tr>
</tbody>
</table>

**ADMINISTRATOR RESPONSIBILITIES**

In addition to the standard Content Server administration tasks, the system administrator works with the user who is designated a collaboration project leader, helping that person set up security permissions for elements of the collaboration. That project leader is responsible for the day-to-day activities of a collaboration project.

The system administrator is responsible for maintaining the following Collaboration Manager features:

- **System-level security**—The system administrator creates roles, creates groups (aliases), and assigns roles and accounts to users. Contributors can then assign permissions to projects, folders, and content. See Chapter 3 (Setting Collaboration Manager Security) for more information.

- **Workflows**—The system administrator creates Collaboration workflows and workflow tokens. Contributors then assign users to workflows for specific content items. See Chapter 4 (Using a Collaboration Workflow) for more information.

- **Folders Component**—Collaboration Manager uses the Content Server Folders component to manage content in a hierarchical structure. For more information on administration of this component, see the Folders Component section of the Folders/WebDAV Component Guide.

- **System Properties Settings**—When you install the Folders component, you must enable the “Allow get copy for user with read privilege” setting. It is important that
you do not disable this setting. If this setting is disabled, users who have only Read permission will not be able to see content items in Collaboration Manager folders.

Library Web Site—Because Collaboration Manager provides a different means of creating and accessing content from a hierarchical structure, you do not need to create pages for the Library, and therefore you will not use the Web Layout Editor.

SECURITY

By using a special security model, Collaboration Manager provides additional levels of security so permissions can be specified independently for projects, folders, and individual content items. See Chapter 3 (Setting Collaboration Manager Security) for more information.

WORKFLOW WIZARD

Collaboration Manager enables you to create Collaboration workflows, which are template-based, user-initiated workflows. See Chapter 4 (Using a Collaboration Workflow) for more information.

Note: You can also set up traditional Criteria workflows in Collaboration Manager but Collaboration Manager does not support Basic workflows. See the Content Server Workflow Implementation Guide for information on Criteria and Basic workflows.

COLLABORATION PROJECTS ADMINISTRATION

The Collaboration Manager includes a Configuration page, a Project Roots page and a Project Listing page that are used to view collaboration project settings, defined project roots, and current projects. These pages are accessed from the Collaboration Projects folder on the Administration tray.

See Chapter 4 (Using a Collaboration Workflow) for more information.
USER INFORMATION FIELDS

Collaboration Manager defines options for the User Type field (defined using the User Admin applet) and provides two additional user information fields:

<table>
<thead>
<tr>
<th>User Information Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Type</td>
<td>The option list includes two options: <strong>Internal</strong>—The user is an employee of your company or a member of your organization. <strong>External</strong>—The user has access to your Collaboration Manager system but is not an employee of your company or member of your organization. <strong>Important:</strong> One of these User Types must be specified for a user to appear in the lists that are used to select members for projects, folders, and content items. <strong>Note:</strong> See Groups (page 3-4) for information on creating internal and external groups.</td>
</tr>
<tr>
<td>Company</td>
<td>The user’s company or organization.</td>
</tr>
<tr>
<td>Phone</td>
<td>The user’s phone number.</td>
</tr>
</tbody>
</table>

SUBSCRIPTIONS

Collaboration Manager uses Criteria subscriptions to enable users to subscribe to projects and folders. You can also create custom Criteria subscriptions in Collaboration Manager using the same procedure as for Content Server. See the Managing Repository Content Guide for details.
**Batch Loading**

You can batch load content into Collaboration Manager in the same way you would batch load content into Content Server. However, you need to include the following metadata so that the content is placed in the correct project and folder:

<table>
<thead>
<tr>
<th>Metadata Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dSecurityGroup</td>
<td>Must specify the <strong>Projects</strong> security group.</td>
</tr>
<tr>
<td>dDocAccount</td>
<td>Specify the project where the content item is located (for example, prj/PRJ0000024). The project number can be determined by looking at the Project ID column on the Project Listing Page (page 5-6). The dDocAccount value is derived by adding the prefix prj/ onto the listed Project ID value. Or, the project number can also be found in the <strong>dDocAccount</strong> column of the Collections table in the Content Server database.</td>
</tr>
<tr>
<td>xCollectionID</td>
<td>Specify the Collection ID of the folder where the content item is located. If the content item is located at the project level, this is the Collection ID of the project. The Collection ID can be determined by looking at the Folder ID column on the Project Listing Page (page 5-6). The xCollectionID value is the same as the listed Folder ID value. Or, the Collection ID can also be found in the <strong>xCollectionID</strong> column of the Collections table in the Content Server database.</td>
</tr>
<tr>
<td>xClbraUserList</td>
<td>Specify users and their permissions for the content item. • Each user name is preceded by an ampersand (&amp;). • Each user’s permissions follow the user name in parentheses. • User names are separated by commas. • The user specified as the Author in the dDocAuthor field should have RWDA permission. (Authors given less than RWDA permission will not be able to perform all content item functions.) For example: xClbraUserList=&amp;sysadmin(RWDA),&amp;user1(RW),&amp;guest(R)</td>
</tr>
</tbody>
</table>
The following example shows a typical batch load record for Collaboration Manager:

```
Action=insert
dDocName= 32465_prj_schedule
dDocType=ADACCT
dDocTitle=Project Schedule for 32465 Project
dDocAuthor=sysadmin
dDocAccount=prj/PRJ24
dSecurityGroup=Projects
xCollectionID=11
xParentCollectionID=10
xClbraUserList=&sysadmin(RWDA),&rgarcia(RWDA),&pkelly(RW), &dmarkov(R)
xClbraAliasList=@Mktg(RWDA),@Mktg_ext(RW)
primaryFile=C:\batchtestlisa2.txt
dInDate=8/03/02
<<EOD>>
```

See the *Managing System Settings and Processes Guide* for more information about batch loading.
Chapter 3

SETTING COLLABORATION MANAGER SECURITY

OVERVIEW

Collaboration Manager relies on a combination of security methods to control access to project content. These methods include the standard Content Server security groups and accounts, as well as access lists that can modify access to specific content items and folders. This section describes the Collaboration Manager security model. The following topics are included:

- Overview of Security Issues (page 3-1)
- Altering Security with EnableForcedACLSecurity (page 3-6)
- Setting Up Collaboration Manager Users (page 3-7)

Note: This section supersedes information in the Managing Security and User Access Guide only when Collaboration Manager security is different than standard Content Server security.

OVERVIEW OF SECURITY ISSUES

This section covers these topics:

- Administrator Responsibilities (page 3-2)
- Security Levels (page 3-2)
- Permissions (page 3-3)
Administrator Responsibilities

Collaboration Manager’s security model reduces the amount of time and effort needed by a system administrator to maintain user permissions and security structures.

Typically, after you create user logins and aliases (called groups in Collaboration Manager) and assign system-level permissions, projects are created and all further permissions are assigned or re-assigned by workgroup members and collaboration project leaders.

**Important:** Do not change the default permissions for the admin role or the sysadmin user that are predefined in Content Server. The default permissions give administrators access to all projects, folders, and content items which is helpful if an administrator needs to troubleshoot security issues. If certain users need to have a limited set of administrative permissions, you should create a new role with the appropriate subadministrator permissions. See the Managing Security and User Access Guide for more information.

Security Levels

Collaboration Manager applies security at four levels:

- **System**—The system administrator assigns system-level permissions and rights to each user through the Projects Security Group (page 3-3) and prj Account (page 3-4). A user’s permissions at this security level determine if they are able to create projects, change member access to content, and perform administrative duties, such as adding new users or creating workflow templates.

- **Project**—Each project has a list of users and groups (similar to Content Server aliases) that have specific permissions for that project. Each project has a project lead, who has full administrative permission for the project.

- **Folder**—Each folder has a list of users and groups that have specific permissions for that folder. Members who have access to the parent project can be restricted from the folder, and members who do not have access to the parent project can be given permission for an individual folder. Each folder has a folder owner, who has full administrative permission for the folder.
Content Item—Each content item and discussion has a list of users and groups that have specific permissions for that item. Members who have access to the parent project and folder can be restricted from the content item or discussion, and members who do not have access to the parent project or folder can be given permission for an individual content item or discussion. Each content item and discussion has an Author, who has full administrative permission for the content item or discussion.

Note: A user with the default admin role has additional permissions at the project, folder, and content levels. See Security by Function (page A-2) for details.

See Also
- Permissions (page 3-3)
- Determining Access (page 3-5)
- Security by Function (page A-2)
- Setting Up Collaboration Manager Users (page 3-7)

Permissions

Permissions determine what access a user has to work with projects, folders, and content items. The following permissions can be assigned to users at all four security levels:

- Read (R)
- Write (W)
- Delete (D)
- Admin (A)

See Security by Function (page A-2) for more information.

Projects Security Group

In addition to the Public and Secure security groups that are pre-defined in Content Server, Collaboration Manager creates a Projects security group. Users must have permission for the Projects security group to be able to access any Collaboration Manager content or perform any Collaboration Manager functions.
**prj Account**

In Collaboration Manager, accounts are enabled and an account named *prj* is created as the top-level project account. This is similar to accounts in large document management sites (for example, a *Human Resources* account with sub-groups such as Internal, External Recruiting, Policies, and so on). Another account can be used as a top-level account, if necessary.

- Each project created in the Collaboration Manager becomes a sub-account of the *prj* account.
- Project accounts are numbered in the order in which they were created. For example, the first project created in a new instance of Collaboration Manager will be *prj/PRJ0000001*.
- It is possible to create a non-project account for a user, but such accounts are not recognized by the Collaboration Manager.
- Anyone who has been given permission for the *prj* account will have that permission for the projects to which they are given permission.

**Groups**

The *group* feature of Collaboration Manager is the same as the *alias* feature in Content Server. When you define an alias in the User Admin tool, it appears as a group in the Collaboration Manager user interface.

**Tech Tip:** We recommend that you use groups as much as possible to help users work more efficiently and to enhance Collaboration Manager performance.

**Creating Groups**

Collaboration Manager differentiates between *internal* and *external* groups, similar to the way it differentiates between internal and external users. However, while you define the User Type (internal or external) in the User Admin tool, the group type is defined by how you name the group.

- **External groups** have an _ext suffix on the alias name (for example, *Mktg_ext*).
- **Internal groups** are defined by any other alias name that does not end in _ext (for example, *Mktg*).
Determining Access

Caution: Be careful not to include external users in internal groups and vice versa. This may result in users having more permission or less permission than you intended.

The permission a user has to a particular project, folder, or content item is a combination of their system-level permissions and the permission they have for that particular item. The following diagrams show examples of how security group, account, and item permissions would intersect.

Figure 3-1  Item Permissions

When different permissions intersect, the resulting permission is the ‘lowest’ common permission (that is, it is the permission with the most restrictive access).
**Note:** There are some exceptions to the intersection rule:

- To be able to update a content item’s member list, a user with RWDA permission for the content item needs only RW permission for the Projects security group and \textit{prj} account.
- To be able to view a content item, a user with RWDA permission for the Projects security group and R permission for the \textit{prj} account does not need any permission for the content item.

**ALTERNING SECURITY WITH \textsc{EnableForcedACLSecurity}**

The \textsc{EnableForcedACLSecurity} configuration variable can be used to alter the behavior of collaboration project security. This variable allows administrators to further delineate what information users can access. Without this ability, users with standard Content Server Admin permissions/rights could access portions of a project for which they did not have project rights. For example, a user with standard Content Server Admin permissions on the \textit{Projects} security group could view a folder even if they did not have permissions to that folder established in the project. By using the \textsc{EnableForcedACLSecurity} configuration variable, an administrator can set security to always evaluate the access lists for specific content items and folders. For example:

- If \texttt{EnableForcedACLSecurity=TRUE} (the default)
  - the access list of each content item or folder augments standard Content Server security models for each user that is not assigned the Content Server ADMIN role. This means that if a user is not assigned the Content Server ADMIN role, then access to project content is dependent on the intersection of the R, W, D, or A permissions established for that content, and the standard Content Server security group and accounts permissions. See Determining Access (page 3-5).
  - if a user is assigned the Content Server ADMIN role when \texttt{EnableForcedACLSecurity=TRUE}, then the entity access lists are bypassed, and standard Content Server security models determine access to the content.

- If \texttt{EnableForcedACLSecurity=FALSE}
  - entity access lists are bypassed, and standard Content Server security models determine access to the content.
Setting Collaboration Manager Security

See Appendix A (Security Details) for further details about the effect of the Enable Forced ACL Security configuration variable.

**SETTING UP COLLABORATION MANAGER USERS**

Before setting up your Collaboration Manager users, determine how your site prefers to allow access to its data. There are two types of access models (and various permutations of each):

- A conservative model: most users are given the minimum permissions possible and collaboration project administrators can extend permissions as needed to individual content, folders, or projects.
- A liberal model: users are given wide permissions and the project administrators can restrict permissions to individual parts of the project.

Regardless of which type of model you follow, use these two steps to set up your Collaboration Manager security model:

1. Create user roles with specific permissions to the Projects security group.
2. Assign each user a role and specific permissions to the prj account.

**Wide Permissions (Best Practice)**

To allow for the most flexibility and the least system administrator involvement, you should give users broad system-level access to the Collaboration Manager, and then allow workgroup members to assign or re-assign permissions at the project, folder, and document levels. With this in mind, most users can be set up with the following system-level permissions:

<table>
<thead>
<tr>
<th>User</th>
<th>Permission to Projects Security Group</th>
<th>Permission to prj Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subadministrator who can create projects</td>
<td>RWDA</td>
<td>RWDA</td>
</tr>
<tr>
<td>Contributor who can create projects</td>
<td>RWD</td>
<td>RWDA</td>
</tr>
<tr>
<td>Contributor who cannot create projects</td>
<td>RWD</td>
<td>RWD</td>
</tr>
</tbody>
</table>

To accomplish this security model, you could create three new roles, such as *subadmin*, *project creator*, and *contributor*, and assign the appropriate Projects security group.
permission to each role. You would then assign each user the appropriate role and assign them the *prj* account with the appropriate permissions.

### Minimum Permissions

If you need to restrict some users to less permission than the “wide permission” security model allows, you can set any combination of permissions you wish. See Appendix A (*Security Details*) for a description of the minimum permissions required to perform various Collaboration Manager functions.
Chapter 4

USING A COLLABORATION WORKFLOW

OVERVIEW

This section describes the following collaboration workflow concepts and administrative tasks:

- Understanding Collaboration Workflows (page 4-1)
- Setting Up Workflow Tokens (page 4-4)
- Setting Up a Collaboration Workflow (page 4-7)

Note: This section is intended to supersede the information about Collaboration workflows in the Workflow Implementation Guide. For an overview of workflows, information on Criteria workflows, and details on jumps and templates, see the Workflow Implementation Guide.

UNDERSTANDING COLLABORATION WORKFLOWS

This section covers these topics:

- About Collaboration Workflows (page 4-2)
- Collaboration Workflow Samples (page 4-2)
- Collaboration Workflow Tips (page 4-3)
About Collaboration Workflows

A Collaboration workflow is similar to a Criteria workflow, except that a workflow template and reviewers are specified by a Collaboration Manager user during file checkin rather than being defined by an administrator in the Workflow Admin tool.

- **Collaboration workflows** appear on the first page of the Workflow Wizard where users select a “workflow template” to route a particular content item. To access the list of available workflows, the Workflow Wizard must be launched by clicking the Configure button (associated with the Selected Workflow metadata field on the checkin window in the Collaboration Manager). Refer to *Working with Project Links* in the *Collaboration Manager User Guide*.

The remaining pages in the Workflow Wizard are based on the number of steps that contain tokens. There is always a summary page in the Wizard regardless of which workflow is chosen. For more details see *Using the Workflow Wizard* in the *Collaboration Manager User Guide*.

For users to be able to manage their own Collaboration workflows, the system administrator must first create workflow tokens, create workflow information fields that correspond to the tokens, and then add the token names to a configuration file.

- After the tokens are set up, the project administrator can create **Collaboration workflows**. A Collaboration workflow is simply a Criteria workflow with the following specific settings:
  - **Security Group** = projects
  - **Criteria** = Selected Workflow matches workflow name
  - **Is Collaboration Project** check box selected
  - Custom entry script for the first step

See Also
- *Setting Up a Collaboration Workflow* (page 4-7)

Collaboration Workflow Samples

Sample workflow tokens and sample Collaboration workflow templates are predefined in the Workflow Admin tool.

- We recommend that you use the templates as a starting point to create your own Collaboration workflows, but leave the original templates intact.
You can use the sample tokens as is in your Collaboration workflows, you can modify them for your needs, and/or you can create your own tokens.

**Collaboration Workflow Tips**

- All users assigned to a Collaboration workflow must have Read permission for the content item. Editors (contributors) must have Write permission for the content item to be able to check the revision in and out.

- You cannot add or delete steps while a Collaboration workflow is enabled.

- Disabling a Collaboration workflow releases any revisions still in the workflow process to the system.

- A Collaboration workflow can use jumps to sub-workflows and other Criteria workflows in the *Projects* security group, and can jump to other steps in the same workflow.

- Users can select multiple users and groups as reviewers for each workflow step, even if you have only defined one workflow token for the step.

- You may want to assign as many workflow tokens as approvals that are required for a particular workflow step. Each token appears as a separate user field on the Choose Workflow page of the checkin window. For example, if a step requires two approvals, assign two workflow tokens so that the user knows to assign at least two reviewers to the workflow.

- **Include detailed descriptions for workflows, steps, and tokens.**
  - The workflow description appears on the Choose Workflow page of the Workflow Wizard. Contributors use it to choose a workflow. For example, “Two edit steps, one review step” is a better description than “Edit and review”.
  
  - The workflow step descriptions appear on the Add Reviewers page of the Workflow Wizard. Contributors use it to choose reviewers. For example, “First edit cycle, 2 approvals required” is a better description than “Edit”.
  
  - Token descriptions appear on the Add Reviewers page of the Workflow Wizard. Contributors use it to choose reviewers. For example, “Assign users for copy edit” is a better description than “Editor.”
**SETTING UP WORKFLOW TOKENS**

This section covers these topics:

- **About Workflow Tokens** (page 4-4)
- **Creating a Workflow Token** (page 4-4)
- **Setting Up Workflow Information Fields** (page 4-5)
- **Adding Tokens to the Configuration File** (page 4-7)

**About Workflow Tokens**

A workflow token is a piece of Idoc Script that defines variable users in a workflow.

- In a Collaboration workflow, tokens serve as placeholders for the reviewers, which are not defined until a contributor checks in the content item.
- Tokens can be used by multiple workflows.
- To set up a workflow token, you must:
  1. Create the token. See **Creating a Workflow Token** (page 4-4).
  2. Create a metadata field with the same name as the token. See **Setting Up Workflow Information Fields** (page 4-5).
  3. Add the token to the configuration file. See **Adding Tokens to the Configuration File** (page 4-7).

**Note:** See the *Content Server Workflow Implementation Guide* for detailed information on workflow tokens.

**Creating a Workflow Token**

To create a workflow token, perform the following tasks:

1. Launch the Workflow Admin applet.
2. Select **Options—Tokens**.
   
   The Workflow Tokens screen is displayed.
3. Click **Add**.
   
   The Add Token screen is displayed.
4. Enter the token name in the **Token Name** field.
**Important:** The **Token Name** must match the name of the corresponding workflow information field. See Setting Up Workflow Information Fields (page 4-5).

5. Enter a detailed description in the **Description** field. This description will appear below the user field on the Choose Workflow page of the checkin window.

6. In the Users field, enter the following text:

   ```
   <$wfAddUser(wfGet("token_name"), "user")$>
   ```

   where **token_name** is the same name you entered in the Token Name field.

7. Click **OK**.

8. Click **Close**.

**See Also**

– About Workflow Tokens (page 4-4)
– Setting Up Workflow Information Fields (page 4-5)
– Adding Tokens to the Configuration File (page 4-7)

### Setting Up Workflow Information Fields

This section covers these topics:

- About Workflow Information Fields (page 4-5)
- Creating a Workflow Information Field (page 4-6)

### About Workflow Information Fields

Custom metadata fields are required to hold the routing information for a Collaboration workflow. Each information field corresponds to a workflow token. You create workflow information fields as you would create any other custom metadata fields in the Configuration Manager tool.

**See Also**

– Creating a Workflow Information Field (page 4-6)
– About Workflow Tokens (page 4-4)
Creating a Workflow Information Field

To create a workflow information field that corresponds to a new workflow token:

1. Launch the Configuration Manager applet.
2. Click the **Information Fields** tab.
3. Click **Add**.
   
   The Add Custom Info screen is displayed.
4. Enter the name of the token you created.

**Important:** The **Field Name** must match the name of the corresponding workflow token. See [Creating a Workflow Token](#) (page 4-4).

5. Click **OK**.

   The Add Custom Info Field screen is displayed.
6. Set the properties for the field as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Caption</td>
<td>field_name</td>
</tr>
<tr>
<td>Field Type</td>
<td>Memo</td>
</tr>
<tr>
<td>Require Value check box</td>
<td>Clear</td>
</tr>
<tr>
<td>Enable on User Interface check box</td>
<td>Selected</td>
</tr>
<tr>
<td>Enable for Search Index check box</td>
<td>Selected</td>
</tr>
<tr>
<td>Enable Option List check box</td>
<td>Clear</td>
</tr>
</tbody>
</table>

7. Click **OK**.
8. Click **Update Database Design**. (It is not necessary to rebuild the index.)

For more information, see the *Managing Repository Content Guide*.

**See Also**

- *About Workflow Information Fields* (page 4-5)
- *About Workflow Tokens* (page 4-4)
Adding Tokens to the Configuration File

This section covers these topics:

- About Configuration File Entries (page 4-7)
- Adding a Token to the Configuration File (page 4-7)

About Configuration File Entries

When you create a new workflow token, you need to add the token name to the `prjWizardTokens` entry in the following file:

```
<install_dir>/<instance>/data/components/CollaborationManager/config.cfg
```

Adding a Token to the Configuration File

To add a workflow token to the configuration file:

1. In a text editor, open the following file:

   ```
   <install_dir>/<instance>/data/components/CollaborationManager/config.cfg
   ```

2. Add the new token name to the end of the `prjWizardTokens` entry. For example, if your new token name is `ReviewStep3`:

   ```
   prjWizardTokens=ReviewStep1,ReviewStep2,ReviewStep3
   ```

3. Save and close the file.

4. Restart the Content Server.

See Also

- About Workflow Tokens (page 4-4)

---

**SETTling up a Collaboration Workflow**

To create a Collaboration workflow, create a Criteria workflow in the Workflow Admin tool as follows:

**Note:** See the Content Server Workflow Implementation Guide for detailed information on Criteria workflows.

1. Launch the Workflow Admin applet.
2. Click the Criteria tab.

3. Click Add.

   The New Criteria Workflow screen is displayed.

4. Enter a name in the Workflow Name field.

5. Enter a detailed description in the Description field. This description appears in the Choose Workflow list from the Configure Workflow Wizard on the Content Checkin page.


7. If templates are available, the Use Template checkbox appears. Select the check box and the name of the template you wish to use.

8. Select the Has Criteria Definition check box.

9. Select Selected Workflow from the Field list.

10. Enter the workflow name in the Value field.

   **Important:** The text in the Value field must match the Workflow Name field.

11. Select the Is Collaboration Project check box (click Enable).

12. Click OK.

13. If a template was not used to create steps, or if you want to add other steps, click Add in the right pane.

   The Add New Step screen is displayed.

14. Enter an appropriate Name and Description for the step. The step description appears on the Configure Workflow Wizard Step page.

15. Select a Type of review step:

   - Users can review the current revision.
   - Users can review and edit (replace) the current revision.
   - Users can review the current revision or create new revisions.

16. Click Add Token.

   The Add Token to Step screen is displayed.

17. Select the reviewer tokens for the step.
- To select a range of tokens, click one token and then hold down the Shift key while clicking another token.
- To select tokens individually, hold down the Ctrl key while clicking each token.

18. Click **OK**.

19. Click the **Exit Conditions** tab.

20. Specify how many reviewers must approve the revision before it passes to the next step.
   - To require approval by all reviewers, select **All reviewers**.
   - To specify a minimum number of reviewers who must approve the revision, select **At least this many reviewers** and enter the number.

   **Note:** You can enter zero (0) in the **At least this many reviewers** field to notify reviewers that the revision has reached the step, but reviewers will not be able to approve, reject, or edit the revision at that step. The workflow will pass to the next step automatically.

21. If the step requires additional exit conditions to be able to pass to the next step:
   a. Select the **Use Additional Exit Condition** check box.
   b. Click **Edit**.
   c. The Edit Additional Exit Condition screen is displayed.
   d. Select a metadata field from the **Field** choice list.
   e. Select an operator from the **Operator** choice list.
   f. Select a value from the **Value** choice list.
   g. Click **Add** to add the conditional statement to the Condition Clause.
   h. Repeat for as many conditions as required.
   i. To edit the condition expression, select the **Custom Condition Expression** check box and edit the script.
   j. Click **OK**.

   **Note:** Exit conditions are useful when metadata could be changed by an external process during the workflow step.

22. Add the required custom script to the entry event:

   **Important:** This custom script is required for the first step in every Collaboration workflow. Do not include this script in any other workflow steps.
   a. Click the **Events** tab.
b. Click the **Edit** button next to the Entry field.

c. The Edit Script screen is displayed. Click the **Custom** tab.

d. Select the **Custom Script Expression** check box.

e. Enter the following script:

   $$<\text{exec inc("prj_token_init_script")}>$$

f. Click **OK**.

**Note:** If you will be creating several Collaboration workflows, we recommend that you create a script template for this entry event script. See the *Content Server Workflow Implementation Guide* for more information.

23. If the workflow requires additional conditional steps or special processing, add the appropriate scripts on the Events tab.

24. Click **OK**.

25. Add, edit, and delete steps as necessary to complete the workflow.

   - To add another step to the workflow, repeat steps 13 through 24.
   - To edit an existing step, select the step and click **Edit**.
   - To delete an existing step, select the step and click **Delete**.

26. Make sure that the Collaboration workflow is selected in the left pane, and click **Enable**.

   A confirmation screen is displayed.

27. Click **Yes** to activate the selected workflow.

Content items that match your specified criteria will automatically enter the workflow.

**See Also**

- *Understanding Collaboration Workflows* (page 4-1)
- *Setting Up Workflow Tokens* (page 4-4)
Chapter 5

PROJECTS ADMINISTRATION

OVERVIEW

This section describes the following Projects Administration topics:

- About Projects Administration (page 5-1)
- Administering Projects (page 5-7)

ABOUT PROJECTS ADMINISTRATION

Collaboration Manager provides administration pages that are used to view collaboration project settings, review the defined project roots, and check the current list of projects.

Each page can be accessed by selecting the specific page from:

- The Collaboration Projects folder on the Administration tray (refer to Accessing the Administration Pages (page 5-2).
- From the Actions pull-down menus on each page (refer to Actions Pull-Down Menus (page 5-2).

The administration pages include the following:

- Configuration Page (page 5-3)
- Project Roots Page (page 5-5)
- Project Listing Page (page 5-6)
Accessing the Administration Pages

To access the Collaboration Projects administration pages:
1. Click the Administration tray in the navigation pane.
2. Open the Collaboration Projects folder.
3. Select the specific page link.
   The applicable page displays.

Actions Pull-Down Menus

The Actions pull-down lists at the top right of each Collaboration Projects administration page enables you to access the other Collaboration Projects administration pages.

To access additional Collaboration Projects administration pages:
1. Click the arrow in the Actions pull-down list box.
2. Select the specific option.
The selected administration page displays.

**Configuration Page**

<table>
<thead>
<tr>
<th>Collaboration Projects Configuration</th>
<th>Quick Help</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actions:</strong> Select an action</td>
<td></td>
</tr>
</tbody>
</table>

These following collaboration project settings are defined for this Content Server:

**Workflow Settings**

- **Use Ad-Hoc Routing:** Yes
- **Selected Workflow Field:** SelectedWorkflow
- **Routing Fields:** RoutingToken1, RoutingToken2, RoutingToken3

**Select User Applet Settings**

- **Applet Enabled:** Yes
- **Column Option:** a
- **Database Is Case Sensitive:** not defined (default 'No')
- **Database Is ISO8859 Dictionary Order:** not defined (default 'No')
- **Force Entries to Lower Case:** not defined (default 'No')
- **Internal User Default Permissions:** not defined (default '3')
- **External User Default Permissions:** not defined (default '1')
- **Internal Group Default Permissions:** not defined (default '3')
- **External Group Default Permissions:** not defined (default '1')

**On-Line Conference Center Settings**

- **Conference Center Enabled:** not defined (default: 'Yes')

The Configuration page is used to view Collaboration Manager settings. See Viewing Collaboration Manager Settings (page 5-7).

The Configuration Setting column in the following table refers to the configuration variables that are set in the following file:

```
<install_dir>/<instance>/data/components/CollaborationManager/config.cfg
```

If a setting is not specifically defined, the default value is shown. See the Collaboration Manager Installation Guide for more information on these configuration settings.
### Workflow Settings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Configuration Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Ad-Hoc Routing</td>
<td>prjUseCustomRouting</td>
<td>Shows whether user-defined content item routing is enabled.</td>
</tr>
<tr>
<td>Selected Workflow Field</td>
<td>prjWizardWorkflowField</td>
<td>Shows the name of the metadata field that Collaboration workflows use as the criteria field.</td>
</tr>
<tr>
<td>Routing Fields</td>
<td>prjWizardTokens</td>
<td>Shows the name of the metadata fields that are defined as workflow tokens.</td>
</tr>
</tbody>
</table>

### Select User Applet Settings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Configuration Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applet Enabled</td>
<td>UseUserSelectApplet</td>
<td>Shows if the Select Member applet is enabled. Note that if you are using Apple Macintosh systems, the Select User applet is not displayed even if this option is enabled. In its place, a popup application is used which has similar functionality.</td>
</tr>
<tr>
<td>Column Option</td>
<td>UserSelectAppletColumn</td>
<td>Shows the display and sort order for the user and group columns in the Select Member applet. The combinations for each setting are shown below.</td>
</tr>
</tbody>
</table>

#### Setting | User Columns | Group Columns |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First (Sort Column)</td>
<td>Second Column</td>
</tr>
<tr>
<td>a</td>
<td>dFullName</td>
<td>dName</td>
</tr>
<tr>
<td>b</td>
<td>dFullName</td>
<td>dName</td>
</tr>
<tr>
<td>c</td>
<td>dName</td>
<td>dFullName</td>
</tr>
<tr>
<td>d</td>
<td>dName</td>
<td>dFullName</td>
</tr>
</tbody>
</table>

Database is Case Sensitive | UserSelectAppletDatabaseCaseSensitive | Shows whether the configuration setting has been enabled for a case-sensitive database.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Configuration Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database is ISO8859 Dictionary Order</td>
<td>UserSelectAppletDatabaseIs8859DictionaryOrder</td>
<td>Shows whether the configuration setting has been enabled for a SQL Server database.</td>
</tr>
<tr>
<td>Force Entries to Lower Case</td>
<td>UserSelectAppletForceEntriesToLowerCase</td>
<td>Shows whether the configuration setting has been enabled for an altered database query.</td>
</tr>
<tr>
<td>Internal User Default Permissions</td>
<td>UserSelectAppletInternalUserDefaultPermissions</td>
<td>Show the codes for the permissions that are selected by default in the Select Member applet. The following values are possible: ValuePermissions 1Read 3Read, Write 7Read, Write, Delete 15Read, Write, Delete, Admin</td>
</tr>
<tr>
<td>External User Default Permissions</td>
<td>UserSelectAppletExternalUserDefaultPermissions</td>
<td></td>
</tr>
<tr>
<td>Internal Group Default Permissions</td>
<td>UserSelectAppletInternalAliasDefaultPermissions</td>
<td></td>
</tr>
<tr>
<td>External Group Default Permissions</td>
<td>UserSelectAppletExternalAliasDefaultPermissions</td>
<td></td>
</tr>
</tbody>
</table>

### On-Line Conference Center Settings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Configuration Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Center Enabled</td>
<td>DisableMeetingCenter</td>
<td>Shows whether the On-line Conferencing feature is enabled.</td>
</tr>
</tbody>
</table>

## Project Roots Page

### Collaboration Project Roots

<table>
<thead>
<tr>
<th>Root Mark</th>
<th>Environment Variable Name</th>
<th>Variable Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECTS ROOT</td>
<td>ProjectRootID</td>
<td>4</td>
</tr>
</tbody>
</table>

Actions: Select an action
Projects Administration

Project roots define top-level folders in the Collaboration Manager system. Each collaboration project is created within a project root folder. They provide a convenient way to organize project-related folder structures. The primary purpose of this page is to allow roots to be set up if they have not been set up through the install program. This applies primarily to custom roots because PROJECTS ROOT is set up by the installer.

The Project Roots page is used to:

- View project roots. See Viewing Project Roots (page 5-8).
- Set up custom project roots. See Configuring Project Roots (page 5-8).

### Project Listing Page

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Mark column</td>
<td>Shows the $dCollectionMark$ value (a property that identifies special folders) for the root folder. The default Root Mark for Collaboration Manager is PROJECTS ROOT.</td>
</tr>
<tr>
<td>Environment Variable Name column</td>
<td>Shows the variable name where the collection ID ($dCollectionID$) value corresponding to the $dCollectionMark$ value will be stored. The default variable for Collaboration Manager is ProjectRootID.</td>
</tr>
<tr>
<td>Variable Value column</td>
<td>Shows the collection ID ($dCollectionID$) value for the root folder. This is an internal number assigned by the Folders component. If a folder name has not been defined for a project root, clicking the link displays a prompt dialog box, which enables you to name the folder. (This folder name appears at the root level in the Folders component.)</td>
</tr>
</tbody>
</table>
The Project Listing page is used to view a list of all projects in the Collaboration Manager. The following information appears on this screen:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project ID column</td>
<td>Shows the project ID for each project in the Collaboration Manager. The list is sorted in ascending Project ID order.</td>
</tr>
<tr>
<td>Project Name column</td>
<td>Shows the name of each project.</td>
</tr>
<tr>
<td>Project Lead column</td>
<td>Shows the project lead for each project.</td>
</tr>
<tr>
<td>Description column</td>
<td>Shows the description for each project.</td>
</tr>
<tr>
<td>Folder ID column</td>
<td>Shows the identification number assigned to each project.</td>
</tr>
</tbody>
</table>

**ADMINISTERING PROJECTS**

Several tasks are associated with administering collaboration projects. This section discusses these topics:

- Viewing Collaboration Manager Settings (page 5-7)
- Viewing Project Roots (page 5-8)
- Configuring Project Roots (page 5-8)
- Viewing the Collaboration Manager Project List (page 5-9)

**Viewing Collaboration Manager Settings**

To view the configuration settings for Collaboration Manager:

1. Log in to Collaboration Manager as the system administrator.
2. Click the Administration tray in the navigation pane.
3. Open the Collaboration Projects folder.
4. Select the Configuration page link.

The Configuration Page (page 5-3) displays the Collaboration Manager settings.
**Viewing Project Roots**

To view the project roots for Collaboration Manager:

1. Log in to Collaboration Manager as the system administrator.
2. Click the **Administration** tray in the navigation pane.
3. Open the **Collaboration Projects** folder.
4. Select the **Project Roots** page link.

   The **Project Roots Page** (page 5-5) displays the Collaboration Manager settings.

   If any root folders have not been named, a setup link appears in the Variable Value column. See **Configuring Project Roots** (page 5-8) for more information.

**Configuring Project Roots**

**Note:** Configuring custom project roots may require additional component customization to the Content Server in order to assign projects to the custom root folder. It is strongly recommended that this activity be performed as part of customization by Oracle Consulting Services.

To configure a project root for Collaboration Manager:

1. In a text editor, open the following file:

   `<install_dir>/<instance>/data/components/CollaborationManager/config.cfg`

2. Add a line to define the new project root as follows:

   ```
   projectRoots=dCollectionMark,variable
   [; dCollectionMark,variable ...]
   [; dCollectionMark,variable]
   ```

   where

   - *dCollectionMark* is a unique name that identifies the project root folder.
   - *variable* is the variable name in which to store the *dCollectionID* that corresponds to the project root folder.

   For example:

   ```
   projectRoots=PROJ ROOT,ProjRootID;OTHER ROOT,OtherRootID
   ```

3. Save and close the file.
4. Restart the Content Server.
5. Click the **Administration** tray in the navigation pane.

6. Open the **Collaboration Projects** folder.

7. Select the **Project Roots** page link.

   The **Project Roots Page** (page 5-5) displays and includes a link in the Variable Value column to set up the project root.

   **Note:** If a project root is defined but a folder does not exist on the system for it, then the Variable Value column contains a link that launches the appropriate folder service to set up the root.

   For example, by adding the following line ‘`projectRoots=TEST,testID`’ to the `config.cfg` file and restarting the server, the Variable Value field on the Project Roots page contains the ‘setup root TEST’ link.

   ![Figure 5-3 Collaboration Project Roots screen](image)

8. Click the **setup root `<root mark>`** link in the Variable Value column for the new project root.

   You are prompted to enter a name for the root folder.

9. Enter a name for the root folder. This folder name appears at the root level in the Folders component.

10. Click **OK**.

    The `dCollectionID` value (Folder ID) for the new root folder is displayed in the Variable Value column.

### Viewing the Collaboration Manager Project List

To view a list of all projects in Collaboration Manager:

1. Log in to Collaboration Manager as the system administrator.
2. Click the Administration tray in the navigation pane.
3. Open the Collaboration Projects folder.
4. Select the Project Listing page link.
Security Details

Overview

This appendix describes the minimum permissions required to perform various Collaboration Manager functions. This information is included to help administrators create special-case security configurations and to assist in troubleshooting.

Note: To allow for the most flexibility and the least system administrator involvement, you should give users broad system-level access to the Collaboration Manager, and then allow workgroup members to assign permissions at the project, folder, and document levels. See Wide Permissions (Best Practice) (page 3-7) for more information.

- This chapter contains the following topics:
  - About Maximum Permissions (page A-2)
  - About Minimum Permissions (page A-2)
  - Security by Function (page A-2)
  - Security Example (page A-12)

As described in Altering Security with EnableForcedACLSecurity (page 3-6), the EnableForcedACLSecurity configuration variable can be used to alter the behavior of collaboration project security. By using the EnableForcedACLSecurity configuration variable, an administrator can set security to rely exclusively on the specific permissions which are set for aspects of a project such as folders, projects, and content.

The effect of this variable is discussed in the individual sections that describe security settings.
About Maximum Permissions

As a “best practice,” administrators should provide users with maximum system-level access to the Collaboration Manager and then allow collaboration project leaders to assign permissions to the project, folder, and content items. Using this model, the following permissions would be assigned:

- To the subadministrator who creates projects: RWDA permission to the Projects security group and RWDA permission to the prj account.
- To the contributor who can create projects: RWD permission to the Projects security group and RWDA permission to the prj account.
- To the individual contributor who cannot create projects but who participates in projects: RWD permission to the Projects security group and RWD permission to the prj account.
- See the Collaboration Manager System Administration Guide for details about broad permissions.

About Minimum Permissions

In Collaboration Manager, many functions can be performed from more than one location in the user interface. In some cases, this results in different permissions being required to perform the same function, depending on how the item is accessed.

For example, if a user has permission to view a content item but does not have permission to view the project or folder where the content item is located, they cannot drill down to the content item on the Browse Content tray. However, they can access the content item from a number of locations in the user interface, including the search results page, workflow notifications, subscription notifications, and so forth.

The Security by Function (page A-2) section indicates where minimum permissions are different when a task is performed from different interface locations.

Security by Function

There are three main areas where security can be assigned:

- Project Security (page A-3)
- Folder Security for Projects (page A-5)
Project Security

A user’s permission to perform project functions is determined by their security group, account permissions, and their permissions for the particular project.

- The system administrator assigns system-level security—roles and accounts—to all users.
- Project permissions are assigned by the project lead or by any user who has Admin permission for the project.

Project Minimum Permissions

This section describes the minimum permissions required to perform project functions.

- A user with the admin role does not need specific permission for the project to perform project functions. Generally, an admin user’s permission for the prj account determines which functions they can perform.
- By default, the project lead has RWDA permission for the project. The project lead’s project permissions cannot be changed.
- By default, the user who creates a project has RWDA permission for the project. This user cannot change their own permission for the project, but another user with Admin permission for the project can change their permissions for them.

This table shows only the effect of the Admin role on security permissions. The EnableForcedACLSecurity configuration variable does not affect Admin role permissions.

A useful way to interpret this table is in the form of a sentence:

> In order to `<project function>`, on `<where function is performed>`, if I have `<do not have>` the Admin role, I must have this permission.

For example:

In order to view a project on the My Projects page, if I have the Admin role, I do not need permissions to the security group, prj account, project account or project.

In order to view a project on the My Projects page if I do not have the Admin role, I must Read permission to the Projects security group, the prj account and the project.
Security Details

<table>
<thead>
<tr>
<th>Project Function</th>
<th>Where Function is Performed</th>
<th>Has admin Role</th>
<th>Permission to Projects Security Group</th>
<th>Permission to proj Account or Specific Project Account</th>
<th>Permission to Specific Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>View Project</td>
<td>My Projects page, Find Projects Results page, Trash</td>
<td>yes</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Exploring “name” page</td>
<td>yes</td>
<td>None</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Check Content Into and Out of Project</td>
<td>Exploring “name” page</td>
<td>yes</td>
<td>None</td>
<td>RW</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>RW</td>
<td>RW</td>
<td>RW</td>
</tr>
<tr>
<td>Update Project Metadata</td>
<td>Edit Collaboration Project page, Project Information page</td>
<td>yes</td>
<td>None</td>
<td>RW</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>RW</td>
<td>RW</td>
<td>RWDA</td>
</tr>
<tr>
<td>Update Project Members</td>
<td>Members page, Edit Project</td>
<td>yes</td>
<td>None</td>
<td>RW</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>RW</td>
<td>RW</td>
<td>RWDA</td>
</tr>
<tr>
<td>Delete Project</td>
<td>My Projects page, Find Projects results, Trash</td>
<td>yes</td>
<td>None</td>
<td>RWD</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>RWD</td>
<td>RWD</td>
<td>RWDA</td>
</tr>
<tr>
<td>Add Project</td>
<td>Create New Project link</td>
<td>yes</td>
<td>None</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>RW</td>
<td>RWDA</td>
<td>N/A</td>
</tr>
<tr>
<td>Restore Project</td>
<td>Trash</td>
<td>yes</td>
<td>None</td>
<td>RW</td>
<td>RW for original project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>RW</td>
<td>RW</td>
<td>RW for original project</td>
</tr>
</tbody>
</table>

A user does not need permission to the Projects security group to add a project, but R permission is required to view the content, and RW permission is required to contribute to the project. Generally, broader permission to the Projects security group (RW) is desirable for those who need to add projects.

Sending a project to the Trash is considered a move and requires fewer permissions than those needed to delete a project.
Folder Security for Projects

A user’s permission to perform folder functions is determined by their security group and account permissions and their permissions for the particular folder.

- The system administrator assigns system-level security—roles and accounts—to all users.
- Folder permissions are assigned by the folder owner or by any user who has Admin permission for the folder.

Folder Minimum Permissions

This section describes the **minimum** permissions required to perform folder functions.

- A user with the default **admin** role (RWDA for the **Projects** security group) can perform all functions for any folder, regardless of their specific project and folder permissions.
- Being assigned the admin role does not automatically grant permissions to the prj account. That must be assigned separately.
- By default, the folder owner has RWDA permission for the folder. The folder owner’s permissions cannot be changed.
- By default, the user who creates a folder has RWDA permission for the folder. This user cannot change their own permission for the folder, but another user with Admin permission for the folder can change their permissions for them.

If `EnableForcedACLSecurity=FALSE`, the following table describes the behavior in effect.

If `EnableForcedACLSecurity=TRUE` and the user is **assigned** the Admin role, the following table describes the behavior in effect.

If `EnableForcedACLSecurity=TRUE` and the user is **not** assigned the Admin role, the Admin permissions (the *A* in RWDA permissions to the security group) are no longer sufficient to grant various folder operation privileges. Only users with the Admin role can bypass folder and content item permissions. Therefore, specific permission will be needed.
for the project or the folder. Those entries marked with RWDA indicate where these specific permissions will be needed because the Admin role is not in use.

For example, when this is enabled even if a user has RWDA permission to the Projects security group, the folder and content item permissions now apply for that user. Therefore, they would need RW permission to a specific folder in order to update that folder’s metadata.

A useful way to interpret this table is in the form of a sentence:

\[
\text{In order to } \text{<folder function>, on } \text{<where function is performed>, I must have } \text{this permission.}
\]

For example:

In order to restore a folder from the Trash page, I must have RW permission to the Projects security group, RW permission to the prj account, no necessary permission for the project, and RW permission for the original parent folder and RW for the folder being restored.
<table>
<thead>
<tr>
<th>Folder Function</th>
<th>Where Function is Performed</th>
<th>Permission to Projects Security Group</th>
<th>Permission to prj Account or Specific Project Account</th>
<th>Permission to Project</th>
<th>Permission to Specific Folder</th>
</tr>
</thead>
<tbody>
<tr>
<td>View Folder</td>
<td>Trash</td>
<td>R</td>
<td>R</td>
<td>None</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD</td>
<td>A</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Exploring “name” page</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD</td>
<td>A</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Check Content In/Out of Folder</td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>RW (see Security Note, below)</td>
</tr>
<tr>
<td>Update Folder Metadata</td>
<td>Hierarchy Folder Config page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>RW (see Security Note, below)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD</td>
<td>A</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td>Update Folder Members (see Permission Note below)</td>
<td>Hierarchy Folder Config page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>RWDA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD</td>
<td>A</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td>Delete Folder</td>
<td>Exploring “name” page, Trash</td>
<td>RWD</td>
<td>RWD</td>
<td>R</td>
<td>RWD (see Security Note, below)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD</td>
<td>A</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td>Add Folder</td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>RW for parent folder/project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD</td>
<td>A</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td>Restore Folder</td>
<td>Trash</td>
<td>RW</td>
<td>RW</td>
<td>None</td>
<td>RW for original parent folder and RW for folder being restored</td>
</tr>
<tr>
<td>Move Folder</td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>R for parent folder, RW for target folder, and RW for folder being moved</td>
</tr>
<tr>
<td>Create Folder Shortcut</td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>R for original folder, RW for target folder</td>
</tr>
</tbody>
</table>
Security Details

Security note: If the `CollaborationUseLegacySecurity` configuration variable is set to TRUE, security will be as it was for version 7.0 in which a user must have RW permission on a project to contribute content to sub-folders that grant RW (as opposed to R).

Permission note: When `EnableForcedACLSecurity=true`, permissions needed to the folder are not RWDA but RW.

See Also

– *Folder Creation Example* (page A-14)
– *Folder Functions Example* (page A-15)
– *Setting Up Collaboration Manager Users* (page 3-7)

Content Item Security

Note: Content item security also applies to discussion items. Posting to a discussion is the same function as checking in a content item.

A user’s permission to perform content item functions is determined by their security group, account permissions, and their permissions for the content item.

- The system administrator assigns system-level security—roles and accounts—to all users.
- Content item permissions are assigned by the Author or by any user who has Admin permission for the content item.

Content Item Minimum Permissions

This section describes the minimum permissions required to perform content item functions.

- A user with the admin role can perform all functions for any content item, regardless of their specific project, folder, and content item permissions. The only exception to
this is that Read permission for the parent folder is required to view a content item on the Exploring “name” page.

- By default, the Author of a content item has RWDA permission for the item. The Author’s permissions cannot be changed.
- By default, the user who checks in a content item has RWDA permission for the item. This user cannot change their own permission for the content item, but another user with Admin permission for the content item can change their permissions for them.

If \texttt{EnableForcedACLSecurity=FALSE}, the following table describes the behavior in effect.

If \texttt{EnableForcedACLSecurity=TRUE} \textit{and} the user \textit{is} assigned the Admin role, the following table describes the behavior in effect.

If \texttt{EnableForcedACLSecurity=TRUE} \textit{and} the user \textit{is not} assigned the Admin role, then the entity access list permissions for each content item augment the standard Content Server security model of security groups and accounts. Only users with the Admin role can bypass folder and content item permissions as established with the entity access list. Therefore, specific permission will be needed for the project or the folder. Those entries marked with RWDA indicate where these specific permissions will be needed because the Admin role is not in use.

For example, when this is enabled even if a user has RWDA permission to the Projects security group, the folder and content item permissions now apply for that user. Therefore, they would need RW permission to a specific folder in order to update that folder’s metadata.

A useful way to interpret this table is in the form of a sentence:

\textit{In order to <content item function>, on <where function is performed>, I must have this permission.}

For example:

In order to \textbf{view an item} on the \textbf{Search Results page}, if I have \textbf{Read} permission to \textit{Projects}, the \textit{prj} account, and the Content Item, I do not need permissions to the parent folder or project.
<table>
<thead>
<tr>
<th>Content Item Function</th>
<th>Where Function is Performed</th>
<th>Permission to Projects Security Group</th>
<th>Permission to prj Account or Specific Project Account</th>
<th>Permission to Parent Folder or Project</th>
<th>Permission to Content Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View Content Item</strong></td>
<td>Search results page, notification e-mails, Trash</td>
<td>R</td>
<td>R</td>
<td>None</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Exploring “name” page</td>
<td>RWDA</td>
<td>R</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Exploring “name” page</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Exploring “name” page</td>
<td>RWDA</td>
<td>R</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td><strong>Check Out Content Item</strong></td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>RW</td>
</tr>
<tr>
<td></td>
<td>Dashboard, Content Information page, Workflow Content page</td>
<td>RWDA</td>
<td>RW</td>
<td>R for project; none for subfolder</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Dashboard, Content Information page, Workflow Content page</td>
<td>RW</td>
<td>RW</td>
<td>R for project; none for subfolder</td>
<td>RW</td>
</tr>
<tr>
<td></td>
<td>Dashboard, Content Information page, Workflow Content page</td>
<td>RWDA</td>
<td>RW</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td><strong>Check In New Content Item</strong></td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>RW</td>
<td>RWDA automatically assigned to author</td>
</tr>
<tr>
<td></td>
<td>Exploring “name” page</td>
<td>RWDA</td>
<td>RW</td>
<td>R</td>
<td>RWDA automatically assigned to author</td>
</tr>
<tr>
<td><strong>Check In Content Item revision</strong></td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>RW</td>
<td>RW</td>
</tr>
<tr>
<td></td>
<td>Exploring “name” page</td>
<td>RWDA</td>
<td>RW</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td><strong>Update Content Item Members</strong></td>
<td>Info Update Form</td>
<td>RW</td>
<td>RW</td>
<td>RW</td>
<td>RWDA</td>
</tr>
<tr>
<td></td>
<td>Info Update Form</td>
<td>RWDA</td>
<td>RWDA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
If Trash is enabled, deleting a content item is considered a move and requires fewer permissions.

<table>
<thead>
<tr>
<th>Content Item Function</th>
<th>Where Function is Performed</th>
<th>Permission to Projects Security Group</th>
<th>Permission to prj Account or Specific Project Account</th>
<th>Permission to Parent Folder or Project</th>
<th>Permission to Content Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete Content Item</td>
<td>Exploring “name” page</td>
<td>RWD</td>
<td>RWD</td>
<td>R</td>
<td>RWD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD A</td>
<td>RWD</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Content Information page, Trash</td>
<td>RWD</td>
<td>RWD</td>
<td>None</td>
<td>RWD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD A</td>
<td>RWD</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Check in for other users</td>
<td>Exploring “name” page</td>
<td>RWDA</td>
<td>RWDA</td>
<td>R</td>
<td>None</td>
</tr>
<tr>
<td>Restore Content Item</td>
<td>Trash</td>
<td>RW</td>
<td>RW</td>
<td>RW for original parent folder</td>
<td>RW</td>
</tr>
<tr>
<td>Move Content Item</td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>RW for target folder, RW for content item</td>
</tr>
<tr>
<td>Create Content Item Shortcut</td>
<td>Exploring “name” page</td>
<td>RW</td>
<td>RW</td>
<td>R</td>
<td>R for content item, RW for target folder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD A</td>
<td>RWDA</td>
<td>R</td>
<td>R for content item, None for target folder</td>
</tr>
<tr>
<td>Delete Content Item Shortcut</td>
<td>Exploring “name” page</td>
<td>RWD</td>
<td>RWD</td>
<td>R</td>
<td>RWD for content</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RWD A</td>
<td>R</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**See Also**

- *Content Checkin Example* *(page A-16)*
- *Content Functions Example* *(page A-17)*
- *Setting Up Collaboration Manager Users* *(page 3-7)*
Security Details

Security Example

In this example, several internal users are set up as contributors and subadministrators with the following profiles in Collaboration Manager:

<table>
<thead>
<tr>
<th>User Name</th>
<th>Roles</th>
<th>Projects Security Group Permission</th>
<th>prj Account Permission</th>
<th>Admin Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>sysadmin</td>
<td>admin</td>
<td>RWDA</td>
<td>RWDA</td>
<td>All</td>
</tr>
<tr>
<td>hchang</td>
<td>subadmin</td>
<td>RWDA</td>
<td>RWDA</td>
<td>User Admin, Workflow Admin</td>
</tr>
<tr>
<td>pkelly</td>
<td>project_creator</td>
<td>RWD</td>
<td>RWDA</td>
<td>None</td>
</tr>
<tr>
<td>rgarcia</td>
<td>contributor</td>
<td>RWD</td>
<td>RWD</td>
<td>None</td>
</tr>
<tr>
<td>sjones</td>
<td>contributor</td>
<td>RWD</td>
<td>RWD</td>
<td>None</td>
</tr>
<tr>
<td>dmarkov</td>
<td>guest</td>
<td>R</td>
<td>R</td>
<td>None</td>
</tr>
</tbody>
</table>

The example is developed further in the following topics:

- Project Creation Example (page A-12)
- Project Functions Example (page A-13)
- Folder Creation Example (page A-14)
- Content Checkin Example (page A-16)
- Content Functions Example (page A-17)
- Discussions Example (page A-19)
- Workflow Example (page A-20)

Project Creation Example

With this scenario, three users can create projects: sysadmin, hchang, and pkelly. The other three users cannot create projects because they do not have Admin permission for the prj account.

In our example, hchang sets up a project (using Browse Content—Manage Project—New Project) named 2004 Annual Report. This project will contain all of the content...
and communications related to the publication of the company’s annual report. The following project permissions are specified:

- *pkelly* is the project lead (RWDA permission)
- *rgarcia* has RWD permission
- *sjones* has RW permission
- *dmarkov* has RW permission

**See Also**

- *Project Security (page A-3)*
- *Project Functions Example (page A-13)*

## Project Functions Example

After assigning the appropriate permission, users can perform the following functions for the 2004 Annual Report project:

<table>
<thead>
<tr>
<th>User Name</th>
<th>Project Functions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sysadmin</td>
<td>All</td>
<td>The <em>sysadmin</em> user has the <em>admin</em> role and RWDA for the <em>prj</em> account, so they can perform all project functions.</td>
</tr>
<tr>
<td>hchang</td>
<td>All</td>
<td>The user who created the project has RWDA permission by default.</td>
</tr>
<tr>
<td>pkelly</td>
<td>All</td>
<td>The project lead has RWDA permission by default.</td>
</tr>
<tr>
<td>rgarcia</td>
<td>View, Check In Content</td>
<td>This user has RWD permission for the project, but you need Admin permission to be able to update or delete a project.</td>
</tr>
<tr>
<td>sjones</td>
<td>View, Check In Content</td>
<td>RW permission for the project allows this user to perform basic project tasks, but they cannot update or delete the project.</td>
</tr>
</tbody>
</table>
Folder Creation Example

Within the 2004 Annual Report project, pkelly creates two new folders (using the Action pull-down menu from the Exploring Project page), naming the folders Design and Content. The Design folder is for graphics and layout files, and the Content folder will contain text and spreadsheet documents. Note that the content types for graphics and content have been pre-defined.

The following folder permissions are specified:

<table>
<thead>
<tr>
<th>User Name</th>
<th>Design Folder Permission</th>
<th>Content Folder Permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>pkelly</td>
<td>folder owner (RWDA)</td>
<td>folder creator (RWDA)</td>
</tr>
<tr>
<td>rgarcia</td>
<td>RW</td>
<td>folder owner (RWDA)</td>
</tr>
<tr>
<td>sjones</td>
<td>RWDA</td>
<td>RWD</td>
</tr>
<tr>
<td>dmarkov</td>
<td>none</td>
<td>RW</td>
</tr>
</tbody>
</table>

After these folders are created and work on the project begins, a large number of content items are checked in to the Content folder.

See Also

– *Folder Security for Projects* (page A-5)
– *Folder Functions Example* (page A-15)
## Folder Functions Example

Users can perform the following functions for the Design folder:

<table>
<thead>
<tr>
<th>User Name</th>
<th>Folder Functions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sysadmin</td>
<td>All</td>
<td>The sysadmin user has the admin role, so they can perform all folder functions by default.</td>
</tr>
<tr>
<td>hchang</td>
<td>All</td>
<td>This user has RWDA rights to the Projects security group and the prj account.</td>
</tr>
<tr>
<td>pkelly</td>
<td>All</td>
<td>The folder owner has RWDA permission by default.</td>
</tr>
<tr>
<td>rgarcia</td>
<td>All except Delete Folder</td>
<td>RW permission for the Design folder (along with RWD to the Projects security group, prj account, and the project) allows this user to perform most folder tasks.</td>
</tr>
<tr>
<td>sjones</td>
<td>All</td>
<td>RWDA permission for the Design folder (along with RWD for the Projects Security Group and prj Account, and RW for the project) allows this user to perform all folder functions.</td>
</tr>
<tr>
<td>dmarkov</td>
<td>None</td>
<td>This user was excluded from the member list, so they cannot view the Design folder.</td>
</tr>
</tbody>
</table>

Users can perform the following functions for the Content folder:

<table>
<thead>
<tr>
<th>User Name</th>
<th>Folder Functions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sysadmin</td>
<td>All</td>
<td>The sysadmin user has the admin role, so they can perform all folder functions by default.</td>
</tr>
</tbody>
</table>
Security Details

See Also

– Folder Security for Projects (page A-5)
– Folder Creation Example (page A-14)

Content Checkin Example

Now that a project and folders are set up, the users can begin checking content items in to the folders.

- All users except dmarkov can check content in at the project level.
- pkelly, rgarcia, and sjones can check content in to the Design folder and the Content folder. In addition, hchang and the sysadmin can because they have Admin permission.
The following content items are checked in to the 2004 Annual Report project:

<table>
<thead>
<tr>
<th>Content Item</th>
<th>Folder</th>
<th>User Checking In File</th>
<th>Author</th>
<th>Access List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project schedule</td>
<td>2004 Annual Report</td>
<td>pkelly</td>
<td>pkelly</td>
<td>pkelly(RWDA), hchang(R), rgarcia(R), sjones(R), dmarkov(R)</td>
</tr>
<tr>
<td>Quark design file</td>
<td>Design</td>
<td>pkelly</td>
<td>pkelly</td>
<td>pkelly(RWDA), sjones (RWDA), rgarcia(R)</td>
</tr>
<tr>
<td>Zip of graphics</td>
<td>Design</td>
<td>sjones</td>
<td>sjones</td>
<td>pkelly(RW), sjones(RWDA), rgarcia(R)</td>
</tr>
<tr>
<td>Financials spreadsheet</td>
<td>Content</td>
<td>sjones</td>
<td>sjones</td>
<td>pkelly(RW), sjones(RWDA), rgarcia(RWD), dmarkov(RW)</td>
</tr>
<tr>
<td>Annual report text</td>
<td>Content</td>
<td>rgarcia</td>
<td>rgarcia</td>
<td>pkelly(RW), rgarcia(RWDA), dmarkov(RW)</td>
</tr>
</tbody>
</table>

See Also

– *Content Functions Example* *(page A-17)*

**Content Functions Example**

Users have the following access to the content items in the 2004 Annual Report project:

<table>
<thead>
<tr>
<th>User Name</th>
<th>Content Item</th>
<th>Functions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sysadmin</td>
<td>All</td>
<td>All</td>
<td>The <em>sysadmin</em> user can perform all content item functions by default.</td>
</tr>
<tr>
<td>User Name</td>
<td>Content Item</td>
<td>Functions</td>
<td>Explanation</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------</td>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>hchang</td>
<td>Project schedule</td>
<td>All</td>
<td>This user has RWDA rights to the <em>Projects</em> security group and the <em>prj</em> account.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quark design file</td>
<td>All</td>
<td>This user has RWDA rights to the <em>Projects</em> security group and the <em>prj</em> account.</td>
</tr>
<tr>
<td></td>
<td>Zip of graphics</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financials spreadsheet</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual report text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pkelly</td>
<td>Project schedule</td>
<td>All except Check In for Other Users</td>
<td>RWDA permission to the <em>Projects</em> security group is required to check in for other users.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quark design file</td>
<td>All except Update Members, Delete Content Item, and Check In for Other Users</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zip of graphics</td>
<td>All except Update Members, Delete Content Item, and Check In for Other Users</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financials spreadsheet</td>
<td>All except Update Members, Delete Content Item, and Check In for Other Users</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual report text</td>
<td>All except Update Members, Delete Content Item, and Check In for Other Users</td>
<td></td>
</tr>
<tr>
<td>rgarcia</td>
<td>Project schedule</td>
<td>All except Update Members, Delete Content Item, and Check In for Other Users</td>
<td>RW permission for the content item.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quark design file</td>
<td>View and Create Shortcut</td>
<td>R permission for the content item.</td>
</tr>
<tr>
<td></td>
<td>Zip of graphics</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financials spreadsheet</td>
<td>All except Update Members and Check In for Other Users</td>
<td>RWD permission for the content item.</td>
</tr>
<tr>
<td></td>
<td>Annual report text</td>
<td>All</td>
<td>RWDA permission for the content item.</td>
</tr>
</tbody>
</table>
As design of the annual report is taking shape, sjones wants to discuss some of the layout details. She submits a post to the discussion associated with the Quark design file content item. She then realizes that rgarcia has only Read permission because the discussion inherits permissions from the associated content item. Since sjones has Admin permission for the discussion, she can update the member list for the discussion to give rgarcia RW permission; the content item permissions remain unchanged.

<table>
<thead>
<tr>
<th>User Name</th>
<th>Content Item</th>
<th>Functions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sjones</td>
<td>Project schedule</td>
<td>View and Create Shortcut</td>
<td>R permission for the content item.</td>
</tr>
<tr>
<td></td>
<td>Quark design file</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zip of graphics</td>
<td>All</td>
<td>RWDA permission for the content item.</td>
</tr>
<tr>
<td></td>
<td>Financials spreadsheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual report text</td>
<td>None</td>
<td>This user was excluded from the member list, so they cannot view the content item.</td>
</tr>
<tr>
<td>dmarkov</td>
<td>Project schedule</td>
<td>View</td>
<td>R permission for the content item.</td>
</tr>
<tr>
<td></td>
<td>Quark design file</td>
<td>None</td>
<td>This user was excluded from the member lists, so they cannot view these content items.</td>
</tr>
<tr>
<td></td>
<td>Zip of graphics</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financials spreadsheet</td>
<td></td>
<td>Although this user has RW permission for these content items, they only have Read permission for the Projects security group and prj account. To delete a content item shortcut, this user must have Read permission for the parent folders of both the shortcut and the original content item.</td>
</tr>
<tr>
<td></td>
<td>Annual report text</td>
<td>View Content</td>
<td></td>
</tr>
</tbody>
</table>

See Also

– Content Checkin Example (page A-16)
Workflow Example

When the annual report is ready to be published, it needs to go through a final review. pkelly checks the annual report file into the 2004 Annual Report project, assigns RW permission to rgarcia and sjones, and specifies that it needs to enter a three-step workflow.

- At the first step, sjones and rgarcia are editors. Their RW permission for the content item enables them to check out the content item and edit it before approval.

- At the second step, pkelly is the sole editor. Because he is the author, he has RWDA permission, and can edit the content item one last time. He also realizes that he has not given dmarkov, the final reviewer, access to the content item; before approval, he changes the member list to give dmarkov Read permission for the content item.

At the last step, dmarkov has final approval of the annual report. Read permission for the content item allows him to approve or reject the item. However, if this was an editor step, dmarkov would need RW permission to be able to check out the content item.
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* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.3, July 18th, 2005

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