Agile Product Lifecycle Management

Recipe Management for Pharmaceuticals Administrator Guide

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Primary Author: Edlyn Sammanasu

Contributing Author:

Contributor:

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B Recipe & Material Workspace Keywords

Preface

Agile PLM is a comprehensive enterprise PLM solution for managing your product value chain.

Audience

This document is intended for administrators and users of the Agile PLM products.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc`.

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Related Documents

Oracle's Agile PLM documentation set includes Adobe® Acrobat PDF files. The Oracle Technology Network (OTN) Web site `http://www.oracle.com/technetwork/documentation/agile-085940.html` contains the latest versions of the Agile PLM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM Documentation folder available on your network from which you can access the Agile PLM documentation (PDF) files.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Convention	Meaning
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Introduction to Recipe & Material Workspace Administration

Agile Product Lifecycle Management (PLM) introduces Recipe & Material Workspace (Recipe Management for Pharmaceuticals) with PLM Release 9.3.1.

Introducing Recipe & Material Workspace

The Recipe Management for Pharmaceuticals solution enables biotechnology and pharmaceutical development companies to create products as well as improve business productivity, visibility, scientific outcomes, and proactive compliance during the product development lifecycle.

Recipe Management for Pharmaceuticals Administrator Nodes for Configuration

The list below summarizes the functions that can be configured in each administrative node of Recipe Management for Pharmaceuticals . Most of the nodes are accessed in the **Tools & Settings** dropdown menu. People and Organizations are accessed using the **Search** dropdown menu.

System Tools

The **System Tools** node lets you manage Data Audit Trails. Recipe Management for Pharmaceuticals provides audit trails on key functions to conform to regulatory requirements. For example, if anyone changes an attribute for a piece of equipment, that change is logged and maintained in an Audit Trail File. This function is detailed in System Tools.

Settings

The **Settings** node includes Default Preferences, Image, and Image Map. These functions are detailed in Settings.

Alerts/Workflows

This section describes the **Alerts/Workflows** node.

Alerts

The **Alerts/Workflows** node lets you provide alerts for the user. For example, you provide permissions for a user to use an alert for a group. When the user wants to send out an alert to all members of that group, it is sent to the group, not to each individual member. These functions are detailed in Alerts.

Workflows

Besides alerts, the **Alerts/Workflows** node also lets you automate manual processes into Workflows, Workflow States, and Workflow State Actions.

These functions are detailed in Workflows.

Administration

The **Administration** node lets you manage Library (that is, Records), Internal ID, Object Lock, Cache, and Service. These functions are detailed in Administration.

Object Modeling

The **Object Modeling** node helps you manage those data objects that are required by the database. You can create new Categories (also known as Business Objects or Tables), Attributes, Views, Subviews, Enumerated Valid Values, Units Of Measure (UOM), UOM Groups, and UOM Conversions. These functions are detailed in Object Modeling. Also see Keywords used by Recipe Management for Pharmaceuticals System.

Integration

The **Integration** node lets you manage Application, Web Service, and Test functions. These functions are detailed in Integration.

The Web service integrated framework invokes external Web services and plugged-in custom-built Web services. The integration is XML-based. All communication between the client and the external application is in XML format.

People

The Recipe Management for Pharmaceuticals administrator accesses People via the **Search** field (using the dropdown arrow). The "**People**" selection lets you choose User, User Group, Contact, and Role. These functions are detailed in People.

Organizations

The Recipe Management for Pharmaceuticals administrator accesses Organizations via the **Search** field (using the dropdown arrow). The "**Organizations**" selection lets you choose Company, Site, Location, Department, and Site Qualification. These functions are detailed in Organizations.

General Administration and Configuration Files

Default settings and utility services for Recipe Management for Pharmaceuticals , and some troubleshooting procedures, are detailed in General Administration.

Configuration information of the Recipe Management for Pharmaceuticals application, such as authentication type, audit trail enabling/disabling, the list of resource files and so on, is stored in a set of configuration files, which are detailed in Configuration Files.

Reserved keywords are detailed in Keywords.

What's New

The following sections describe new features as they are introduced in a particular release.

New Features in Recipe Management for Pharmaceuticals Material Management in 9.3.3

No new administrator features were introduced in Recipe Management for Pharmaceuticals Release 9.3.3.

New Features in Recipe Management for Pharmaceuticals Material Management in 9.3.1.2

No new administrator features were introduced in Recipe Management for Pharmaceuticals Release 9.3.1.2.

New Features in Recipe Management for Pharmaceuticals Administrator Nodes for 9.3.1.1

New administrator features in Recipe Management for Pharmaceuticals Release 9.3.1.1 include the following:

- Multiple language support is now available for Recipe Management for Pharmaceuticals . See Multiple Language Support in Recipe Management for Pharmaceuticals .
- Labels, including but not limited to EVV values and view names, can be localized. All labels that can be localized can also be customized or overridden. See Localizing EVV Value and Customizing and Localizing Labels for details.
- There are licensing tasks that must be completed in Agile PLM before a user is able to see the link to switch to Recipe Management for Pharmaceuticals . For more information about this, see Administrator Access to and from Recipe Management for Pharmaceuticals .
- Recipe Management for Pharmaceuticals users cannot set the preferences of Language, Date Format, or Time Zone preferences from the Recipe Management for Pharmaceuticals user preferences option. The menu items for managing Locale and Number Format have been removed. All of these settings are inherited from the Agile PLM side.
- You can no longer explicitly lock or unlock user-locked objects. You can, however, unlock objects that are currently being edited that have been locked by Recipe Management for Pharmaceuticals . See Unlocking Objects Currently Being Modified.
- The locking grid (where the user can freeze display of a few columns and scroll to see the data in the other columns) has been removed.
- The user with login 'administrator' has been removed from Recipe Management for Pharmaceuticals , to meet the default settings of Agile PLM.

2

Integrating Agile Recipe Management for Pharmaceuticals with Agile PLM

This chapter provides information about prerequisite settings in PLM Administrator and system files. The two main areas of integration are:

- the configuration of PLM users so they can work in Agile Recipe Management for Pharmaceuticals, and
- the configuration of PLM business objects that can be leveraged in Agile Recipe Management for Pharmaceuticals.

The material in this chapter must be thoroughly and sequentially applied before refining Agile Recipe Management for Pharmaceuticals users and the Agile Recipe Management for Pharmaceuticals solution itself (as documented in the rest of this manual).

Administrator and User Access to Agile Recipe Management for Pharmaceuticals

This section presents some tasks that permit access to the Agile Recipe Management for Pharmaceuticals user interface in Agile Web Client, as a starting point. This table gives a summary of configuration to work in Agile Recipe Management for Pharmaceuticals:

Administrator User or End-user	Client used to configure Agile Recipe Management for Pharmaceuticals or work in Agile Recipe Management for Pharmaceuticals	Configuration required to perform administrative or user tasks in Agile Recipe Management for Pharmaceuticals
The PLM Administrator uses the information in this chapter to set up, synchronize, and integrate PLM Users and Business Objects to properly work in Agile Recipe Management for Pharmaceuticals. *Then an Agile Recipe Management for Pharmaceuticals Administrator refines User capabilities and configures Business Objects in Agile Recipe Management for Pharmaceuticals.*		
PLM Administrator	**Java Client** (**Admin** tab)	PLM "Administrator" role and/or privilege
Agile Recipe Management for Pharmaceuticals Administrator	**Web Client** > Agile Recipe Management for Pharmaceuticals Administrator UI (which is fully documented in this manual)	Must be assigned specific PLM privilege mask to access Agile Recipe Management for Pharmaceuticals, *plus* specific selection in AppliedTo property to configure the solution and refine users.

Administrator User or End-user	Client used to configure Agile Recipe Management for Pharmaceuticals or work in Agile Recipe Management for Pharmaceuticals	Configuration required to perform administrative or user tasks in Agile Recipe Management for Pharmaceuticals
All Agile Recipe Management for Pharmaceuticals users are created in Agile PLM (or company LDAP system) and synchronized and further configured to work in the Agile Recipe Management for Pharmaceuticals user interface.		
Agile Recipe Management for Pharmaceuticals End-user	**Web Client**'s "Agile Recipe Management for Pharmaceuticals" UI (documented in other Agile Recipe Management for Pharmaceuticals user manuals)	Must be assigned specific PLM privilege mask to access Agile Recipe Management for Pharmaceuticals, *plus* additional configuration in PLM (detailed in this chapter), *plus* assigned Agile Recipe Management for Pharmaceuticals roles and privileges (detailed later in this manual)
PLM End-user	**Web Client**'s "Product Collaboration" UI	PLM roles and privileges (documented in *Agile PLM Administrator Guide*). Cannot access Agile Recipe Management for Pharmaceuticals unless properly configured

You will return to User Configuration in Configuring PLM Users for Agile Recipe Management for Pharmaceuticals.

Administrator Access to and from Agile Recipe Management for Pharmaceuticals

This section contains 4 procedures that describe how the PLM Administrator:

1. gives a PLM user administrative access to Agile Recipe Management for Pharmaceuticals. Once he/she is given administrative access, the PLM user is considered an Agile Recipe Management for Pharmaceuticals Administrator.
2. accesses Agile Recipe Management for Pharmaceuticals administrative features in Agile Recipe Management for Pharmaceuticals.
3. gives the Agile Recipe Management for Pharmaceuticals Administrator the ability to switch back to PC from Agile Recipe Management for Pharmaceuticals.
4. accesses PC from Agile Recipe Management for Pharmaceuticals.

> **Note:** The procedures described in #2 and #4 are applicable to both the Agile Recipe Management for Pharmaceuticals Administrator and the PLM Administrator.

The following procedure allows the PLM Administrator to make a PLM user an Agile Recipe Management for Pharmaceuticals Administrator.

For a PLM user to have access to the administrative functions in Agile Recipe Management for Pharmaceuticals:

1. Assign the **Agile Recipe & Material Workspace UI Access** privilege mask to the user.

2. Assign the (PLM) **Administrator** privilege mask to the user.
3. In the user's Administrator privilege mask AppliedTo property, move **Agile Recipe Management for Pharmaceuticals Admin** from the Choices field to the Selected field.

> **Note:** As managing PLM Administrator for your company, you may want to assign user(s) to the administrative function for Agile Recipe Management for Pharmaceuticals users without granting full administrative capacity in PLM. The AppliedTo property is fully detailed in the chapter on Privileges in *Agile PLM Administrator Guide*.

This following procedure can be done by a PLM Administrator or Agile Recipe Management for Pharmaceuticals Administrator.

To go to the administrative functions in Agile Recipe Management for Pharmaceuticals:

1. In Agile Web Client's standard interface, choose **Tools & Settings > Agile Recipe Management for Pharmaceuticals** to open the Agile Recipe Management for Pharmaceuticals user interface.

   > **Note:** There are a few licensing tasks that must be completed in PLM in order to enable the *Agile Recipe Management for Pharmaceuticals* menu item. For details, see the *Agile PLM Administrator Guide.*

   Many buttons and features are the same as in Web Client's user interface for the other PLM solutions.
2. Click **Tools & Settings** again; a dropdown menu appears. It lists the Agile Recipe Management for Pharmaceuticals administrative components. These Agile Recipe Management for Pharmaceuticals-configuring objects are fully documented in the remaining chapters of this manual.

Once an Agile Recipe Management for Pharmaceuticals Administrator is in Agile Recipe Management for Pharmaceuticals, he must also have the proper privilege to access PC from Agile Recipe Management for Pharmaceuticals. The PLM Administrator must complete the following task to give the Agile Recipe Management for Pharmaceuticals Administrator this privilege.

For an Agile Recipe Management for Pharmaceuticals administrator to have access to Product Collaboration from Agile Recipe Management for Pharmaceuticals:

1. From the Search dropdown menu, select **People > Role**.
2. Enter Admin* in the Search field, then click **Execute Search**.
3. On the *Administrator* row, click the checkbox, then click the **Edit** button.
4. Open the **Privileges** tab, then click the **Actions** subtab.
5. On this path: **System > Default > Manage**, select **Product Collaboration**.
6. Click **OK**.
7. This sequence permits access of the PC user interface.

To go to Product Collaboration from Agile Recipe Management for Pharmaceuticals:

This can be done by an Agile Recipe Management for Pharmaceuticals administrator user who has been configured according to the previous procedure.

1. Choose **Tools & Settings > Product Collaboration** to return to the standard user interface for the other PLM solutions.

Agile Recipe Management for Pharmaceuticals Preferred Start Page

If it helps for an Agile Recipe Management for Pharmaceuticals administrator or Agile Recipe Management for Pharmaceuticals users to be directed to the Agile Recipe Management for Pharmaceuticals user interface *upon logging in* to Web Client, on the user's User Preferences, set Preferred Start Page to **Agile Recipe Management for Pharmaceuticals**.

This menu selection is available only to those users who have been assigned the **Agile Recipe & Material Workspace UI Access** privilege mask, assuming that the Agile Recipe Management for Pharmaceuticals licenses are enabled in PLM. This prevents a PLM user from changing his Preferred Start Page to Agile Recipe Management for Pharmaceuticals if he has not been assigned the privilege to the Agile Recipe Management for Pharmaceuticals UI.

Note: The Preferred Start Page setting affects how UI-UI context switching functions. To learn about how UI-UI context switching is affected by this setting, see the *Getting Started with Agile Recipe Management for Pharmaceuticals Guide.*

User Access to Agile Recipe Management for Pharmaceuticals

A PLM user can access the Agile Recipe Management for Pharmaceuticals solution after the PLM administrator assigns the PLM privilege mask called **Agile Recipe & Material Workspace UI Access**.

Important: The tasks below do not indicate anything more than access of the Agile Recipe Management for Pharmaceuticals solution. End-users must be created in PLM and further configured in Agile Recipe Management for Pharmaceuticals, as documented in Configuring PLM Users for Agile Recipe Management for Pharmaceuticals.

Further Agile Recipe Management for Pharmaceuticals-specific roles and privileges are assigned to users within the Agile Recipe Management for Pharmaceuticals solution.

Note: You may want to create a role for "Agile Recipe Management for Pharmaceuticals User", especially if you want to consistently bundle together other PLM privileges for PLM users who will work in Agile Recipe Management for Pharmaceuticals. For more information, see *Agile PLM Administrator Guide* chapter on Roles.

To give a PLM user access to Agile Recipe Management for Pharmaceuticals in Web Client:

1. All users who will work in the Agile Recipe Management for Pharmaceuticals solution are first created in Agile PLM (or the company's LDAP system).

2. An Agile PLM user must be assigned the **Agile Recipe & Material Workspace UI Access** privilege mask. This privilege mask is based on the **Agile Recipe & Material Workspace UI Access** privilege type.
3. From Agile Web Client's standard interface, a user chooses **Tools & Settings > Agile Recipe Management for Pharmaceuticals** to open the Agile Recipe Management for Pharmaceuticals user interface.

For Agile Recipe Management for Pharmaceuticals user, to access Product Collaboration from Agile Recipe Management for Pharmaceuticals:

1. In Agile Web Client's Agile Recipe Management for Pharmaceuticals interface, choose **Tools & Settings > Product Collaboration** to return to the standard UI for Product Collaboration and the other PLM solutions.

> **Note:** You must have already assigned the user the privilege to access Product Collaboration as mentioned in Configuring Privileges for the Integration User.

Preliminary Configuration Tasks in PLM

This section details preliminary configuration tasks.

Note that the following terms may be used in directory paths:

- ORACLE_HOME - the directory where Oracle software is installed
- AGILE_HOME - the directory where Agile software is installed

Run Pharma.sql

The pharma.sql file creates an Agile Recipe Management for Pharmaceuticals privilege mask and creates Agile Recipe Management for Pharmaceuticals-Agile PLM subclasses in PLM. The pharma.sql file does the following:

- Adds subclasses under Item - Materials subclass, Recipe subclass.
- Adds Workflow under for Material - Default Material ECO.
- Adds a new Privilege type - Agile Recipe & Material Workspace UI Access.
- Creates a new privilege - Agile Recipe & Material Workspace UI Access.
- Adds Agile Recipe Management for Pharmaceuticals Admin to Admin type list. (The list of activities that the admin can access).
- Enables the Material and Equipment Management and Recipe Management modules. (These modules are added to the database in a disabled state.)

Run thepharma.sql script as Agile DB user. It is located at oracle_ home\admin\<ORACLE_SID>\create\<agile schema user>.

Required Changes When Agile Recipe Management for Pharmaceuticals and PLM Are Installed Separately

When PLM and Agile Recipe Management for Pharmaceuticals are installed on different servers, there are manual changes you must make on the PLM side, as well as the Agile Recipe Management for Pharmaceuticals side.

Manual Changes Required in Agile Recipe Management for Pharmaceuticals

When PLM and Agile Recipe Management for Pharmaceuticals are installed on separate servers, you must verify that the following URLs are properly defined in the CFMConfig.xml file which is located in agile_home\AgilePharma\config.

Note that when PLM and Agile Recipe Management for Pharmaceuticals are installed on the same server, these properties are pre-populated and manual changes are not required.

Agile Http URL

Set the Agile HTTP URL:

http://<A9_SERVER_HOST_NAME>:<A9_SERVER_PORT>/<A9_VIRTUAL_PATH>

where "A9" refers to Agile PLM 9.*x.y.z* (such as 9.3.1.1). The default port number is "23791".

Example:

<AgileHttpUrl> `http://plm.company.com:23791/Agile` </AgileHttpUrl>

The Remote Method Invocation (RMI) is slightly different on OAS or WLS.

If Agile PLM is installed on Oracle Application Server (OAS), the RMI should be:

Ormi://<A9_SERVER_HOST_NAME>:<RMI_port>/<virtual_path>

Example:

<AgileRmiUrl> **ormi://plm.company.com:23791/Agile** </AgileRmiUrl>

If PLM is installed on WebLogic Server (WLS), the RMI should be:

T3://<A9_SERVER_HOST_NAME>:<A9_SERVER_PORT>

Example:

<AgileRmiUrl> **T3://plm.company.com:7001/Agile**

</AgileRmiUrl>

Agile Web Services URL

Agile Web Services are located at

http:// <A9_SERVER_HOST_NAME>:<A9_SERVER_PORT>/<A9_WS_VIRTUAL_PATH>/services

Example:

<AgileWebServiceUrl> `http://plm.company.com:23791/CoreService/services` </AgileWebServiceUrl>

Summary of Agile Details

Another look at these "Agile Details":

`<AgileDetails>`

<AgileHttpUrl> **>**http://<agile_host>:<port>/<virtual_path </AgileHttpUrl>

<AgileRmiUrl> **ormi://<agile_host>:<RMI_port>/<virtual_path>** </AgileRmiUrl>

<AgileWebServiceUrl> **>**http://<agile_host>:<port>/<Web_Services_virtual_path </AgileWebServiceUrl>

```
</AgileDetails>
```

Manual Changes Required in PLM

The following changes are required in PLM when PLM and Agile Recipe Management for Pharmaceuticals are installed on different servers.

Configuring agile.properties For Separate Server Setup

1. Open agile.properties and scroll down to the Agile Agile Recipe Management for Pharmaceuticals Integration section.

> **Note:** If PLM is installed on an OAS server, agile.properties is located in oracle_ home\j2ee\home\applications\Agile\APP-INF\classes. If Agile is installed on Weblogic, the location of the file agile.properties is agile_ home\agileDomain\config.

2. Modify properties as given below:

   ##### Agile Agile Recipe Management for Pharmaceuticals Integration #####

   # Change this value to true if Agile Recipe Management for Pharmaceuticals is installed.

   agilepharma.install = true

   # Specify the Host Name of the Pharma Server.

   agilepharma.hostname = < Agile Recipe Management for Pharmaceuticals_ hostname>

   # Specify the Port Number of the Pharma Server.

   agilepharma.portnumber = < Agile Recipe Management for Pharmaceuticals_ port>

   # Specify the Protocol http or https.

   agilepharma.protocol = http

   # If the Agile Recipe Management for Pharmaceuticals server is configured for HTTPS/SSL, specify:

   agilepharma.protocol = https

3. Save the file.

Create Default Company and Site in Agile Recipe Management for Pharmaceuticals

"Default Company" and "Default Site" properties work differently in Agile Recipe Management for Pharmaceuticals than they do in PLM. The administrator must set default values for the Company and Site attributes in Agile Recipe Management for Pharmaceuticals, and have them correctly mapped from PLM, before creating Agile Recipe Management for Pharmaceuticals users.

If "Sites" are not enabled in PLM, the "Default Company" attribute must be set in Agile Recipe Management for Pharmaceuticals Administrator for user synchronization to work properly (this is accomplished in the task below).

To configure Company and Site in Agile Recipe Management for Pharmaceuticals:

1. Choose **Create New > Organizations > Company**.
2. Enter a Company **Name**. There are other properties you may fill in, but Name is the only required field that does not have a default value.
3. Choose **Create New > Organizations > Site**. A site always has a root Company, and the Company has to exist before the site can be created.

   These Agile Recipe Management for Pharmaceuticals objects are documented in the sections Add New Company and Add New Site.
4. Under **Tools & Settings**, choose **Settings > Default Preferences** and, under the **System** tab, ensure that the Default Company attribute is populated.
5. Do one of the following:

   a. In Java Client, on the General Info tab of the User object, set the attributes **Default Site** and **Sites** as Required fields. You must provide a valid Company for the **Sites** and **Default Site** attributes while creating or modifying the user in PLM.

   b. Leave the **Default Site** and **Sites** attributes in PLM empty. Ensure that the **Default Company** is set in the **Default Preferences** in Agile Recipe Management for Pharmaceuticals. In this case, the Agile Recipe Management for Pharmaceuticals user will have company as the "Default Company" in the Agile Recipe Management for Pharmaceuticals Default Preferences.

Differences in Company and Site in PLM and Agile Recipe Management for Pharmaceuticals

- In Agile Recipe Management for Pharmaceuticals, regarding Company, and unlike Product Collaboration:
  - Company is a business object, not an attribute;
  - Company is a necessary parent object for a Site in Agile Recipe Management for Pharmaceuticals;
  - Company is a required attribute for creating Users; that is why a default value must be set in Agile Recipe Management for Pharmaceuticals admin's Default Preferences;
  - User synchronization maps (PC user) Default Site to (Agile Recipe Management for Pharmaceuticals admin) Default Company.
- In Agile Recipe Management for Pharmaceuticals, regarding Site, and unlike Product Collaboration:
  - A Site always has a parent Company;
  - That Company must exist before the Site can even be created;
  - A Site can have multiple levels of child sites, locations, etc.;
  - A Site can be defined as a Supplier, a Manufacturer, or both.

Configure CFMConfig.xml for Integration Updates to PLM

The CFMConfig.xml file is the main configuration file in Agile Recipe Management for Pharmaceuticals.

There is one parameter in CFMConfig.xml that must be configured for integration purposes. You must set the hourly periodicity of the integration of Agile Recipe Management for Pharmaceuticals to Product Collaboration (or "PC", the basic solution in PLM) - that is, how often you want the system to publish Agile Recipe Management for Pharmaceuticals updates to PC - open

agile_home\AgilePharma\config\CFMconfig.xml

and, under the CFMDaemon tag, adjust the **AgileIntegrationHourlyPeriodicity** property.

The property accepts integers 1-24 (that is, 1, 2, 3, ..., 23, or 24) for number of Hours.

Configuring PLM Users for Agile Recipe Management for Pharmaceuticals

This section details how to configure users who will work in the Agile Recipe Management for Pharmaceuticals solution.

All users who will work in the Agile Recipe Management for Pharmaceuticals solution are created in Agile PLM (Java Client or Web Client), or in the company's LDAP system.

Sequence of Agile Recipe Management for Pharmaceuticals User Configuration

The following sequence applies to all users who will work in Agile Recipe Management for Pharmaceuticals.

Sequence to configure Agile Recipe Management for Pharmaceuticals users:

1. **Create user**:

   Users are created in PLM, either in Java Client (**Admin**), in Web Client (**Address Book**), or in the company's **LDAP** system.

   > **Note:** You may need to refer to the chapter about Users in *Agile PLM Administrator Guide*.

2. **Provide PLM Privilege to access Agile Recipe Management for Pharmaceuticals**:

   Each user must be assigned **Agile Recipe & Material Workspace UI Access** privilege mask. Any user can also have PLM roles & privileges for non-Agile Recipe Management for Pharmaceuticals work.

   > **Note:** Roles assignment must be done in both PLM (this step) and in Agile Recipe Management for Pharmaceuticals Administrator (see final step below).

3. **Email format**:

   Agile Recipe Management for Pharmaceuticals requires that each user's email address be in this format: xxx.yyy@zzz.com where "*xxx*" represents the user's first name, "*yyy*" represents the user's last name, and "*zzz*" represents the domain name of the mail server.

4. **Preferred Start Page**:

   User > **User Preferences > Preferred Start Page** and set to **Agile Recipe Management for Pharmaceuticals**. This lands the user directly in the Agile Recipe Management for Pharmaceuticals user interface. While this setting is best for users who will work only in Agile Recipe Management for Pharmaceuticals, it is optional and may not be preferred for users who work in other PLM solutions along with Agile Recipe Management for Pharmaceuticals.

> **Note:** The **Agile Recipe Management for Pharmaceuticals** option for Preferred Start Page is available only when the user has the Agile Recipe & Material Workspace UI Access privilege and Agile Recipe Management for Pharmaceuticals specific licenses are enabled in the PLM.

5. **Company and Site**:

   Preliminary tasks were described in Create Default Company and Site in Agile Recipe Management for Pharmaceuticals.

6. **User Synchronization**:

   PLM users must be synchronized with Agile Recipe Management for Pharmaceuticals before any Agile Recipe Management for Pharmaceuticals-specific modifications to users can be made. Before creating and configuring users for Agile Recipe Management for Pharmaceuticals, you must choose between manual synchronization and automatic synchronization. The latter process is more involved than creating a single Process Extension, but it is more efficient in the long run, especially for synchronizing many Agile Recipe Management for Pharmaceuticals users. See Preliminary Steps to Synchronize Agile Recipe Management for Pharmaceuticals Users for more information.

7. **Refine and modify user in Agile Recipe Management for Pharmaceuticals**:

   Now the user can be seen and accessed in Agile Recipe Management for Pharmaceuticals. His capabilities in Agile Recipe Management for Pharmaceuticals now depend on the Agile Recipe Management for Pharmaceuticals administrator assigning Agile Recipe Management for Pharmaceuticals roles, following the procedures detailed in the sections Configuring Privileges for the Integration User and People.

   > **Note:** Agile Recipe Management for Pharmaceuticals administrators are automatically synchronized, once they fulfill the conditions described in Administrator Access.

   The Agile Recipe Management for Pharmaceuticals administrator further refines the configuration of Agile Recipe Management for Pharmaceuticals users by applying solution-specific roles and privileges *from within* the administrative functions of Agile Recipe Management for Pharmaceuticals. For details on Agile Recipe Management for Pharmaceuticals-side configuration of users, see People.

Preliminary Steps to Synchronize Agile Recipe Management for Pharmaceuticals Users

To synchronize Agile Recipe Management for Pharmaceuticals users, choose one of the following ways of synchronizing User objects:

a. Create a user in PLM and manually synchronize the User object to Agile Recipe Management for Pharmaceuticals. This is called the "force synchronization" process, and it is detailed in Create Process Extension to Manually Synchronize Users.

b. Set up Event subscriptions in the Event Management framework that will automatically synchronize modifications to Users. The components are detailed in

Event Management Process Extensions for Automatic User Synchronization. This is the recommended method.

Create Process Extension to Manually Synchronize Users

Users must be synchronized from the Agile PLM framework to the Agile Recipe Management for Pharmaceuticals solution.

If your company's use of Agile Recipe Management for Pharmaceuticals will be limited to a finite number of users, you may elect to create a single process extension and apply it manually. The alternative is to use the Event Management capability (in Administrator module of Java Client) for automatic user synchronization.

Note: If you elect to use the Event Management framework to automatically synchronize users, the PX in this topic is not necessary. See Create Event Management PXs for Automatic User Synchronization.

When the general "Agile Recipe Management for Pharmaceuticals User Synchronization" Process Extension (PX) is created and added to the **Users** class (or subclass) in Java Client, it is then available to manually synchronize users from PLM to Agile Recipe Management for Pharmaceuticals.

Note: The jar file namedpharmaIntegrationPX.jar was deployed, during Install, in the **extensions** folder (**agile_home > integration > sdk > extensions**), but it will not show up in Java Client until the PX is configured.

To create the "Agile Recipe Management for Pharmaceuticals User Synchronization" PX:

1. In **Java Client >Admin > Data Settings > Process Extensions**, click the **New** icon and populate it with these values:
   - Name: **Agile Recipe Management for Pharmaceuticals User Synchronization** [suggested]
   - API Name: [accept the default after entering a Name]
   - Description: [brief description of the PX]
   - Type: **Internal Custom Action**
   - Internal Custom Action [this field was enabled when you set Type; the PX itself was deployed onto the server at Install time]: com.agile.agilepharma.integration.PX.UserIntegrationPX
   - Initiate From: **Actions Menu** [move from Choices to Selected in the dropdown dialog]
   - Roles: [leave empty]

   Important: The PX runs with the privileges of the user who triggers it, so it is important that the Roles field is left empty.

   - Enabled: **Yes**

2. Click **OK** to save the PX.
3. Navigate to **Data Settings > Classes > users** class > **Process Extensions** tab, and assign the Agile Recipe Management for Pharmaceuticals User Synchronization PX to the **users** class.

   The "synchronize users" PX is now properly configured and available as you create new users or modify existing users to work in Agile Recipe Management for Pharmaceuticals. Once the PX is configured, you can do synchronizations by accessing the PX, which is available in the user object's Actions menu in the PLM web client.

Event Management PXs for Automatic User Synchronization

The Event Management capability in Java Client Administrator enables PXs to streamline the synchronization of User objects between PLM and Agile Recipe Management for Pharmaceuticals.

Event Management is fully documented in *Agile PLM Administrator Guide* and *Agile SDK Developers Guide*. The various masks below are guidelines for a useful set of Event subscriptions when users are created, modified (updated), or deleted.

Event Masks for User Synchronization

The following sections describe Event Masks for User Synchronization.

'Create User' Event mask: [Create User]

- **Event Type**: Create Object
- **Object Type**: User [the User subclass]

'Delete User' Event mask: [Delete User]

- **Event Type**: Delete Object
- **Object Type**: User [the User subclass]
- **Action:** Soft

'Update User' Event mask: [Update User]

- **Event Type**: Update Title Block
- **Object Type**: User [the User subclass]

Event Handler for User Synchronization

The following sections describe the Event Handler for User Synchronization.

Handler mask: [Agile Recipe Management for Pharmaceuticals User Sync Handler]

- **Handler Type**: Java PX
- **Event Action**: com.agile.agilepharma.integration.px.UserIntegrationPX
- **Enable:** Yes
- **Role:** [Leave blank.]

Event Subscribers for User Synchronization

The following sections describe the Event Subscribers for User Synchronization.

'Create User' Subscriber mask: [Agile Recipe Management for Pharmaceuticals Create User Sync Subscriber]

- **Event**: [CreateUser]
- **Event Handler**: [Agile Recipe Management for Pharmaceuticals User Sync Handler]
- **Trigger Type**: Post
- **Execution Mode**: Synchronous
- **Order**: 0
- **Error Handling Rule**: Continue

'Delete User' Subscriber mask: [Agile Recipe Management for Pharmaceuticals Delete User Sync Subscriber]

- **Event**: [DeleteUser]
- **Event Handler**: [Agile Recipe Management for Pharmaceuticals User Sync Handler]
- **Trigger Type**: Post
- **Execution Mode**: Synchronous
- **Order**: 0
- **Error Handling Rule**: Continue

'Update User' Subscriber mask: [Agile Recipe Management for Pharmaceuticals Modify User Sync Subscriber]

- **Event**: [UpdateUser]
- **Event Handler**: [Agile Recipe Management for Pharmaceuticals User Sync Handler]
- **Trigger Type**: Post
- **Execution Mode**: Synchronous
- **Order**: 0
- **Error Handling Rule**: Continue

> **Note:** Once all events have been configured, you must enable events to be triggered. To do this, navigate to the Admin tab in Agile PLM java client and click the **Enable Triggering Events** button.

Configuring PLM Business Objects for Agile Recipe Management for Pharmaceuticals

The following PLM business objects must be integrated with Agile Recipe Management for Pharmaceuticals so that the Agile Recipe Management for Pharmaceuticals solution works properly:

- Parts - Materials, Recipes;
- Manufacturers;
- Manufacturer Parts;

- Suppliers;
- Content (Attachment);
- Workflow and Autopromote.
- User

Each of the integrations of PLM business objects includes an optional step is to create a Subclass in Agile PLM that is dedicated to the Agile Recipe Management for Pharmaceuticals-specific object, for example, "Agile Recipe Management for Pharmaceuticals Manufacturers" or "Agile Recipe Management for Pharmaceuticals Suppliers". Whether or not you create Agile Recipe Management for Pharmaceuticals-specific subclasses depends on such factors as: the volume of business by your company in PLM and/or Agile Recipe Management for Pharmaceuticals solutions; the need to easily distinguish whether a Manufacturer, for example, produces goods to be used in pharmaceutical manufacturing or otherwise; and so forth.

When some objects, such as materials, get to a specified lifecycle phase, such as the Approved state, the object gets updated into the PLM database. This process is called synchronization. You can track the success or failure of an object's synchronization to PLM by checking the *Integration Status* and *Integration Message* attributes in the Default view of the object. These integration status fields are available for the Material, Recipe or Site Qualification objects. Additionally, you can check the WebServices.log file for integration errors. The log file is on the Agile Application Server, but is in different locations for OAS or WLS. Integration errors are written to the log file for the PLM-Agile Recipe Management for Pharmaceuticals integration objects, namely, Materials, Recipes, Manufacturers, Manufacturer Parts, Suppliers, Users, and (Attachment) Content.

> **Note:** You can control the interval at which synchronization of integration objects occur. Refer to Configure CFMConfig.xml for Integration for more information.

Files Required for Integration

The following files need to be modified to integrate business objects between Agile Recipe Management for Pharmaceuticals and PLM:

- Integration.properties
- AgilePharmaMapping.xml

In general, all PLM business classes and PLM business objects that are required for integration by Agile Recipe Management for Pharmaceuticals must be created, enabled, and configured in the PLM Administrator.

Instructions that are more specific to the various PLM business classes follow.

> **Important:** If you change any of the following files, you must re-start the Agile Agile Recipe Management for Pharmaceuticals Application Server for the changes to be incorporated by the system: - Integration.properties - AgilePharmaMapping.xml - CFMConfig.xml

Integration.properties

The Integration.properties file contains subclass names from Agile PLM that are needed for Agile Recipe Management for Pharmaceuticals Integration. If you customize these names in the Java Client, you must ensure that the API names are correct as per your customization in the Integration.properties file.

Modify the Integration.properties file located at agile_home/AgilePharma/config/agile so that all API Names are correct. The file contains inline comments to guide you.

Refer to the information about API Names in *Agile PLM Administrator Guide*, Chapter 3, "Administrator Functions in Java Client".

> **WARNING: The last portion of the Integration.properties file is preceded by the following comment: "It is highly recommended NOT to modify the below properties." Please heed this warning and do not alter any line of code in that portion of the file.**

AgilePharmaMapping.xml

The configurations in the AgilePharmaMapping.xml file are necessary for integration purposes. There are two separate AgilePharmaMapping.xml files, one of which is located on the PLM side and another that is located on the Agile Recipe Management for Pharmaceuticals side.

The PLM version of the AgilePharmaMapping.xml file is used for user synchronization from PLM to Agile Recipe Management for Pharmaceuticals. The file is used to pass data from PLM to Agile Recipe Management for Pharmaceuticals. It can be found in the following locations:

- In a WebLogic setup, agile_home/agiledomain/config folder.
- In an OAS setup, oracle_home/j2ee/home/applications/Agile/APP-INF/classes.

> **Caution:** It is recommended that you do not remove entries from the PLM version of this file, since user synchronization functionality could be broken.

The Agile Recipe Management for Pharmaceuticals version of the AgilePharmaMapping.xml file is used for Material, Recipe, Site Qualification, and Content integrations from Agile Recipe Management for Pharmaceuticals to PLM. The file is used to pass data from Agile Recipe Management for Pharmaceuticals to PLM. It is available under agile_home/AgilePharma/config/agile.

Material Integration

1. In Java Client, go to **Admin** > **Data Settings** > **Classes** > **Items** base class > **Parts Class** > **Materials Subclass**.
2. Add an AutoNumber source to the Materials Subclass.
3. Enable the Page Three tab for the Materials subclass
4. Create or Enable a Text Field in Page Three and set its Name as **Material Category** and API Name as **materialCategory**.
5. Create or Enable a Text Field in Page Three and set its Name as **Material Type** and API Name as **materialType.**

6. Create or Enable a Text Field in Page Three and set its Name as **Material Name** and API Name as **materialName.**
7. Modify AgilePharmaMapping.xml located in agile_home/AgilePharma/config/agile so that it has correct API Names for Material-related properties.
8. Modify Integration.properties file located at agile_home/AgilePharma/config/agile so that it has correct API Names for Material-related properties, for example:

PHARMA_CLASS_APINAME=MaterialsSubclass

ITEM_LIFECYCLE_PHASE_DEFAULT=Production

ITEM_LIFECYCLE_PHASE_DEACTIVE=Inactive

ITEM_LIFECYCLE_PHASE_ACTIVE=Production

Recipe Integration

1. In Java Client, go to **Admin** > **Data Settings** > **Classes** > **Items** base class > **Parts Class** > **Recipe** subclass.
2. Add an AutoNumber source to the Recipe subclass.
3. Enable the Page Three tab for the Recipe subclass.
4. Create or Enable a Text Field in Page Three and set its Name as **Recipe Name** and API Name as **recipeName**.
5. Create or Enable a Date Field in Page Three and set its Name as **Effective Start Date** and API Name as **effectiveStartDate**.
6. Create or Enable a Text Field in Page Three and set its Name as **Effective End Date** and API Name as **effectiveEndDate**.
7. Modify AgilePharmaMapping.xml located in agile_home/AgilePharma/config/agile so that all the Agile attributes have the correct API Names for Recipe-related properties.
8. Modify Integration.properties file located at agile_home/AgilePharma/config/agile so that it has the correct API Names for Recipe-related properties, for example:

RECIPE_APINAME=Recipe

RECIPE_LIFECYCLE_PHASE_DEFAULT=Production

RECIPE_LIFECYCLE_PHASE_DEACTIVE=Inactive

RECIPE_LIFECYCLE_PHASE_ACTIVE=Production

RECIPE_LIFECYCLE_PHASE_OBSOLETE=Obsolete

RECIPE_CHANGE_ORDER_APINAME=ECO

RECIPE_CHANGE_AUTONUMBER_APINAME=ECONumber

RECIPE_CHANGE_ORDER_WORKFLOW=DefaultChangeOrders

RECIPE_CHANGE_ORDER_WORKFLOW_FINAL_STATUS=CCB

Note: This last line names the final status to which the integration will advance the workflow: from that status on, it must be manually approved and released. If Autopromote is enabled on the workflow, it is released automatically when everyone approves. If you do not want approvals to be required in PLM, you must configure the workflow appropriately.

Manufacturer Integration

PLM uses the Manufacturer subclass for integration purposes, however, you can customize the setup by creating a new subclass. The steps to create and configure a custom Manufacturer subclass are as follows:

1. In Agile Java Client > **Admin** > **Data Settings** > **Classes** > **Manufacturers** base class > **ManufacturersClass**, create a subclass for "Agile Recipe Management for Pharmaceuticals Manufacturers".
2. Enable the **Country/Area** and **State/Province/Region** attributes on the Attributes:General Info tab.
3. Customize AgilePharmaMapping.xml located in agile_home/AgilePharma/config/agile so that all the Agile attributes have the correct API Names for Manufacturer-related properties.
4. Modify the Integration.properties file located at agile_home/AgilePharma/config/agile so that it has the correct API Names for Manufacturer-related properties, for example:

   MANUFACTURER_APINAME=Manufacturer

Manufacturer Part Integration (Optional)

PLM uses the Manufacturer Parts subclass for integration purposes, however, you can customize the setup by creating a new subclass. The steps to create and configure a custom Manufacturer Parts subclass are as follows:

1. In Agile Java Client > **Admin** > **Data Settings** > **Classes** > **Manufacturer Parts** base class > M**anufacturer PartsClass**, create a subclass for "Agile Recipe Management for Pharmaceuticals Manufacturer Parts".
2. Customize AgilePharmaMapping.xml located in agile_home/AgilePharma/config/agile so that all the Agile attributes have the correct API Names for Manufacturer Part-related properties.
3. Modify the Integration.properties file located at agile_home/AgilePharma/config/agile so that it has the correct API Names for Manufacturer Part-related properties, for example:

   MANUFACTURERPART_APINAME=ManufacturerPart

Supplier Integration (Optional)

PLM uses the Suppliers subclass for integration purposes, however, you can customize the setup by creating a new subclass. The steps to create and configure a custom Suppliers subclass are as follows:

1. In Agile Java Client > **Admin** > **Data Settings** > **Classes** > **Suppliers base class** > **Suppliers** class, create a subclass for "Agile Recipe Management for Pharmaceuticals Suppliers".

2. Enable the **Country/Area** and **State/Province/Region** attributes on the Attributes:General Info tab.
3. Customize AgilePharmaMapping.xml located in agile_home/AgilePharma/config/agile so that all the Agile attributes have the correct API Names for Supplier-related properties.
4. Customize the Integration.properties file located at agile_home/AgilePharma/config/agile so that it has the correct API Names for Supplier-related properties. For example:

   SUPPLIER_APINAME=Supplier

   SUPPLIER_CORPORATECURRENCY=USD

Content and Attachments Integration

1. Agile File Server must be installed and configured properly in Java Client (see *Agile PLM Administrator Guide*).
2. Agile File Server should be up and running.
3. Customize the Integration.properties file located at agile_home/AgilePharma/config/agile so that it has all correct API Names for Content-related properties. For example:

   FILE_FOLDER_APINAME=FileFolder

   FILE_FOLDER_AUTONUMBER_APINAME=FileFolderNumber

Workflow and Autopromote Configuration

1. You need to configure the following workflows for integration purposes:

- Default Material ECO
- Default Change Orders
- Default Manufacturer Orders

Configuring the Default Material ECO Workflow

To configure the Default Material ECO workflow:

1. Navigate to **Agile Java Client > Admin > Workflow Settings > Workflows > Default Material ECO**.
2. Modify workflow statuses so that Pending status (Pending status type) has CCB status (Review status type) as Manual Valid Next Status.
3. In CCB status, set Autopromote to True.
4. Remove all entry and exit criteria for Workflow CCB status.
5. Modify the Integration.properties file located at agile_home/AgilePharma/config/agile so that it has the correct API Names for Workflow- and Change Order-related properties, for example:

   CHANGE_ORDER_APINAME=ECO

   CHANGE_AUTONUMBER_APINAME=Agile Recipe Management for PharmaceuticalsIntegrationAutonumber

   AGILE_WORKFLOW_APINAME=Agile Recipe Management for PharmaceuticalsIntegrationWorkflow

AGILE_WORKFLOW_FINAL_STATUS=CCB

ITEM_REVISION=1

WORKFLOW_TYPE=Auto-Promote

AGILE_WORKFLOW_STATUS_FOR_MANUAL_WORKFLOW=Submitted

Note: The Default Material ECO workflow is a PLM-only workflow. The Agile Recipe Management for Pharmaceuticals solution has its own workflows (see Workflows).

Configuring the Default Change Orders Workflow

To configure the Default Change Orders workflow:

1. Navigate to **Agile Java Client > Admin > Workflow Settings > Workflows > Default Change Orders**.
2. Modify workflow statuses so that Pending status (Pending status type) has CCB status (Review status type) as Manual Valid Next Status.
3. In CCB status, set Autopromote to True.
4. Remove all entry and exit criteria for Workflow CCB status.
5. Modify the Integration.properties file located at agile_home/AgilePharma/config/agile so that it has the correct API Names for Workflow- and Change Order-related properties, for example:

   CHANGE_ORDER_APINAME=ECO

   CHANGE_AUTONUMBER_APINAME=Agile Recipe Management for PharmaceuticalsIntegrationAutonumber

   AGILE_WORKFLOW_APINAME=Agile Recipe Management for PharmaceuticalsIntegrationWorkflow

   AGILE_WORKFLOW_FINAL_STATUS=CCB

   ITEM_REVISION=1

   WORKFLOW_TYPE=Auto-Promote

   AGILE_WORKFLOW_STATUS_FOR_MANUAL_WORKFLOW=Submitted

Configuring the Default Manufacturer Orders Workflow

To configure the Default Manufacturer Orders workflow:

1. Navigate to **Agile Java Client > Admin > Workflow Settings > Workflows > Default Manufacturer Orders**.
2. Modify workflow statuses so that Pending status (Pending status type) has CCB status (Review status type) as Manual Valid Next Status.
3. In CCB status, set Autopromote to True.
4. Remove all entry and exit criteria for Workflow CCB status.
5. Modify the Integration.properties file located at agile_home/AgilePharma/config/agile so that it has the correct API Names for Workflow- and Change Order-related properties, for example:

   CHANGE_ORDER_APINAME=ECO

CHANGE_AUTONUMBER_APINAME=Agile Recipe Management for PharmaceuticalsIntegrationAutonumber

AGILE_WORKFLOW_APINAME=Agile Recipe Management for PharmaceuticalsIntegrationWorkflow

AGILE_WORKFLOW_FINAL_STATUS=CCB

ITEM_REVISION=1

WORKFLOW_TYPE=Auto-Promote

AGILE_WORKFLOW_STATUS_FOR_MANUAL_WORKFLOW=Submitted

Configuring Privileges for the Integration User

You must ensure that the integration user has the required privileges. The Integration user (as defined in agile.properties in the Agile PLM and in agile_home/AgilePharma/config/agile/Integration.properties in Agile Recipe Management for Pharmaceuticals) must have the following privileges in PLM:

1. Recipe and Material Workspace Admin privilege in PLM and must be super user in Agile Recipe Management for Pharmaceuticals.
2. Create, Discovery, Read and Modify privileges on all attributes of Materials subclass.
3. Create, Discovery, Read, Modify and Change Status privileges on the Default Material ECO.
4. Create, Discovery, Read and Modify privileges on all attributes of Manufacturer subclass (or on the custom sub class if one was created and configured in Integration.properties).
5. Create, Discovery, Read and Modify privileges on all attributes of Manufacturer Part subclass (or on the custom sub class if one was created and configured in Integration.properties).
6. Create, Discovery, Read and Modify privileges on all attributes of Broker subclass (or on the custom sub class if one was created and configured in Integration.properties).
7. Create, Discovery, Read and Modify privileges on all attributes of Recipe subclass
8. Create, Discovery, Read, Modify and Change Status privileges on the Default Change Orders (or on the custom workflow if one was created and configured in the Integration.properties).
9. Create, Discovery, Read, Modify and Change Status privileges on the Default Manufacturer Orders (or on the custom workflow if one was created and configured in the Integration.properties).
10. Create, Discovery, Read, Modify, Check-in, Check-out, Cancel Checkout, Get File, and Delete privileges on the File Folder subclass in PLM (or on the custom subclass, if one was created and configured in the Integration.properties) to perform Attachment operations:
11. The privilege in Agile Recipe Management for Pharmaceuticals for the user to navigate from Agile Recipe Management for Pharmaceuticals to Agile PLM. Navigate to System > Default > Manage > Product Collaboration privilege to enable the privilege.

Note: If Agile PLM is installed on an Oracle Application Server, the agile.properties file is located in <ORACLE_APP_SERVER_HOME>\j2ee\home\applications\Agile\APP-INF\classes. If Agile is installed on WebLogic Server, the location of the file agile.properties is agile_home\agileDomain\config. The value for Agile Recipe Management for Pharmaceuticals.intuserpassw in agile.properties and AGILE_PASSWORD in agile_home\AgilePharma\config\agile\Integration.properties should be encrypted using the encryptpwd.cmd or encryptpwd.sh (This file can be found under agile_home\AgilePharma\bin).

3
System Tools

All of the tasks in this chapter are begun by choosing **Tools & Settings** > **System Tools** and selecting from the flyout menu.

Data Audit Trail

Data audit is a way to track the history of all the changes on any object from the date of creation. Every change is captured with a reason for the change. Auditing records activities performed on a business object on a specified date.

For example, the audit trail data can be searched for a specific user, who accessed the application, during a specific period of time and the type of operations performed by that user.

Any category can be selected for auditing. Categories with attributes spanning across multiple tables can also be audited. You can update the list of categories or attributes for audit.

The audit information can be archived for future reference.

Searching Audit Data

To perform a search for the audit trail:

1. In the **Tools & Settings** menu, select **System Tools** > **Data Audit Trail**.
2. Select a search view from the **View** list. The following views are available:
   - Basic
   - Audit History ("Removed Objects Audit History")
   - Default ("DEFAULT")
3. On the Search Audit Trail page, you can perform a search in the following ways:
   - Enter (type in) values to any or all of the fields, and click **Search**.
   - Select value(s) from the dropdown list(s) in any or all of the fields, and click **Search**.
   - Leave all the fields blank and click **Search**.

   Search Results displays the list of data audits based on the filled-in search criteria.

Viewing Audit Details

You can view the audit data for an object or an attribute in the **Changes** tab in **Business Object Details**.

The audit information includes the following:

- Modified Time
- Modified By
- Action
- Attribute
- Category
- Old Value
- New Value
- Reason for Change

To view audit details for an object:

1. In the **Tools & Settings** menu, select **System Tools** > **Data Audit Trail**.
2. Perform a search for the audit trail.
3. In the search results display, click on **Modified Time** hyperlink to view the audit data.

4 Settings

The Settings menu lets you manage the settings for Default Preferences, Image and Image Map.

All of the tasks in this chapter are begun by choosing Tools & Settings > Settings and selecting from the fly-out menu.

Default Settings

Agile Recipe Management for Pharmaceuticals is configured with some default settings. When a user is created, the default settings are applied. You can change these settings based on your requirements.

The administrator can change general preferences such as the login preferences and home page settings to suit the organization's requirements.

Locale and number format settings are not set in Agile Recipe Management for Pharmaceuticals. These settings are dependent on the preferences set in PLM. For more information on how to set these preferences in Agile PLM, see the *Agile PLM Administrator Guide.*

Setting System Preferences

To set System preferences:

1. In the Tools & Settings menu, select Settings > Default Preferences.
2. On the System tab, enter information for the following:
   - Automatic Hierarchy Depth Traversal - Enter the level of hierarchy you want to go to. For example, if you enter level 2, then you will be able to go to a depth of second level in any hierarchy in the application.
   - Default Company - Click the look up icon to select the company name.
   - External User Audit - Click the radio button to indicate whether external user audit is required ("true") or not ("false").
   - Equipment Allocation Role - Select the role for hard reservation of the equipment. This is applicable if general reservation is not allowed in Equipment Library.
   - Minimum For Background Control Recipe Creation - Enter the minimum number of Control Recipes/Work Orders that can be created synchronously with switching to asynchronous background process.
3. Click OK. You have set the preferences and a confirmation message appears.

Setting General Preferences

To set General preferences:

1. In the Tools & Settings menu, select Settings > Default Preferences.
2. On the General tab > Characteristics subtab, enter information for the following:
   - Default Number of Results Per Page - Select the default number of results, or rows of data records, to be displayed per page.
   - Default Delegate - Click the look up icon and select a User from the dialog.
3. On the General tab > Macros subtab, enter information for the following:
   - Default Equipment Site - Click the look up icon and select a Site from the dialog. You may want to click the Expanded Search button to examine more possibilities.
4. Click OK. A confirmation message appears.

Setting Home Page Preferences

To set Home Page preferences:

1. In the Tools & Settings menu, select Settings > Default Preferences.
2. On the Home Page tab:
   - Number of Columns on Home Page - Use the dropdown to select a number.
3. In the Channels table, select one or more Channels, which is a table that appears on every user's Home page:
   - Display Assigned Tasks Table - a user's Home page displays the Tasks assigned to the user.
   - Display Notification Table - a user's Home page displays the Notifications assigned to the user.
   - Display Projects Table - a user's Home page displays the Projects assigned to the user.
   - Display Campaigns Table - a user's Home page displays the Campaigns assigned to the user.
4. Click OK.

Adding a Channel (Home Page setup)

To add an existing Channel:

1. In the Tools & Settings menu, select Settings > Default Preferences.
2. Click on the Home Page tab.
3. In the Channels table, click the Add Channel button.
4. On the Lookup for 'Channel' page, enter the following information:
   - Name - select from the list of Home page tables.
   - Description - select a description of the table to be displayed.
   - BO: BO ID - select the type of business object, from Workflow Task, Project, or Campaign.
   - BO Action: Action Name - default is "@".

- Order - select a value for the order the tables will appear on users' Home page.
- Display Rows - default is 5.
- Display As - default is Table.
- Is Default Channel
- Channel View: Name
- Channel View: Search Name
- Modified User: User ID
- Modified Date
- Created User: User ID
- Created Date

5. Select the channel(s) to be added and click the OK button. The selected channel(s) appear in the Home Page tab.
6. Click the OK button. A confirmation message appears.

Setting Recipe Preferences

To set Recipe preferences:

1. In the Tools & Settings menu, select Settings > Default Preferences.
2. Click the Recipe tab.
3. On the General subtab, use the following sequence of steps to populate the field for each of these templates:
   - Default Procedure Template
   - Default Unit Procedure Template
   - Default Operation Template
   - Default Phase Template, and
   - Default Action Template.
4. Click the Search (Lookup) icon.
5. The Recipe Element Template table appears listing templates that are available. If you do not see the template you expect, click the Expanded Search button.

   Note: The Default Action Template table appears when you click the Lookup icon next to Default Action Temple.

6. Click the radio button for the template you want, and click OK. The name of the template you selected appears in the Name field.
7. When you have finished selecting templates, click OK.

Image

All images that are used in Agile Recipe Management for Pharmaceuticals are stored in a single table. The images added to this table are usually used for Categories/Image columns, etc.

You can add, search, view, edit, remove, and duplicate images.

Creating an Image

To create an image:

1. In the Tools & Settings menu, select Settings > Image > New Image.
2. On the General subtab:
   - Image ID - Enter name of the image.
   - Image URL - Enter the URL of the image.
   - Image Width (px) - Enter the width of the image in pixels.
   - Image Height (px) - Enter the height of the image in pixels.
   - Description - Enter a description of the image.
3. Click Finish. You have created a new image, and a confirmation message appears.

Managing Imagea

The following sections cover how to manage images.

Searching Image

To search for image:

1. In the Tools & Settings menu, select Settings > Image > Manage Image.
2. Select a search view from the View dropdown list.
3. In the Search Image area, use the dropdown menus to fill in criteria of the images you are interested in finding.
4. When you have filled in sufficient criteria, click Search.

Viewing Image

To view image details:

1. In the Tools & Settings menu, select Settings > Image > Manage Image.
2. Perform a search for the image.
3. In the Image ID column, click on the image for which you want to view the details.

Editing Image

To edit image details:

1. In the Tools & Settings menu, select Settings > Image > Manage Image.
2. Perform a search for the image.
3. Select the image for which you want to edit the details and click Edit.
4. Enter information for the various fields.
5. Click OK.
6. Enter the reason for the changes that you have made and click OK.

You have edited the image and a confirmation message appears.

Duplicating Image

You can create a new instance of an existing image with the same attributes, but with a different name.

To duplicate an image:

1. In the Tools & Settings menu, select Settings > Image > Manage Image.
2. Perform a search for the image.
3. Select the image that you want to duplicate and click More > Save As.
4. In the Duplicate Image, click Clear.
5. Enter the Image ID for the image.
6. Click Save and Edit to change the associated details or click OK to save the duplicated image without changing the associated details. To cancel, click Cancel.

Removing Image

To remove an image:

1. 1. In the Tools & Settings menu, select Settings > Image > Manage Image.
2. 2. Perform a search for the image. Results displays a list of images.
3. 3. Select the image that you want to remove and click Delete.
4. 4. Enter the reason for removal and click OK.

You have removed the image and a confirmation message appears.

Image Map

An image map defines the rules for rule-based image displays. An attribute can have multiple values. Based on the given value, you can display a particular image. For example, let's take cost as the particular attribute. If the value for cost is greater than 500, then the image shown can be green, while If the value for cost is less than 500, then the image shown can be yellow.

You can add, search, view, edit, remove, and duplicate image maps.

Creating an Image Map

To create an image map:

1. In the Tools & Settings menu, select Settings > Image > New Image Map.
2. Enter Image Map Name.
3. Click Next.
4. Click the Add Rows button to add one or more Images. For each image, enter the Order and Regular Expression.
5. Click on Finish.

Managing Image Map

The following sections show how to manage Image Maps.

Searching Image Map

To search for image map:

1. In the Tools & Settings menu, select Settings > Image > Manage Image Map.
2. Select a search view from the View dropdown list.
3. In the Search Image Map area, use the dropdown menus to fill in criteria of the images you are interested in finding.
4. When you have filled in sufficient criteria, click Search.

Viewing Image Map Details

To view image map details:

1. In the Tools & Settings menu, select Settings > Image > Manage Image Map.
2. Perform a search for the image map.
3. In the Name column, click on the image map for which you want to view the details.

Editing Image Map

To edit image map details:

1. In the Tools & Settings menu, select Settings > Image > Manage Image Map.
2. Perform a search for the image map.
3. Select the image map for which you want to edit the details and click Edit.
4. Enter information for the various fields.
5. Click OK.
6. Enter the reason for the changes that you have made and click OK.

You have edited the image map and a confirmation message appears.

Duplicating Image Map

You can create a new instance of an existing image map with the same attributes, but with a different name.

To duplicate an image:

1. In the Tools & Settings menu, select Settings > Image > Manage Image Map.
2. Perform a search for the image map.
3. Select the image map that you want to duplicate and click More > Save As.
4. In the Duplicate Image Map, click Clear.
5. Enter the name for the image map.
6. Click Save and Edit to change the associated details or click OK to save the duplicated image map without changing the associated details. To cancel, click Cancel.

Removing Image Map

To remove an image map:

1. In the Tools & Settings menu, select Settings > Image > Manage Image Map.
2. Perform a search for the image map. Results displays a list of image maps.
3. Select the image map that you want to remove and click Delete.

4. Enter the reason for removal and click OK.

You have removed the image map, and a confirmation message appears.

5 Alerts

Alerts are informational or warning messages. This chapter provides information about adding and managing alerts in Recipe & Material Workspace.

All of the tasks in this chapter are begun by choosing **Tools & Settings** > **Alert/Workflows** > **Alert** and selecting from the flyout menu.

Alerts Overview

Alerts allow you to notify users based on the occurrence of predefined actions within the application. Alerts ensure continuous information flow in Recipe Management for Pharmaceuticals . They automatically inform the user about what action to take during a process and when to take it.

These messages are triggered when specific, predefined actions are performed on a business object. For example, you can define an alert to be triggered when a material object is modified.

Types of Alerts

Alerts can be classified into four main types:

- **Mandatory alerts** - These alerts contain information/messages that all Recipe Management for Pharmaceuticals users must receive. Mandatory alerts are automatically assigned to all users. The alert criteria on mandatory alerts cannot be modified. These alerts cannot be subscribed or unsubscribed.
- **Autosubscribe alerts** - These alerts are automatically assigned to one or more users by the system. You can modify the alert attributes for these alerts. Users can unsubscribe from Autosubscribe alerts to stop receiving these messages.
- **Workflow alerts** - Alerts are also used within workflows. There are two types of workflow alerts:
  - **System Notification workflow alerts** - These alerts indicate changes that have been made to a business object's attributes.

    For example, the equipment may have the following attributes:
    - Equipment ID: T-60
    - Equipment Name: Reactor
    - Equipment Tag Number: K2334
    - Location: Building 1, Floor 3, Room 12

To move the Reactor to Building 3, Floor 3, Room 10, the administrator creates a System Notification workflow alert to the change in the location attribute.

- **Task Notification workflow alerts** - These alerts allow the user to take action on the received alert. Examples include:
  - Approve or reject a Specification Plan;
  - Indicate that you "need more information".

Types of Alert Triggers

Alerts are triggered by the following types of Recipe Management for Pharmaceuticals events:

- **Alerts based on user actions** - these alerts are triggered by specific actions of a user on a business object.
- **Conditional alerts based on user actions** - these alerts are triggered when a predefined action is performed on a business objectand if specified conditions are met.
- Conditional Alerts that incorporate time interval (frequency):
  - **Conditional alerts based on frequency** - these alerts are triggered at a certain time interval;
  - **Conditional alerts based on user actions and frequency** - these alerts are triggered both when a user performs an action and at a certain time interval.
- **System-generated alerts** - these alerts are triggered based on application logic.

Once you create an alert, you must authorize users to view or subscribe to these alerts. You associate roles to an alert to specify the authorized receivers of the alert.

> **Note:** An alert triggers if it has one or more users subscribed to it. An alert is not triggered when it has no subscribers subscribed to it. For an alert to be active, at least one user must be associated to it; without having a user associated to an alert, the alert's definition is incomplete.

Conditional Alerts

Alerts that have conditions specified are called conditional alerts. While defining an alert condition Relationship, Macro, and Operator is dynamic. These conditions change accordingly with the data type of the business object type selected.

When a business object is modified, the conditions specified for conditional alerts must be evaluated and all the subscribers subscribed to that alert must be notified.

Some of these conditions include:

- All attributes belong to the same object type that is part of the condition.
- Specifying values for parameters which are mandatory and cannot be modified. These conditions are locked. For example, for Site object, Type = Warehouse, where Type is the name of the attribute of Site object and Warehouse is the value.
- Specifying attributes with some values. The values cannot be blank.
- Specifying attributes and their values, which are not mandatory.

The following relational operators can be used when creating alert conditions:

- Modified

- Greater than
- Less than
- Equal to
- Not equal to
- Starts with
- Contains
- Ends with
- Expression

Conditional Alerts that incorporate Time Interval

Conditional alerts that incorporate a time interval are alerts that are generated at a specified time. These alerts also have specified conditions. The alert triggers when the conditions are met at that specified time.

There are two types of conditional alerts that use a time interval:

- Conditional Alerts based on Frequency
- Conditional Alerts based on Frequency and User Actions

The subscriber can modify the time frequency to any frequency higher than the one specified in the alert definition (but not a lower frequency). The time frequency can be any of the following:

- Yearly
- Monthly
- Weekly
- Daily
- Hourly
- Specific time without any recurrences (example, on December 12, 2010, at 10 hours 15 minutes 25 seconds).

For example, if you have specified the time frequency as weekly, the subscriber can change it to monthly or yearly, but not daily or hourly.

Alerts are not sent if the value of the number of occurrences is less than or equal to the number of attempts made to evaluate the criteria.

If action is also selected for this alert definition, the alert is generated when the action is taken.

The periodicity can be any of the following:

- Yearly (a day and time of the year) - alert is triggered on a specified date for a month. For example, Feb. 13th; or, a specified weekday of a month, such as "the second Monday of March".
- Monthly (a day and time of the month) - alert is triggered on the specific date of every nth month. For example, "second of every three months". Can be set for a particular weekday of every nth month, such as "third Wednesday of every sixth month".
- Weekly (day and time of the week) - alert is triggered on one or multiple days every week. For example, Monday, Wednesday, and Friday every week.

- Daily (day) - alert is triggered at either every nth day. For example, every third day or every weekday.
- Hourly (time) - alert is triggered at every n hours. For example, every 1 hour and 15 minutes.
- Specific time without any recurrences - alert is triggered on 12th December 2012 at 10 hours 15 minutes 25 seconds.

For all of these conditions, you can specify:

- Start date - date on which the alert criteria checks start.
- Start time (hour and minute)
- Time zone
- End date - date on which the alert criteria checks stop.
- Number of occurrences - alert processing must happen only for the specified number of occurrences.
- No end date - processing should continue till alert definition is active.

However, the alert itself is generated only after the alert definition is published. Alert processing does not start as soon as you publish the alert. It starts only if at least one user has subscribed to this alert. Processing stops if no one has subscribed to this alert.

System-generated Alerts

System-generated alerts are generated by the system based on application logic. These alerts are related to certain actions in the Recipe Management for Pharmaceuticals user interface that results in changes in attribute values. Each of this sort of attribute is included in criteria of the alert definition. The criteria is evaluated before sending alerts.

You cannot modify the system-generated alerts.

Multiple alerts can be triggered by the same action.

Alert Notifications

Alert notifications are messages that include the subject and other details of an alert.

Alerts notify users through Dashboard or Email, one of which is designated the default or primary means of notification, the other is designated the optional or secondary means of notification. The primary notification means cannot be modified to secondary means of notifications.

- Dashboard alerts are displayed in the left frame of the home page;
- Email alerts are emailed to the primary email ID of the recipient(s).

You must select Dashboard or Email as the primary notification method while defining an alert.

> **Note:** The subscriber cannot choose an additional notification method, while subscribing to an alert.

When defining an alert, you can also choose to display the alert criteria in the body of the alert message. If this option is set, the system formats the alert criteria into a text message, which is a part of the alert notification message. This text message is appended to the existing content of the message.

A user subscribes to an alert (provided it is not mandatory or data-driven) to receive an alert notification. You can define a subscription name for the alert, edit the alert condition, and deselect the optional notification method, if you have subscribed to the alert. You can unsubscribe at any time. If it is a timer alert, you can modify the frequency.

Steps toward Creating Alerts

To create a functioning alert, you must perform the following steps:

1. Create the basic alert.
2. Assign roles and sites to the new alert.
3. Publish the completed alert.

1. Creating an Alert

To create a normal alert based on user actions:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **New**.
2. In the **Preface** tab, enter the kinds of business objects to which the alert will apply. The choices on the **Preface** tab are found when you expand the list of primary Recipe Management for Pharmaceuticals objects:
   - Analytical
   - Environment
   - Equipment
   - Material
   - Organization
   - People
   - Process
   - Standards
   - System
   - Test
3. In the **General** tab, enter information for the following fields:
   - **Name** - Enter the name of the alert.
   - **Alerts will be mandatory for subscribers** - Select the option, if alerts would be mandatory for subscribers.
   - **Subscribe users automatically** - Select the option, if you want the users to be subscribed automatically.
   - **Type** - Select the type of alert, Informational or Warning, from the dropdown list.
   - **Invoke Service upon Alert Trigger** - Select Yes or No.
   - **Priority** - Select one of the priority levels from the dropdown list.
   - **Effective Start Date** - Enter the effective start date.

- **Effective End Date** - Enter the effective end date.

4. Click **Next**.
   - In the **Alert Trigger** tab > **Trigger** subtab > **Alerts triggered by** field, select **User Action of a user on an object** or **Attribute's value meeting a condition**.
   - If you select the latter value, the options under **Check the attribute** are enabled; select one and click **Next**.
5. The **Details** tab has three subtabs:
   - Attributes
   - Conditions
   - Actions

   In the **Attributes** subtab, select the object attributes that has to be displayed in the alert notification message and click **Next**.
6. In the **Conditions** subtab, populate the fields that define the attribute. When you are done, click **Next**.
7. In the **Actions** subtab, select the actions that are used to trigger the alert and click **Next**.
8. The **Notification** tab has two subtabs:
   - Notification Details
   - Notification Content

   In the **Notification Details** subtab, enter information for the following fields to specify how the users are notified when the alert is triggered:
   - **Primary notification methods** are Dashboard or Email.
   - **Optional methods** - the one you did not check above is now enabled.
   - **Alert Information in Email** - Display at Top or Display at Bottom
   - **Customize Subject and Message** - Yes or No.
   - **Include Criteria Information** - Yes or No.
9. In the **Notification Content** tab, enter text for the Subject and Message fields.
10. To preview the notification, click **Preview Notification** button. When you are finished, click **OK**.

    You can use the **Previous** button to back up to pages that need adjustment.
11. When you are finished, click **Finish**. You have created a new alert, and a confirmation message appears.

Conditional Alerts based on User Actions

To create a conditional alert based on user action:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **New**.
2. Select the object or category for the alert.
3. In the **General** tab, enter information for the following fields:
   - Name
   - Type

- Alerts will be mandatory for subscribers
- Subscribe users automatically
- Priority
- Effective Start Date
- Effective End Date
- For Custom Web service related Attributes, select any or all of the options:
  - Invoke External Service
  - Whom to Notify (Determined by Service)
  - Criteria evaluation
  - What to notify

4. Click **Next**.
5. In the **Alert Trigger** tab, for **Alerts Triggered by**, select **Action of a user on an object**.
6. Click **Next**. The **Details** tab displays.
7. In the **Attributes** subtab, select the attribute that has to be used for the alert condition or displayed in the alert notification message and click **Next**.
8. In the **Actions** tab, select the action that is used to trigger the alert and click **Next**.
9. In the **Notifications** tab, enter information for the following fields to specify how the users are notified when the alert occurs:
   - On the **Notification Details** subtab, select the notification method. The options are:
     - Dashboard
     - Email
   - On the **Notification Content** subtab, Include alert context details within message:
     - Subject
     - Message
10. Click **Finish**.

Conditional Alerts based on Frequency

To create a conditional alert based on frequency:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **New**.
2. Select the object or category for the alert.
3. In the **General** tab, enter information for the following fields:
   - **Name** - Enter the name of the alert.
   - **Type** - Select the type of alert.
   - **Mandatory** - Select the option, if the alert is mandatory.
   - **Auto-Subscribe** - Select the option, if you want to auto-subscribe to the alert.
   - **Priority(DEFAULT)** - Select the priority level.

- **Effective Start Date** - Enter the effective start date.
- **Effective End Date** - Enter the effective end date.
- For Custom Web service related Attributes, select any or all of the options:
  - **Invoke External Service** - Select the option, if you want to invoke external service
  - **Whom to Notify (Determined by Service)** - Select whom you want to notify to.
  - **Criteria evaluation** - Select the criteria evaluation.
  - **What to notify** - Enter the message you want to notify.

4. Click **Next**.
5. In the **Alert Trigger** tab, for **Alerts Triggered by**, select **Attribute's value meeting a condition**.
6. For the **Check the Attribute** field, select **At certain time intervals.**
7. Click **Next**. The Details tab displays.
8. In the **Attributes** tab, select the attribute that has to be used for the alert condition and/or displayed in the alert notification message and click **Next**.
9. In the **Conditions** tab, specify the condition for each attribute that must trigger the alert. The conditions that you can specify are:
   - In the **Condition** column, select **Modified**, **Equal To**, or **Not Equal To**.
   - In the **Macro** column, select a pre-defined function.
   - In the **Operator** column, select +, *, -, or / which are used to specify the condition.
   - In the **Value** column, enter the value that uses the operators to define a condition.

     If you have selected the condition as **Modified**, then the **Macro**, **Operator** and **Value** columns are not enabled.
   - In the **UOM** column, specify the Unit of Measure for the attributes, if any.
   - In the **Required** column, if the checkbox is selected, you cannot leave the condition field blank while adding or editing the conditions on your subscribed alert.
   - In the **Non-editable** column, if the checkbox is selected, you cannot edit the condition when you subscribe to the alert.
10. Click **Next**.
11. In the **Frequency** tab, enter information for the following fields:
    - Select the frequency for checking the alert conditions. The options are:
      - Hourly
      - Daily
      - Weekly
      - Monthly
      - Yearly

Based on the option selected, fields display on the right. For example, if you have selected the **Hourly** option, then on the right side, enter the hourly details. If you have selected the **Monthly** option, enter the day and time of the month.

- **Start Date** - specify the date on which the frequency monitoring has to start.
- **Start Time** - specify the time when the frequency monitoring has to start.
- **Time Zone** - the time zone based on the geographical location.
- **End Date** - specify the date on which frequency monitoring has to stop.
- **End After** - specify the number of occurrences of the alert that triggers the stop.

12. Click **Next**.
13. In the **Notifications** tab, enter information for the following fields to specify how the users are notified when the alert occurs:
    - On the **Notification Details** subtab, select the notification method. The options are:
      – Dashboard
      – Email
    - On the **Notification Content** subtab, Include alert context details within message:
      – Subject
      – Message
14. Click **Finish**.

Conditional Alerts based on User Actions plus Frequency

If the alert is triggered by user actions and frequency, then you get two alerts, one when the user does the action and the second when the frequency condition is met.

To create conditional alerts based on user actions and frequency:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **New**.
2. Select the object or category for the alert.
3. In the **General** tab, enter information for the following fields:
   - Name
   - Type
   - Mandatory
   - Autosubscribe
   - Priority (Default)
   - Effective Start Date
   - Effective End Date
   - For Custom Web service related Attributes, select any or all of the options:
     – Invoke External Service
     – Whom to Notify (Determined by Service)
     – Criteria evaluation

- What to notify

4. Click **Next**.
5. In the **Alert Trigger** tab, for **Alerts Triggered by**, select **Attribute's value meeting a condition**.
6. For the **Check the Attribute** field, select **Both when a user performs an action and at certain time intervals.**
7. Click **Next**. The Details tab displays.
8. In the **Attributes** tab, select the attribute that has to be used for the alert condition and/or displayed in the alert notification message and click **Next**.
9. In the **Conditions** tab, specify the condition for each attribute that must trigger the alert. The conditions that you can specify are:
   - In the **Condition** column, select **Modified**, **Equal To**, or **Not Equal To**.
   - In the **Macro** column, select a pre-defined function.
   - In the **Operator** column, select +, *, -, or / which are used to specify the condition.
   - In the **Value** column, enter the value that uses the operators to define a condition.

   If you have selected the condition as **Modified**, then the **Macro**, **Operator** and **Value** columns are not enabled.

   - In the **UOM** column, specify the Unit of Measure for the attributes, if any.
   - In the **Required** column, if the checkbox is selected, you cannot leave the condition field blank while adding or editing the conditions on your subscribed alert.
   - In the **Noneditable** column, if the checkbox is selected, you cannot edit the condition when you subscribe to the alert.
10. Click **Next**.
11. In the **Actions** tab, select the actions that are used to monitor the alert and click **Next**.
12. In the **Frequency** tab, enter information for the following fields:
    - Select the frequency for checking the alert conditions. The options are:
      - Hourly
      - Daily
      - Weekly
      - Monthly
      - Yearly

    Based on the option selected, fields display on the right. For example, if you have selected the **Hourly** option, then on the right enter the hourly details. If you have selected the **Monthly** option, enter the day and time of the month.

    - **Start Date** - specify the date on which the frequency monitoring has to start.
    - **Start Time** - specify the time when the frequency monitoring has to start.
    - **Time Zone** - the time zone based on the geographical location.

- **End Date** - specify the date on which frequency monitoring has to stop.
- **End After** - specify the number of occurrences of the alert that triggers the stop.

13. Click **Next**.
14. In the **Notifications** tab, enter information for the following fields to specify how the users are notified when the alert occurs:
    - On the **Notification Details** subtab, select the notification method. The options are:
      – Dashboard
      – Email
    - On the **Notification Content** subtab, Include alert context details within message:
      – Subject
      – Message
15. Click **Finish**.

2. Assigning Roles, Users, Groups, or Macros

You can assign roles and sites to alerts, while creating an alert definition. If you are assigned to the published site and the parent site(s) with the same role, you can subscribe to that alert. If alert definition is mandatory, you are subscribed automatically based on the site-role combinations assigned to that definition.

> **Note:** Data-driven alerts cannot be assigned roles and sites as all the required inputs are acquired from the external Web service.

You can unassign the sites and roles associated to an alert. If you are subscribed to an alert definition, for which the site-role assignments are changed, you stop receiving the alert. An e-mail is sent to you stating that you no longer have access to that alert.

There are two types of macros:

- **Data-context-specific macros** - these are driven by the Data/Business Object such as PRJ_MANAGER, CMP and MANAGER.
- **Global macros** - applicable per instance of a database that can also be used in an INPUT field during operations such as SEARCH, ADD and DELETE.

For example, typing the macro @TIME@ in an attribute of TIME datatype must automatically translate it to Current Time when adding, editing, or searching using TIME datatype. The application must check and prompt the user if a MACRO is used with an incorrect datatype.

If TIME is used as a default value for attribute of TIME datatype, then that field should be prepopulated with the current time in the logged in user's time zone, when adding a new RECORD.

'@' is used as a special character to let the application know that the text within the 2 characters is a macro name and needs special processing.

To assign roles, users, groups, or macros to an alert:

In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.

Perform a search for the alert.

Select the alert for which you want to assign roles and click **Assign Subscribers**.

In the **Alert Assignments** pane, you can assign the following:

- Roles
- Users
- Groups
- Macros

Assigning Roles

To assign roles to an alert:

1. In **Alert Assignments**, on the **Roles** tab, click **Add Roles**.
2. Select the role(s) to assign and click **OK**.
3. In the **Sites** tab, select the site to qualify the role assignment.
4. Click **Finish**. The selected role displays in the **Roles** tab.
5. To edit an assigned role, select the role and click **Edit**.
6. To remove an assigned role, select the role and click **Delete**.
7. Click **OK**. The confirmation message appears.

Unassigning Roles

To unassign roles from an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Enter the Name of the Alert, to which the Role is to be unassigned, in the **Alert Name** field. Click **Search**.

   The details of the Alert are displayed in **Search Results**.
3. Select the **Alert Definition**. Click on **Assign Subscribers**.

   The **Assign Roles** page is displayed.
4. Remove the existing role and add another role and site.

If the user who has already subscribed to this alert does not have the updated site-role combination, the system deletes the subscription.

The user will receive an email notification regarding unsubscribing this alert.

> **Note:** In case of a Published, Mandatory, or Autosubscribe alert, if the updated site-role combination matches with any of the existing users' site-role combination, this alert will be automatically subscribed to that user and sends an email notification.

Assigning Users

To assign users to an alert:

1. In **Alert Assignments**, click the **Users** tab.
2. Click **Add User**.

3. Perform a search for the user.
4. Select the users to whom you want to assign the alert and click **OK**. The selected users display in the **Users** tab.
5. To remove an assigned user, select the user and click **Remove**.
6. Click **OK**. The confirmation message appears.

Unassigning Users

To unassign users from an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Enter the Name of the Alert, to which the user is to be unassigned, in **Alert Name**. Click **Search**.

   The details of the Alert are displayed in the **Search Results** page.
3. Select the Alert definition. Click **More** and **Assign Subscribers**.
4. Click on the **Users** tab.

Remove the existing user and add another user.

If the user who has already subscribed to this alert does not have the updated Assigned User list, the system deletes the subscription.

The user will receive an email notification regarding unsubscribing alert.

Note: In case of a Published, Mandatory, or Autosubscribe alert, if any user in the updated user list does not consist of the alert subscription, this alert will be automatically subscribed to that user and sends an email notification.

Assigning User Groups

To assign user groups to an alert:

1. In **Alert: Assignments**, click the **Groups** tab.
2. Click **Add Group**.
3. Perform a search for the user group.
4. Select the user group to which you want to assign the alert and click **OK**. The selected user groups display in the **Groups** tab.
5. To remove an assigned user group, select the group and click **Delete**.
6. Click **OK**. The confirmation message appears.

Unassigning User Groups

To unassign User Groups from an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Enter the Name of the Alert, to which the user group is to be unassigned, in the **Alert Name** field. Click on **Search**.

   The details of the Alert are displayed in the **Search Results** page.
3. Select the Alert definition. Click on the **Assign Subscribers** button.

4. Click on the **User Group** tab.

   The **Assign User Group** page is displayed.

5. Remove the existing user group and add another user group.

If the user who has already subscribed to this alert does not belong to the updated assigned User Groups, the system deletes the subscription.

> **Note:** The user will receive an email notification regarding unsubscribing this alert. In case of a Published, Mandatory, or Autosubscribe alert, if any user belonging to the updated User Group list does not consist of the alert subscription, this alert will be automatically subscribed to that user and sends an email notification.

Assigning Macros

To assign macros to an alert:

1. In **Alert: Assignments**, click the **Macros** tab.
2. Click **Add Macros**.
3. Select the macro to which you want to assign the alert and click **OK**. The selected macro display in the **Macros** tab.
4. To remove an assigned macro, select the macro and click **Delete**.
5. Click **OK**. The confirmation message appears.

Unassigning Macros

To unassign Macros from an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Enter the Name of the Alert, to which the macro is to be unassigned, in the **Alert Name** field. Click on **Search**.
3. Select the Alert definition. Click on the **Assign Subscribers** button.
4. Click on the**Macros** tab.

   The **Assign Macros** page is displayed.

5. Remove the existing macro and add another macro. Click **OK**. The macro is updated.

3. Publishing Alerts

You can publish an alert only if it is assigned to roles, users, user groups, or macros.

To publish an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Perform a search for the alert.
3. Select the alert that you want to publish.
4. Click **More** and select **Publish**.
5. In **Confirm Publish Alert**, add or change the effective dates and click **OK**. You have published the alert and a confirmation message appears.

Unpublishing Alerts

You can unpublish an alert. When you unpublish an alert, you get a list of users who have currently subscribed to the alert. A notification is sent to this list of users and they are automatically unsubscribed.

To unpublish an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Perform a search for the alert.
3. Select the alert that you want to unpublish.
4. Click **More** and select **Unpublish**.
5. **Alert Details** displays information about subscribed users. Click **OK**.
6. Enter the reason for not publishing the alert and click **OK**. You have unpublished the alert and a confirmation message appears.

Managing Alerts

You can search, view, edit, duplicate, remove, and activate/deactivate alerts. You can also assign roles, users, groups, or macros to alerts.

Searching Alerts

To search for an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search Alert Definition area, use the dropdown menus to fill in criteria of the alerts you are interested in finding.
4. When you have filled in the Search Alert Definition, click **Search**.

Viewing Alerts

You can view last 'x' number of alert messages on the home page (Tools & Settings bar). This number 'x' is configurable via user preferences.

To view alert details:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Perform a search for the alert.
3. In **Name**, click on the alert name for which you want to view the details.
4. When you open an alert for viewing, there are tabs for the five areas addressed in Adding New Alert: **Preface**, **General**, **Alert Trigger**, **Details**, and **Notification**. There are these additional tabs:
   - **Assigned To** - displays the roles, users, groups, or macros that is assigned to the alert.
   - **Subscribers** - displays the users who have subscribed to the alert.
   - **Notes & Attachments** - displays the notes and attachments that have been added to the alert by users.
   - **History** - displays the record of actions performed by users on the alert.

Editing Alerts

You can edit any existing alert definition that has not been published. If you want to modify a published alert, unpublish it prior to modification.

Note: You can not edit published alerts.

To edit alert details:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Perform a search for the alert.
3. Select the alert you want to edit and click **Edit**.
4. In **Edit Alert**, edit the required information in the various tabs.

   You can also edit the assigned roles, users, user groups and macros.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. The confirmation message appears.

Duplicating Alerts

You can create a new instance of an existing alert with the same attributes, but with a different name.

To duplicate an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Perform a search for the alert.
3. Select the alert that you want to duplicate.
4. Click **More** and select **Save As**.
5. In **Alert: Duplicate**, click **Clear**.
6. Enter a name for the alert.
7. Select **NotesandAttachments** to specify if you want to add any notes and attachments.
8. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated alert without changing the associated details. To cancel, click **Cancel**.

Note: If the original alert definition is published and subscribed, the duplicated alert definition is not automatically published. You have to publish the alert.

Removing Alerts

You can delete an alert definition if it is not published. If you want to remove a published alert, unpublish it prior to removal (deletion).

To remove an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Perform a search for the alert.

3. Select the alert that you want to remove.
4. Click **Delete**.
5. Enter the reason for removal and click **OK**. The alert is removed and a confirmation message appears.

Activating and Deactivating Alerts

You can activate an alert that is published, thus making it available for subscription. You can also activate an alert that has been deactivated.

When an alert is deactivated, a notification is sent about the inactivation. Deactivated alerts are not available for subscription.

To activate or deactivate an alert:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Alerts** > **Manage**.
2. Perform a search for the alert.
3. Select the alert that you want to activate or deactivate.
4. Click **More** and select **Activate.** You have activated the alert.
5. To deactivate the alert, click **More** and select **Deactivate**. You have deactivated the alert

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6 Workflows

This chapter provides details on how to create and manage workflows in Agile Recipe Management for Pharmaceuticals .

Overview of Recipe Management for Pharmaceuticals Workflows

Workflows are used to automate the approval process.

For example, if you need five people to approve your documents, a workflow can be implemented that automatically forwards all the approval forms to all five people. You have to only submit the document once and it is automatically emailed to all five members in the workflow chain for their approval or rejection.

As another example, you are the Equipment Manager and you may order 150 pieces of equipment in a given year. There are three people in your equipment order process: the original equipment requester, yourself, and your manager, who has to approve or disapprove it. This process can be automated using workflows.

When the request is received, and if any action is taken, an email is sent to all the people involved in the approval chain.

Note: There is no "crossover" between PLM workflows and Recipe Management for Pharmaceuticals workflows: - Recipe Management for Pharmaceuticals workflows do not carry non-Recipe Management for Pharmaceuticals business objects; - PLM workflows do not carry Recipe Management for Pharmaceuticals business objects.

The Recipe Management for Pharmaceuticals Workflow process uses five components:

- Authorized Parties
- Workflow Statuses
- Workflow Actions
- Workflow Trigger Actions
- Business Objects

Caution: The word "Status" now appears in the top-level UI, e.g., **Alerts/Workflows** > **WF Status**. However, many attributes pertaining to workflow "status" still use the word "state". There are also attributes pertaining to aspects of workflows that use the word "status" but do not refer to the main steps of workflows.

Steps toward Creating Workflows

You can create workflows for other users within your organization. The workflows can then be used by the authorized personnel.

Creating a workflow includes the following steps, which are defined below the list:

- Selecting a business object
- Selecting Sites
- Specifying notification methods
- Defining trigger actions
- Define Attribute Conditions to Qualify the Trigger Action
- Adding Statuses (States)
- Adding Actions
- Adding Authorized Parties
- Specifying Idle and Backup Delays
- Specifying State Transitions

Selecting a Business Object

Business objects can be used to create approval workflows. There are three business object categories namely, Material, Equipment, and Process. Within each of these categories you have business objects that you can use:

- **Material** - Material, Spec Plan, Allocation Request, Dispense Request.
- **Equipment** - Equipment, Equipment Qualification, Equipment Reservation, Equipment Activity.
- **Process** - Project, Work Request, Campaign, Process Step, Control Recipe.

You cannot create your own Business Objects.

Selecting Sites

A Workflow can be assigned to multiple sites. You can create and modify workflows for only those sites for which you have access permissions.

All the available sites are listed, but the sites that you are authorized to view is enabled.

Specifying Notification Methods

Notifications are sent during any state transition. The means of notifications can be email and dashboards. The primary notification method cannot be selected as secondary again. Notifications are sent to the authorized parties of subsequent state and the additional parties who are selected during workflow definition using both of the (primary and secondary) methods.

You can specify the subject and message of the notifications.

Defining Trigger Actions

Trigger action triggers the workflow. It is a pre-defined action that you can perform on the business object and they are unique to that object. Every object has allowed actions defined. You need to select an action from the allowed actions. For example, New and Remove are some of the trigger actions. You cannot create your own trigger actions.

Defining Attribute Conditions to Qualify the Trigger Action

Workflows are triggered based on various conditions. One of them is the attribute condition. These conditions must be met for an action to trigger the workflow.

Adding Statuses (States) to the Workflow

Each step or stage of a workflow is a workflow status (state). Each state has a status name and state type. Based on the defined state, the authorized parties take actions on the workflow. Before you define a workflow, you must define the states for the object.

Caution: The word "Status" now appears in the top-level UI, e.g., **Alerts/Workflows** > **WF Status**. However, many attributes pertaining to workflow "status" still use the word "state". There are also attributes pertaining to aspects of workflows that use the word "status" but do not refer to the main steps of workflows.

Adding Workflow Actions

Workflow actions are the operations you can perform on any workflow state. For example, Approve, Delete, Edit, Need More Info, Reject, Save, and Submit are some of the predefined workflow actions. For every action on a workflow state, you must specify a destination workflow state.

Adding Authorized Parties

Authorized parties take actions on workflows, for example, by moving the object from one state to another. They can be classified as:

- **Primary Approver party** - is the first party to receive the notification about the object state and receives a request for approval action. When the primary approver performs the necessary action, the object in the current state moves to the next state.

However, moving to the next state may depend on consensus from the authorized parties also, where all the authorized parties should take actions. Primary approver can be a Role, User, User Groups, or Macro.

- **Backup Approver party** - is the second party to receive the notification, when the Primary party does not respond. You must specify the delay, after which the task moves from the Primary approver party to the Backup approver party.

The backup delay period is the waiting period for the primary approver to act on any action.

If backup approver is not specified, the application sends the alert to the requester.

Specifying Idle and Backup Delays

You must specify the delay for taking actions and move the current workflow state to the next. Delays are classified as:

- **Idle delay** - determines when the initiator of the task has to be notified that no one (including the Backup Party, if any) has taken action.

- **Backup delay** - defines the delay, after which the task moves from the Primary Party to the Backup Party.

If neither the primary approver(s) nor the backup approver(s) have taken any action (even after the backup delays), the workflow sends a "No Action Alert" to the workflow requester. Also, these workflow tasks remain as pending tasks on the primary and backup party's task list. Now, the initiator can notify you about the pending workflow.

Specifying State Transitions

You must define state transitions to automate the Workflow. If a workflow is in state s1, upon action a1, it advances to state s2.

For each Starting or Intermediate state, you can specify if you require a consensus on one of its actions from all authorized parties. You can specify if all authorized parties are required to take some action before a state transition happens or any one authorized party taking action can result in a state transition.

For example, there is a workflow with states Review, Rejected, Approved, and Draft. Suppose the Review state had the following actions defined: Reject, Accept, and Need More Info. The transitions for these actions are:

- Reject Action to Rejected state
- Approve Action to Approved state
- Need More Info Action to Draft state

While defining the workflow state, if you select **ALL** for the Approve action, then the workflow enforces **ANY** for all the other remaining actions in this workflow state (namely, Reject and Need More Info).

During execution, if all authorized parties select the Approve action for the Review state, the workflow state is moved to the Approved state. If one of the authorized parties take an action other than Approve, the state moves to either Rejected or Draft (based on the transition matrix defined.)

During state transition, the configured notification(s) are sent to the authorized parties of next state.

Workflow Tasks

The authorized approver parties of the workflow are prompted to perform actions to push the workflow states to the next state. These actions are allowed on the current state of the object in the workflow. If you cannot perform a workflow action or task, you can delegate it to another user. This can be done through the Task pane on your Home page. For more information, see Task Management.

Creating a Workflow

To create a workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **New**.
2. In the **Object** tab, select the object or the category to which you want to associate the workflow.
3. Click **Next**.
4. The General tab has three subtabs:

- Identity
- Sites
- Notifications

In the **Identity** subtab, specify the following information about the workflow:

- **Name** - Enter the name of the workflow.
- **Operating Mode** - Select the operating mode.
- **Effective Start Date** - Enter the effective start date.
- **Effective End Date** - Enter the effective end date.
- **Description** - Write a brief description about the workflow.

5. Click **Next**
6. In the **Sites** subtab, click **Add** and select the sites to associate the workflow and click **OK**. The selected site(s) appear in the **Sites** subtab.

   If you want to add more sites, click **Add** and repeat this procedure.
7. Click **Next**.
8. In the **Notifications** subtab, specify the following information on how the authorized party must be notified:

   - **Primary Notification Method** - select Dashboard or Email.
   - **Optional Notification method** - the method you selected for Primary is now disabled; select the other method.
   - **Subject** - enter the subject for the notification message.
   - **Message** - enter the message details.
9. Click **Next**.
10. The **Trigger** tab has three subtabs:

    - Actions
    - Attributes
    - Conditions

    In the **Actions** subtab, select the actions for which the workflow must be triggered and click **Next**.
11. In the **Attributes** subtab, if the attribute conditions will be used to qualify the trigger action, select the attributes to be included in the condition and then click **Next**.
12. In the **Conditions** subtab, specify for each attribute the condition that must be met for the workflow to be triggered.
13. Click **Next**.
14. In the **States** tab, do the following to add states to the workflow:

    - Click **Add a State**.
    - In the **Choose State** subtab, select the state and specify if it is the Starting, Intermediate, or Ending state for this workflow.

Note: Ensure you add at least two states when defining a workflow; the Starting state and the Ending state.

- Click **Next**.
- You need to define the states for the object before you define a workflow. For information about defining states, see Workflow State.
- In the Details ubtab, specify the following:
  –
  –
- In the **Details** subtab, specify the following:
  – In the Actions subtab, select the actions to be allowed for the specifed states and click Next.
  – In the Authorized Parties subtab, click New to specify the parties who can take actions on the workflow.

15. In the **Primary Party** subtab, you can specify the roles, macros, groups and users. Click **Next**.
16. In the **Backup Party** subtab, specify another role, user, macro, or group as the backup party. Click **Next**. The selected primary and the backup parties appear in the **Authorized parties** subtab.
17. Click **Next**.
18. In the **Delays** subtab, specify the Backup Delay after which the action can be taken by the backup party. The Idle Delay determines when the initiator of the task is notified that no one has taken action on the workflow.
19. Click **Next**. The selected state appears in the **States** tab.
20. Click **Next**.
21. The **Transitions** tab has three subtabs:
    - Next State
    - Consensus
    - Parties to Notify

    In the **Next State** subtab, select the next state for each action on a state, specify the version change and if any signature is required.

Note: You can use the **System Actions** option to stop the workflow.

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22. Click **Next**.
23. In the **Consensus** subtab, for each action in the state, select the Destination state and click **Next**.
24. In the **Parties to Notify** subtab, select one or more state transitions and click **Set Parties to Notify** to specify the people to be notified.
25. In **Parties to Notify**, select the roles, macros, groups, or users to be notified when the selected actions are taken.

26. Click **Add to Notify List**. The selected parties appear in **Parties to Notify**.
27. Click **Preview Notification** to view the Notification details.
28. Click **OK** and then click **Finish**. You have created a workflow, and the confirmation message appears.

Managing Workflows

You can edit, duplicate, activate/deactivate, remove and set status for workflow. You can perform these tasks when searching or browsing for the workflow.

Searching Workflow

To search for a workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows > Workflows > Manage**.
2. Select a search view from the **View** dropdown list. By default, the Basic view is selected.
3. In the Workflows definition area, use the dropdown menus to fill in criteria of the workflows you are interested in finding.

   You can also search without filling in any criteria.
4. When you have filled in sufficient criteria, click **Search**.

Browse Workflow

To browse for a workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **Manage**.
2. Click the **Browse** tab.
3. Select an object for which you want to view the associated workflows. **Workflows** displays the list of workflows for the selected object.

Viewing Workflow

You can view the workflow details in Details.

To view the details for a workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **Manage**.
2. Perform a search or browse for the workflow.
3. In **Workflow ID**, click on the workflow ID to view the details.

Editing Workflow

Workflow can be edited in Draft and Review states.

To edit workflow details:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **Manage**.
2. Perform a search or browse for the workflow.
3. In **Workflows**, select the workflow for which you want to edit the details and **Edit**.
4. Enter information in the various fields.

5. Click **OK**.

Removing Workflow

You cannot remove a workflow that is in use.

To remove a workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **Manage**.
2. Perform a search or browse for the workflow.
3. In **Workflows**, select the workflow that you want to remove and click **Delete**.

   The confirmation message appears.

Duplicating Workflow

You can create a new instance of an existing workflow with a new name, but with the same details. You can duplicate a canceled workflow as well.

To duplicate a workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **Manage**.
2. Perform a search or browse for the workflow. **Workflows** displays a list of workflows.
3. In **Workflows**, select the workflow that you want to duplicate.
4. Click **More** and select **Save As**.
5. In **Duplicate Workflow**, enter information in the various fields.
6. Click OK.

Activating and Deactivating a Workflow

You can activate or deactivate a released workflow. Deactivated workflows cannot be started. A deactivated workflow can be activated, if not in Canceled state.

To activate or deactivate a workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **Manage**.
2. Browse or search for the workflow.
3. In **Workflows**, select the workflow that you want to activate or deactivate.
4. Click **More** and select **Activate**, to activate the workflow. Click **OK**. You have activated the workflow.

   To deactivate the workflow, click **More** and select **Deactivate**. Click **OK**. You have deactivated the workflow.

Workflow Status

Workflow statuses are the steps or stages of a workflow. A workflow status has a State Name and State Version. You can define any number of statuses in an Recipe Management for Pharmaceuticals workflow.

Examples of status (state) names include Draft, Release for Review, Approved, Rejected, and On Hold. Workflow statuses with the same name can exist in two different workflows; however, two statuses with the same name cannot exist within a single workflow.

You can create your own workflow statuses.

You can create, search, view, edit, duplicate, and remove workflow statuses.

Caution: The word "Status" now appears in the top-level UI, e.g., **Alerts/Workflows** > **WF Status**. However, many attributes pertaining to workflow "status" still use the word "state". There are also attributes pertaining to aspects of workflows that use the word "status" but do not refer to the main steps of workflows.

State Type of Workflow Status

State Types are **Start**, **Intermediate**, or **Final**.

Each workflow must have:

- A workflow state of State Type **Start**
- A workflow state of State Type **Final**

You can specify a workflow to stop in any of its states.

Setting Workflow Status

Workflows can have the following states:

- **Draft** - this is the initial state of the workflow. In this status, the workflow can be modified as many times without affecting the version number of the workflow.
- **Review** - when a user submits a workflow for review, the workflow moves from the Draft to the Review state.
- **Released** - when a user approves a workflow, it moves from the Draft to the Released state.
- **Canceled** - when a user cancels a workflow that is in the Draft, Review, or Released state, it moves to the Canceled state.

Once a workflow is in Canceled state, it cannot move to any other state. It can be removed if it has not been used, even once.

To change the state of the workflow:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **Workflows** > **Manage**.
2. Perform a search for the workflow.
3. Select the workflow for which you want to change the state and click **Change> Lifecycle Phase** and select the required state.
4. Click **OK**.

Creating a Workflow Status

To add new state:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Status** > **New**.
2. In the **General** tab, select the object for which you want to create a workflow state.
3. Click **Next**.

4. In the **Details** tab, enter information for the following fields:
   - **State Name** - Enter the name of the state.
   - **State Description** - Write a brief description about the state.
   - **Lifecycle Phase** - Select the lifecycle phase.
   - **Allow stop workflow** - Select the option, if you want to stop workflow.
5. Click **Finish**. The confirmation message appears.

Searching Workflow Status

To search for a state:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Status** > **Manage**.
2. In the Object States definition area, use the dropdown menus to fill in criteria of the workflows you are interested in finding.
3. When you have filled in sufficient criteria, click **Search**.

Browsing Workflow Status

To browse for a state:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Status** > **Manage**.
2. Click the **Browse** tab.
3. Select the object for which you want to view the states. You can view a list of states for the selected object in **States**.

Viewing Workflow Status

To view details for a state:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Status** > **Manage**.
2. Click the **Browse** tab.
3. Select the object for which you want to view the states.
4. In **State Name**, click on the state name to view the details.

Editing Workflow Status

To edit details for a state:

1. In the **Tools & Settings** menu, select **Alerts/Workflows > WF Status > Manage**.
2. Perform a search or browse for the state.
3. Select the state that you want to edit and click **Edit States**.
4. In **Edit Object State**, enter information for the following fields:
   - **State Name**
   - **Description**
   - **Lifecycle Phase**
   - Allow stop workflow
5. Click **OK**.

You have edited the state and a confirmation message appears.

Releasing Object State

A business object must have at least two released states so that a workflow can be created for it.

To release an object state:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Status** > **Manage**.
2. Perform a search or browse for the object.
3. Edit the object state(s) you want to release and click **Release**.

   You have released the selected state for the object, and a confirmation message appears.

Removing Object State

To remove an object state:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Status** > **Manage.**
   - From the Search tab, search for a state, select the Business Object that contains the state you want to delete, and click **Edit States**.
   - From the Browse tab, select an object that has the state that you want to delete.
2. Perform a search or browse for the object with the related state.
3. Select the state that you want to remove and click **Delete**.

   The state is removed for the object.

Workflow Action

Workflow actions are operations you can perform on any workflow status. Examples of workflow actions include Approve, Delete, Edit, Need More Info, Reject, Save, and Submit. You can create, search, view, modify, duplicate, and remove workflow actions.

Creating a Workflow Action

To add a new workflow state action:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Action > New.**
2. Enter information for the following fields:
   - **Action Name**
   - **Action Description**
   - Active
3. Click **Finish**. You have added a new workflow action and a confirmation message appears.

Searching Workflow Action

To search for a workflow state action:

1. In the **Tools & Settings** menu, select **Alerts/Workflows > WF Action > Manage**.
2. Select a search view from the **View** dropdown list.

Viewing Workflow Action

To view workflow action details:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Action > Manage**.
2. Perform a search for the workflow action.
3. In **Action Name**, click on the workflow action name for which you want to view the details.

Editing Workflow Action

To edit details for a workflow action:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Action** > **Manage**.
2. Perform a search for the workflow action.
3. Select the workflow action for which you want to edit the details and click **Edit**.
4. Enter the information in the following fields:
   - **Action Name**
   - **Action Description**
   - Active
5. Click **OK.**

Duplicating Workflow Action

You can create a new instance of an existing workflow action with a different name.

To duplicate a workflow action:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Action** > **Manage**.
2. Perform a search for the workflow action.
3. Select the workflow action for which you want to duplicate and click **More > Save As**.
4. In **Duplicate Action**, enter the Action Name.
5. Select **Notes and Attachments**, if you want to add notes and attachments to the action name.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated workflow action without changing the associated details. To cancel, click **Cancel**.

Removing Workflow Action

To remove a workflow action:

1. In the **Tools & Settings** menu, select **Alerts/Workflows** > **WF Action** > **Manage**.
2. Perform a search for the workflow action.
3. Select the workflow action for that you want to remove and click **Delete**.

   You have removed the workflow action and a confirmation message appears.

Workflow Statuses Versioning

A set of workflow states for a given object is versioned. If you add, modify, or delete the existing set of workflow states for an object, the version number for the set of states is incremented. However, the new or modified workflow states have to be released for the version to be incremented.

Versioning of workflow states is helpful as the administrator can attach the workflow to any current or previous versions of the object state set(s) with Released state.

7

Administration

This section helps you to set the application defaults and understand how to manage audit trails.

As an Recipe Management for Pharmaceuticals administrator, you log on to the development database to incorporate metamodel changes across the application.

Library (Records)

Recipe & Material Workspace's record-management system permits the creation, retention, removal, and use of records. The Library lets a privileged user locate records, add the records directly into the database, have multiple result views of records, compare records, and duplicate records.

Information is organized depending on functionality. Each function is stored as separate categories or folders. Each category has a set of attributes. There is a parent category that is the base or root of the category hierarchy tree. A child category inherits all attributes of a parent category.

For example, View is one of the subcategories of Metamodel. Recipe Management for Pharmaceuticals allows the user to add multiple records simultaneously.

Creating a Record

To add a new record to the library:

1. In the **Tools & Settings** menu, select **Administration** > **Library** > **New Record**.
2. In the **Category** tab, select a category for which you want to add a record and click **Next**.
3. In the **General** tab, enter the key information for the record and click **Next**.
4. The **Details** tab displays fields based on the selected category.
5. Enter relevant information in all the fields.
6. Click **Finish** to save the changes. You have added a new record to the library and a confirmation message appears.

Managing Records

You can view, search, browse, view details, edit, duplicate, and remove records.

Browsing and Searching Records

To browse for a record in the library:

1. In the **Tools & Settings** menu, select **Administration > Library > Manage Record**.
2. To browse for a record, in the **Browse** tab, select a category.
3. In **Records**, click the **Search** tab.
4. You can perform a search in any of the following ways:
   - Enter the search criteria in any or all of the fields and click **Search**.
   - Select the required Value from the fields. Click **OK** and then click **Search**.
   - Leave all the fields blank and click **Search**.

Records displays the records based on the search.

Editing Records

To edit record or report details:

1. In the **Tools & Settings** menu, select **Administration** > **Library** > **Manage Record**
2. Search and select the record or report.
3. Click **Edit**.
4. Edit information for the fields.
5. Click **OK**. A confirmation message appears.

Duplicating Records

To duplicate a record:

1. In the **Tools & Settings** menu, select **Administration** > **Library** > **Manage Record**.
2. Browse or search for the record.
3. In **Records**, select the record that you want to duplicate and click **Duplicate**.
4. Enter the required information and click **OK**. The confirmation message appears.

Removing Records

To remove a record:

1. In the **Tools & Settings** menu, select **Administration** > **Library** > **Manage Record.**
2. Browse or search for the record.
3. In **Records**, select the record that you want to remove and click **Remove**.

Activating and Deactivating Records

You can only activate and deactivate records that belong to selected categories.

> **Note:** You can see the effectivity options only if a category has its **Effectivity** set to True. Effectivity option is set to true when you define a category.

To activate or deactivate a record:

1. In the **Tools & Settings** menu, select **Administration** > **Library** > **Manage Record**.
2. Browse or search for the record.
3. Click **More** and select **Activate** or **Deactivate**.

- In **Reason for Activation**, enter the start date, end date and the reason for activation. Then, click **OK**. You have activated the record.
- In **Reason for Deactivation**, enter the end date and the reason for deactivation. Then, click **OK**. You have deactivated the record.

Note: you will not be prompted for your reasoning unless the "Reason For Change" prompts have been enabled.

Manage Internal ID

In Recipe Management for Pharmaceuticals , each instance of an object is identified with its Internal ID. An internal ID is generated each time a new record is inserted into the system. You can:

- Increase the size of the internal ID to accommodate IDs beyond the given size.
- Change the start and end sequence ID.

You can set a maximum value for the sequence so that after the end sequence is reached, the system does not allow any user to insert any more records. In case the internal ID sequence reaches a predefined threshold, the system sends out a Critical Alert to you.

Internal IDs can be used to migrate data from another external system without using API (such as a PL/SQL program.)

To manage internal IDs:

1. In the **Tools & Settings** menu, select **Administration** > **Manage Internal ID**.
2. **Manage Internal IDs** displays the start sequence number, end sequence number and the last value. Click **Refresh** to refresh the displayed values.
3. To set the end/maximum value:
   - Click **Set MAX ID**.
   - In the **Set Internal IDs** screen, enter the End Sequence Number. This value should be greater than the last value.
   - Click **OK**. The value displays in the **ManageInternalIDs**.
4. To reserve IDs:
   - Click **Reserve Block**.
   - In the **Reserve ID Block**, enter the number of IDs to be reserved.
   - Click **OK**.

The confirmation message displays the number of reserved IDs, maximum value and the next available ID.

Unlocking Objects Currently Being Modified

At any given time, only one user can edit an object. When a user opens an object for editing, Recipe Management for Pharmaceuticals automatically locks the object to prevent others from attempting to edit the same object. The system will throw an exception if multiple users try to edit the same object simultaneously. Hence, the object remains locked for all other users when it is being edited by one user.

You can see all objects that are currently locked by the Recipe Management for Pharmaceuticals system on the Objects Currently being Modified page. If needed, you can unlock an object that has been locked by Recipe Management for Pharmaceuticals .

To unlock an object:

1. In the **Tools & Settings** menu, select **Administration** > **Manage Object Lock** > **Objects Being Modified.**

   All objects that are currently being edited are listed on the Objects Currently being Modified page.

2. Select the object(s) that you want to unlock and click **Unlock Objects**.

   Once an object is unlocked, it can be edited, updated, or deleted.

User Audit

User audit records the details of users who are currently logged in. It also gathers the history of all users who have logged in to the application. Details of users such as User ID, Display Name, Login Time, Logout Time, Client IP Address, Client Name, Database, and Session ID are recorded and displayed.

Active History

To view the active history of users:

1. In the **Tools & Settings** menu, select **Administration** > **User Audit** > **Active History**.
2. Click on **Search**.

   Results in 'Audit User Activity' shows the details of the history of all the users who have logged in.

   - You can export the details of users by selecting them and clicking on the export icon.
   - You can compare two users by select on the users and clicking on the compare icon.

Users Logged In

To view users who are currently logged in:

1. In the **Tools & Settings** menu, select **Administration > User Audit > Users Logged In**.
2. A list of all the users who are currently logged in is displayed.

   - You can export the details of users by selecting them and clicking on export icon.
   - You can compare two users by selecting the users and clicking on the compare icon.

Cache

Cache improves the performance of the application and ensures faster responses to requests. A cache ensures that the application meets the performance and response requirements.

At a high level, the following objects are cached in Recipe Management for Pharmaceuticals :

- Metadata for all persistent data objects are retrieved from the database and a database cache is built. These objects are cached in memory when the first request for the object is made by any one of the application modules.
- Configuration information that is stored in files, which are cached in memory, at the application startup.

The various granular caches in Recipe Management for Pharmaceuticals are:

- Image Cache
- Alerts Cache
- Authorization Cache
- Business Object Cache
- Integration Cache
- Macro Cache
- Metamodel Cache
- Organization Cache
- People Cache
- Sequence Cache
- UOM Cache
- Valid Value Cache
- Workflow Cache
- Localization Cache

Cache Initialization

There are two types of cache initialization in Recipe Management for Pharmaceuticals :

- **Lazy Loaded Cache** - Data is loaded from the repository on-demand and the cache is built, as requests are made for different objects/data. Since the cache is not built completely at a single instance, this type of loading mechanism is called Lazy Loaded Cache.
- **First Access Fully Constructed Cache** - The entire set of objects/data that form the cache is loaded from the repository when the first request is initiated. Since the entire set of objects/data is cached, this type of loading mechanism leads to a completely constructed cache at the first request, and so is called First Access Fully Constructed Cache.

Refreshing and Invalidating Cache

Caches can be refreshed or invalidated. Configuration information (data read from the application configuration files) is not refreshed. You can refresh the entire application cache for a database that invalidates all the caches stored in the Application Caches.

For example, you may change the Category through the Metamodel UI, which results in the Persistence Cache (Category Cache) being refreshed by the system automatically, without your intervention. In this case, you do not have to refresh the cache manually through the UI.

To refresh a cache manually:

1. In the **Tools & Settings** menu, select **Administration** > **Cache** > **Manage**.
2. In **RefreshCache**, select the database that you want to refresh and click **Reload Cache**.

View Refresh History of Caches

You can view the refresh history of caches in a chronological order.

To view the refresh history of caches:

1. In the **Tools & Settings** menu, select **Administration** > **Cache** > **View Refresh History**.
2. **Cache Refresh History** displays the history of all the caches that were reloaded or cleared.

   Details of caches like Cache Name, User ID, User Name, Client IP Address, Reason for Change, Refresh Type, DB Name and Client Type are displayed in the Cache Refresh history page.
3. Click **OK** to return.

8 Object Modeling

Object Modeling section helps you to understand how to manage database categories, attributes, views, filter views and workflow states in Agile Recipe Management for Pharmaceuticals .

Object Modeling Overview

Object modeling, or Metamodeling, is the construction of a collection of "concepts" within a certain domain. In Recipe Management for Pharmaceuticals , it is the ability to modify major Categories and their attributes.

Category is equivalent to a database table, but it has business logic and UI-related metadata associated with it. A Category may not always map to a single database table, it can have multiple tables associated with it, as in the case of inherited categories.

Attributes are like columns in a database table, so attributes are defined for a Category. Again attributes have much more metadata associated than a plain data type. Attributes can be of Foreign Key type, which can be used to define relationships between two categories.

A View is a collection of attributes picked up from a set of related categories. It is an equivalent of the database View with more metadata defined. Views are used to query and edit records in the database.

A Subview can be defined on any View, and it can only contain a subset of result attributes defined in the View.

Recipe Management for Pharmaceuticals has the following Folder categories:

- Audit Trail Folder
- Inventory Balance Folder
- Base:
- Analytical Management Folder
- Equipment Folder
- Exception Folder
- Material Folder
- Meta Model Folder
- Print Folder
- Process Folder

- Recipe Folder
- Standards Folder
- System Folder

Within each of these folders, there are further subclassifications of Categories. Many of these categories are internally used by Recipe Management for Pharmaceuticals .

For example, within the Equipment folder is the subclassification of these business objects:

Equipment Business Objects		
Blender	Column	Dryer
Evaporator	Filter	Hood
pH Meter	Reactor	Tank
Pump	Scale	Scrubber
Sieve	Syrup can	Temperature Controller
Vacuum Meter	Cyromat	Distributed Solvent System
Flow Chart	HVAC System	InfraRed Analyzer
Mass Flow Volume Density Meter	Mill	Module
Nitrogen System	Purified Water System	Thermal Fluid System

A classification is based on equipment with the same characteristics. For example, you can create any number of blenders, columns, and dryers. In addition, you can add your own characteristics (attributes) to each equipment type.

An example of blender characteristics (attributes) includes Calibration Frequency, Cleaning Method, Created Date, and PPM Limits.

Every time you create a new blender type, these characteristics are inherited. In addition, you can add your own characteristics.

> **Important:** When creating categories, attributes, views, filter views, and workflow states, do not use reserved keywords that are used by the Recipe Management for Pharmaceuticals system.

Searching Category, Attribute, View, or Subview

To search for a category, attribute, view, or subview, do the following:

1. In the **Tools & Settings** menu, select **Object Modeling** > select **Category** or **Attribute** or **View** or **Subview** > then select **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search definition page, use the dropdown menus to fill in criteria of the business objects you are interested in finding.
4. When you have filled in sufficient criteria, click **Search**.

Category

Category represents a database table that comprises attributes. These attributes are viewed through Views and Subviews. Categories in a database are associated to one another. These associations create relationships in the database among categories. This relationship creates a category hierarchical structure displaying the parent and the child relationship.

Besides the normal "manage" functions (detailed in Managing Category), you can create a new category, create a schema, and move a category from one parent to another parent category.

You can add categories:

- at the same level as an existing category in the category hierarchy;
- at one level below (as a child) of any existing category in the category hierarchy;
- at the Base;
- at the default category folders, such as, Administration, Data Modeling, Organization, People, Equipment, Material, and Process.

In the category hierarchy tree, the categories are referred to as parent categories and child categories.

Steps toward Creating a Category

You create a new category in the Base or the default folders. Creating a category involves:

- Defining the category;
- Adding attributes for the category;
- Creating a schema for a category;
- Adding views; and,
- Adding subviews.

Category Types

Category is classified as:

- **System category** - a category that provides system data. A System category comprises attributes of its own, and it allows you to add data records.
- **Folder category** - a container object. A Folder category does not allow you to add data records. It can have categories of both the System and Folder types. They are referred to as child categories, which inherit the properties of the parent category and can have attributes of their own.

Every category must have a name, database name, label, and parent category.

Adding a Category at the Base

Base category is a default category with common attributes. This is the parent category for all the System categories.

The System categories inherit the attributes of the Base category.

You can create categories of System or Folder type in this category.

Adding a Category under the Default Folders

The system folders provide the data required to construct and manage the application. You can configure these folders to set up the data in the required category.

adding Attributes to a Category

If a category belongs to a child category type, it inherits the properties of the parent category. You can add specific attributes to the category.

There are two types of attributes, namely, Inherited attributes and Category-specific attributes. The Inherited attributes are the attributes inherited from the parent category, if it is a child category.

Creating a Schema for a Category

When a new category is added, by default, it is in "Schema not created" status. The tables are not created in the database.

To create these tables, you must create a schema. A table is created in the database with the category name and the data type. The category status is updated with "Schema created." Now, records can be queried from the database. A default view for the category, including the inherited and the current attributes, is available.

Creating a Category

To create a category:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **New**.
2. In the **Preface** tab, select a category and then select one of the following two options:
   - Create child of the selected category
   - Create peer of the selected category
3. Click **Next**.
4. In the **General** tab, enter information for the following fields:
   - **Name** - Enter the name of the category.
   - **Display Name** - Enter the display name of the category.
   - **DB Name** - Enter the name of the table in the database for the category.
   - **Allow Records** - Select Yes, if you want to allow records.
   - **Allow Attributes** - Select Yes, if you want to allow attributes.
   - **Description** - Give a brief description of the category.
5. Click **Next**. The **Details** tab displays. This tab has two subtabs:
   - Characteristics
   - Attributes
6. In the **Characteristics** subtab, select any of the following options:
   - **Allow Versioning** - Select Yes, if you want to allow versioning in this category.
   - **Allow Workflows** - Select Yes, if you want to allow workflows.

- **Has Effectivity Dates** - Select Yes, if you want the category to have start dates and end dates associated with it along with the functionality of activation and deactivation.
- **Marked as Business Object** - Select Yes, if you want to store the statuses.
- **Use as Internal System Category** - Select Yes, if you want to use the category as internal system category.
- **Icon ID** - Select Icon ID to display the category.
- **Allow Attachments** - Select Yes, if you want to allow attachments in a category.
- **Allow Notes** - Select Yes, if you want to allow notes in a category.
- **Allow Multi-record Additions** - Select Yes, if you want to allow multi-record additions.
- **Allow Locking** - Select Yes, if you want to allow locking.

7. Click **Next**. In the **Database** subtab, enter values in the following fields:
   - **Initial Extent** - Enter the database storage parameter for the initial extent for the table.
   - **Next Extent** - Enter the database storage parameter for the next extent for the table.
   - **PCT Free** - Enter the parameter for percent free for the table.
   - **PCT Used** - Enter the parameter for percent used for the table.
8. Click **Next**.
9. In the **Attributes** subtab, click **New** to specify the attributes for the category. For information to add attributes, see Add New Attribute.

   The attributes that you add are displayed in the **Attributes** subtab.
10. Click **Finish**. You have created the category and a confirmation message appears.

Managing Categories

You can browse, search, view, modify, duplicate, export, and remove a category.

Browsing Category

To browse for a category:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Click the **Browse** tab to view **Data Categories**.
3. Select a category. The **Category** tab displays the details for the selected category.
4. Click the **Attributes** tab to view attribute details of the selected category.
5. Under **Attributes** tab there are three subtabs.
   - Category-Specific
   - Inherited
   - Composite Keys

   You can add and edit attributes under Category-Specific subtab. You can add and edit Composite Keys for a set of attributes under the Composite Keys subtab.

6. Click the **Views** tab to view associated views of the selected category.
7. Click the **Subviews** tab to view the subviews details of the selected category.

You can also edit, remove, duplicate, create schema, refresh schema, and move categories.

Viewing Category Details

You can view category details from the **Search** or the **Browse** tab.

To view details for a category using search:

1. In the **Tools & Settings** menu, select **Object Modeling > Category > Manage**.
2. In the **Search** tab, perform a search for the category.
3. The **Records** pane displays the list of categories based on the search.
4. In **Name**, click on the category name for which you want to view the details. **Category: View Details** displays the category details such as Name, DB Name, category status, characteristics, associated attributes, views, and subviews.

Editing Category

You can edit the details for the category when you browse or search for the category.

Modifying a category involves:

- Changing the Name, Display Name, DB Name, Is System Flag setting, Allow Attributes, Allow Records, description setting
- Adding or removing associated attributes
- Modifying existing attribute details
- Adding or removing associated Views and Subviews

> **Note:** You cannot uncheck the Allow Attachments or Allow Notes, if any attachments or notes are attached to the category. If the category has data, some of the edit operations specified above would be restricted. Please clean up all data before you attempt to make changes.

To edit the category details:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Browse or perform a search for the category.
3. When you perform a search, **Results** displays the list of categories based on the search. Select the category for which you want to edit the details.
4. Click **Edit**. **Edit Category** displays the following subtabs:
   - General
   - Details
   - Attributes

Note: When you perform certain Edit on Categories like Has Effectivity, Owner BO and adding / removing attributes, the schema status changes to schema refresh.

5. Enter the information in the various fields. For information about the fields, see Create New Category.
6. You can add, edit, remove, and duplicate the category-specific attributes. You can only duplicate the inherited attributes.
7. Click **OK**.
8. Enter the reason for the changes that you have made and click **OK**. You have edited the category and a confirmation message appears.

Duplicating Category

You can create a new instance of an existing category with the same attributes, but with a different name.

While duplicating a category, you must specify a unique name for the category. All properties of the original category are duplicated, except for the data and the views of the category. The new category is in "Schema Not Created" state. You need to create schema for this category. Child categories of the category are not duplicated. The views associated with the original category and the data in the category are also not duplicated.

To duplicate a category:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Browse or perform a search for the category.
   - When you perform a search, **Records** displays the list of categories based on the search. Select the category that you want to duplicate and click **More > Save As**.
   - When you browse, the category details are displayed. Click **More > Save As.**
3. In **Duplicate Category**, click **Clear**.
4. Enter information for the following fields:
   - **Name** - Enter the name of the category.
   - **Display Name** - Enter the display name of the category.
   - **DB Name** - Enter the name of the table in the database for the category.
   - **Description** - Give a brief description of the category.
   - **Allow Records** - Select Yes, if you want to allow records.
5. Select **Notes** and **Attachments** option if you want to add notes or attachments.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated category without changing the associated details. To cancel, click **Cancel**.

Removing Category

You can remove a category, only if a category:

- Does not have any child categories

- Does not hold any data or records in the database
- Does not have any links or references defined into other categories

To remove a category:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Browse or perform a search for the category.
3. When you perform a search, **Results** displays the list of categories based on the search. Select the category that you want to remove.
4. Click **Delete**.
5. Enter the reason for removal and click **OK**. You have removed the category and a confirmation message appears.

Moving Category

You can move a category from one parent category to another parent category. All child categories can be selected and moved to a different parent category. A child category that has data cannot be moved from one parent to another parent.

Moving a category modifies the following data in the categories:

- All the properties inherited from the parent category are removed.
- All the existing views are removed.
- The old schema is removed and the schema has to be created again.
- All the properties of the current parent are inherited.

To move a category:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Click the **Browse** tab.
3. Select the category that you want to move. The details for the selected category displays.
4. Click **More** and select **Move**.
5. In **Move Category**, select a new parent category to where you want to move the category.
6. Click **OK**. You have moved the category and a confirmation message appears.

Creating Schema

A newly created category is in the "Schema not created" status. That is, the supporting database tables are not created and the category is not ready to be used.

To create a schema for the category:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Click the **Browse** tab.
3. Select the category for which you want to create a schema. The details for the selected category displays.
4. Click **More** and select **Create Schema**. The application updates the schema status as "Schema Created" and a confirmation message appears.

Refreshing Schema

If any meta-data information related to schema is changed for an attribute, it is in the "Schema Refresh Required" status. You must refresh the schema to submit these changes.

The category and its views cannot be used to query or edit records in the category in this state. When the schema is refreshed, the Default View of the category is updated. A warning is displayed, if there are no Primary Keys defined for this category.

Once the schema is refreshed, the category schema status is "Schema Created."

To refresh a schema for the category:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Click the **Browse** tab.
3. Select the category that you want to refresh the schema. The details for the selected category displays.
4. Click **More** and select **Refresh Schema**. You have refreshed a schema and a confirmation message appears.

Attribute

An attribute represents a characteristic of a category. It is stored as a column in a category table. It specifies the data type and other necessary UI and back-end properties of the category.

Creating an Attribute

You can add new attributes while creating a category or from the **Browse** tab.

To add new attribute:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Attribute** > **New**.
2. In **Attribute: New**, under **Preface** tab, select the category for which you want to add new attributes.
3. Click **Next**.
4. In the **General** tab, enter information for the following fields:
   - **Name** - Enter the name of the attribute.
   - **Display Name** - Enter the display name of the attribute
   - **DB Name** - Enter the database name of the attribute.
   - **Data Type** - Enter the type of data of the attribute.
   - **Add External Service Call** - Select Yes, if the value for the attribute is derived externally.
   - **Description** - Write a brief description of the attribute.
5. Click **Next**. The **Details** tab displays. This tab has three subtabs:
   - Characteristics
   - View parameters
   - Type Details
6. In the **Characteristics** subtab, select any of the following option(s):

- **Value Required** - Select this option to specify that this attribute cannot have null values.
- **Primary Key** - Select this option to specify that this attribute will be part of the Primary Key on the category.
- **Editable** - Select this option to specify that this attribute is editable.
- **Allow Setting of View Privileges** - Select this option if you want to allow settings of view privileges.
- **Indexed** - Select this option for the database column created for this attribute to be indexed.
- **Value must be unique within category** - Select this option if you want the value to be unique within the category.
- **Second Person Verification Required** - Select this option if a second person verification is required.
- **Store Value in Database** - Select this option if you want to store value in the database.
- **Auditable** - Select this option to set the attribute as auditable so that all the changes on the attribute can be tracked using Audit Trail.

7. Click **Next**. In the **View Parameters** subtab, select any of the following option(s):
   - **Icon ID** - Enter the icon id to be displayed for the attribute.
   - **Always Included In View** - Select this option if you want the attribute to always be included in your view.
   - **Hidden** - Select this option if you do not want this attribute to be displayed on the user interface.
   - **Display Order** - Enter value for the display order of the view on the screen.
   - **Hyperlink to Details** - Select this option if you require hyperlink to details.
   - **Method Name** - Select the type of method name.
   - **Bean Callback** - Enter the value for bean callback.
   - **Tooltip** - Enter the text that needs to appear when you mouseover the hyperlink.

   Note: If Hyperlink To Details is selected, then Method Name and Tooltip become relevant. If method is custom, then the Bean Callback needs to be specified.

   Note: You can select either Hidden or Editable option, but not both.

8. Click **Next**.
9. In the **TypeDetails** subtab, enter information for the various fields. The fields are displayed based on the data type that you have selected.

> **Note:** By default, for float type attribute, lead zeros in decimal fraction of value entered by user is altered to append required zeros for meeting storage precision as well as for UOM Conversion

> **Note:** If Save Entered Value is selected, you require the value entered by the user. The value entered will appear at two places - next to the standard value of the attribute in Details and in an extra column on the screens where data is displayed in tabular format, with the label in format <Attribute Label> (As Entered). Unit of measure is applicable only to the number data types.

10. Click **Finish**. The confirmation message appears.

Managing Attributes

You can create attributes of different data types based on your requirement. There are various data types available in the application and are as follows:

- Text
- Number
- Boolean
- Date/Time
- Foreign Key
- Picture
- Auto Sequence
- File
- Large Text

Attributes data types have a special subtype to enhance the requirement.

For example, text data types support Email, Phone, Validated Text, URL.

Number data types support Integer, Float, and Currency.

These enhance the ability of the user to create attributes required. With these features, a user also has the ability to represent the attribute by specifying a display name, which will be used to represent it on the UI.

Attributes are of two types:

- Inherited
- Category-specific

Inherited Attributes are the attributes inherited from the parent category, if it is a child category. They can only be duplicated and cannot be created, modified or removed. Inherited attributes can be duplicated to make a category-specific attribute.

Category-specific attributes are the specific attributes for the new category. Category-specific attributes can be modified, duplicated, and removed.

When you specify a category property, such as Has Effectivity, Owner BO, Versioning, or Has Workflow, system attributes are created. These system attributes cannot be modified or removed by users of the application.

Viewing Attribute Details

You can view attribute details in **Attribute: View Details**. You can view information such as **Attribute Name**, **Label** and **Data Type**. **Details** displays the characteristic details, UOMs, Enumerated Values, and the Display width. You can view attributes from the **Search** or the **Browse** tab.

To view attribute details using search:

1. In the **Tools & Settings** menu, select **ObjectModeling** > **Attribute** > **Manage**.
2. Perform a search for the category.
3. In **Results** > **Attribute Name**, click on the attribute name link for which you want to view the details.

Editing Attribute

You can only edit the category-specific attributes and not the inherited attributes from the parent category. You can edit using search or browse. After you edit the attribute details, you have to refresh the schema for the associated category.

To edit details for the attribute:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Attribute** > **Manage**.
2. Perform a search for the attribute.
3. **Records** displays the list of attributes based on the search. Select the attribute for which you want to edit the details.
4. Click **Edit**.
5. In **Attribute: Edit**, enter the information in the various fields. For information about the fields, see Add New Attribute.
6. Click **OK**.
7. Enter the reason for the changes that you have made and click **OK**. You have edited the attribute and a confirmation message appears.

Duplicating Attribute

Duplicate an attribute to create a new attribute of a similar type. The attribute duplicated can belong to a parent or a child category. You can duplicate category-specific and inherited attributes for a category.

To duplicate details for the attribute:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Attribute** > **Manage**.
2. Perform a search for the attribute.
3. **Results** displays the list of attributes based on the search. Select the attribute that you want to duplicate.
4. Click **More > Save As.**
5. Change the information for the following fields:
   - **Attribute Name** - Enter the name of the attribute.
   - **Attribute Label** - Enter the label of the attribute.
   - **Attribute DB Name** - Enter the database name of the attribute.
   - **Description** - Write a brief description about the attribute.

6. Select **Duplicate All Notes** and **Duplicate All Attachments** option if you want to add notes or attachments.
7. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated attribute without changing the associated details. To cancel, click **Cancel**. You have duplicated the attribute.

Removing Attribute

You can remove an attribute, as long as both of these conditions are true:

- The attribute does not have any associated data; and,
- The attribute is not a part of a View or Subview.

If you try to remove an attribute that contains any data or that is associated to a View or Subview, a warning message displays. You must remove the attribute associated with the View or Subview, then you can remove the attribute.

> **Note:** When the attribute is removed from a category, the schema status of that category must be updated.

To remove an attribute:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Attribute** > **Manage**.
2. Perform a search for the attribute.
3. **Records** pane displays the list of attributes based on the search. Select the attribute that you want to remove.
4. Click on **Delete**.
5. Enter the reason for removal and click **OK**. You have removed the attribute.

Reordering Attribute

Reorder helps you change the display order of the attributes.

To reorder an attribute:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Category** > **Manage**.
2. Select the **Browse** tab and select the category whose attribute you want to reorder.
3. On the **Attributes** tab, select the attribute that you want to reorder.
4. Click **More > Reorder**.
5. On the Attributes: Reorder screen, change the display order, as needed, and click **OK**.

Configuring Icons to URL Attributes

To add icon IDs to attributes:

1. Open the CFMPCMImages_en_US.properties file, which is located at <AgilePLM_HOME>\config\locale

   The CFMPCMImages_en_US.properties file contains a list of key value pairs.
2. For the attribute whose value you want to modify, In the **Details > Characteristics** page, for the **Icon Id** field, enter the key details.

For example, if the key value pair is PCM_IMG_COM_CACHE=/icons/cache.gif, enter the value PCM_IMG_COM_CACHE in the Icon Id field.

3. Click **OK**.

View

When you create the schema for a category, a Default View is automatically created. A Default View contains all the attributes from the base category plus all attributes from all parents. In addition, you (as Administrator or the user with privileges) create new views.

There are two types of views that can be created for a given category:

- Normal or Basic view
- "Tree" view

Steps toward Creating Views

The steps to create a basic view are:

- Select the category and assign a name to the view.
- Determine whether it is a System view.
- Determine whether it is a Result view (that is, a searchable view).
- Select Search view and Result view attributes.

After you create the new view, you can decide if it has precedence over the Default view.

Creating a View

This task describes how to create a normal, or basic, view.

To create a view:

1. In the **Tools & Settings** menu, select **Object Modeling > View > New**.
2. In the **Preface** tab select a category for which you want to add the view.
3. Click **Next**.
4. In the **General** tab, enter information for the following fields:
   - **View Name** - Enter the view name.
   - **View Label** - Enter the view label.
   - **Internal to System** - Select Yes, if you want the localization value of this field to be maintained in a separate file.
   - **Show in Search** - Select Yes, if you want the view to be shown in search.
   - **Exclude Duplicate Records** - Select Yes, if you want to exclude duplicate records.
   - **Allow Tree View** - Should be set to Yes
   - **Default Rendering** - Select the view for default rendering.
   - **Description** - Write a brief description.
5. Click **Next**.

6. In the **Related Categories** tab, navigate through the tree to select the categories that need to be included in this view.

   Related Categories are classified as:

   - **Application** - Categories which are not marked as system categories.
   - **Metamodel** - Categories that hold meta-data information for the Recipe Management for Pharmaceuticals application.
   - **System** - Categories that are marked with Use as Internal System Category Flag.
   - **Child Categories** - Children of the related categories.
   - **Show Incoming** - Show related categories that reference the category on which the view is being created.
   - **Show Outgoing** - Show related categories that reference the category on which the view is being created.
   - Based on the option selected, the related categories are shown in the tree.

7. Click **Next**.
8. In the **Attributes** tab, you can view the attributes for the selected categories. Select the attribute to be used in the Search View and Result View. A few system attributes may be selected by default.
9. Click **Next**. The **Details** tab displays two subtabs:

   - Search View
   - Results View

10. Both the subtabs display the attributes selected in the **Attributes** tab.
11. In the **Search View** subtab, specify the Name, Display Label and Display Order for each attribute. You can choose to hide a certain attribute from the search view by selecting the Hidden for that attribute. A few system attributes may be selected by default.
12. Click **Next**.
13. In the **Results View** subtab, specify the Display Name, Display Label and Display Order for each attribute. You can choose to hide a certain attribute from the results view by selecting the Hidden for that attribute.
14. Click **Finish**. You have added a new view, and a confirmation message appears.

> **Note:** In **Object Modeling**, you can click **Category** > **Manage** > **Browse** tab. Select Category and click the **Views** tab.

Creating a Tree View

To create a tree view:

1. In the **Tools & Settings** menu, select **Object Modeling > View > New**.
2. In the **Preface** tab select a category for which you want to add the view.
3. Click **Next**.
4. In the **General** tab, enter information for the following fields:

   - **View Name** - Enter the view name.

- **View Label** - Enter the view label.
- **Used By System** - Select Yes, if you want the view to be used by the system.
- **Show in Search** - Select Yes, if you want the view to be shown in search.

Note: If you select the Show in Search option, the view will appear on Search Screens used for searching records on any category. For example, Library Search Screens for Equipment and Material. Additional attributes, Note count, and Attachment Count columns are added to the view.

- **Exclude Duplicate Records** - Select Yes, if you want to exclude duplicate records.
- **Allow Tree View** - Should be set to Yes.
- **Default Rendering** - Select the Tree View option.
- **Description** - Write a brief description.

5. Click **Next**.
6. In the **Related Categories** tab, select the category on which the view is being defined and the attributes to be included from related categories.
7. Click **Next**.
8. In the **Attributes** tab, the attributes for the selected categories appear. Select the attribute to be used in the Use In Search View and Use In Result View. A few system attributes are selected by default.
9. If you want to repeat the attribute more than once in the view, select the attribute and click **Repeat**, specify the Times to Repeat in Search view and Results view. Click **OK**.
10. Click **Next**. The **Details** tab appears with four subtabs:
    - Search View
    - Results View
    - Tree Definition
    - Tree Attributes
11. In the **Search View** subtab, specify the Name, Display Label and Display Order for each attribute and then click Next.
12. In the **Results View** subtab, enter information in the following fields for each attribute:
    - **Name** - Enter the name of the attribute.
    - **Display Label** - Enter the display label of the attribute.
    - **Display Order** - Enter the display order of the attribute.
    - **Editable** - Controls whether the attribute value can be edited in this field.
    - **Required** - Controls whether a value is mandatory for this attribute.
    - **Sort Order** - Sort order in conjunction with sort method controls the order in which the attributes are displayed in the results view.
13. Click **Next**.

14. Choose the attributes to define the tree and specify the tree level for each.

> **Note:** You specify an Icon ID when defining a tree view. You use a tree definition icon to represent an attribute.

15. Click **Next**. Choose the attributes to group by in a tree-oriented results view and specify the hierarchy level for each.
16. Click **Finish**. You have added a new tree view, and a confirmation message appears.

Creating a Business Object View and Associating the View with a Business Object

After you have created your view you can associate it with a specific business object so that the view can be seen while managing Alerts and Workflows.

To associate your view with the business object:

1. In the **Tools & Settings** menu, select **Administration > Library > Manage Records**.
2. Click on the **Browse** tab. Select **Base > System Folder > Authorization Folder** and click the **BO View** radio button.
3. From **Records in "BO View"**, select the specific view record you want to see while managing Alerts and Workflows and click **New**.

> **Note:** Select only the record which has the **Is Alerts View** and **Is Workflow View** flag set to **No**.

4. In the **General** tab, enter information for the following:
   - **Business Object** - Click the icon, select the BO ID of the view and click OK.
   - **View** - Click the icon, select the view name and click **OK**.
5. Click **Next**.
6. In the **Details** tab, select **Yes** from both the **Is Alerts View** and **Is Workflow View** dropdown lists.
7. Click **Finish**. A confirmation appears that the record has been added to the business object view.

> **Note:** In order to see the view that you just created, you must refresh the database cache.

Managing View

You can manage and display different types of data by creating customizable views. You can define the display order of the attributes of each category to be displayed on the screen, for each action, as views and save them in the system. You cannot remove the Default view. It can be edited with respect to making it a preferred view or by changing the display order.

Viewing Detail for View

You can see details for the associated views for a category from the Search tab.

To view details for the view using search, do the following:

1. In the **Tools & Settings** menu, select **Object Modeling** > **View** > **Manage**.
2. Perform a search for the view.
3. In **View Name**, click on the view name for which you want to see the details. **View: View Details** displays the view details such as View Name, View Label, Internal to System, Show in Search, Exclude Duplicate Records, Allow Tree View, Default Rendering and Description.
4. To view the history details such as Modified Time, Modified By Action, Attribute Category, Old Value, New Value, Reason For Change, click on the history icon in **View: View Details**.

Editing View

You can change the details of the existing view attributes, add, remove or reorder view attributes. Once a view is edited, all existing objects in the application created on that view is invalidated automatically. A warning is displayed if a view is in use, while it is being edited. While editing the view, you cannot change the owner category of the view. A default view can be edited with respect to making it a preferred view or changing the display order.

You can edit view details using search or browse.

To edit details for the view:

1. In the **Tools & Settings** menu, select **Object Modeling** > **View** > **Manage**.
2. Perform a search for the view.
3. When you perform a search, **Results** displays the list of views based on the search. Select the view for which you want to edit the details.
4. Click **Edit**.
5. In **View: Edit**, enter the information in the various fields.
6. Click **OK**.
7. Enter the reason for the changes that you have made and click **OK**. The confirmation message appears.

Note: Default view is created by the system and cannot be edited.

Duplicating View

You can create a new view based on an existing view. All the attributes of the view and the associated meta data are duplicated to the new view. You can only duplicate the category-specific views.

To duplicate a view:

1. In the **Tools & Settings** menu, select **Object Modeling** > **View** > **Manage**.
2. Perform a search for the view.

   When you perform a search, **Results** displays the list of views based on the search. Select the view that you want to duplicate.

3. Click **More > Save As.**
4. In **View: Duplicate**, click **Clear**.
5. Enter the information for the following:
   - **View Name** - Enter the name of the view.
   - **View Label** - Enter the view label.
6. Select **Notes** and **Attachments** option if you want to add notes or attachments.
7. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated view without changing the associated details. You have duplicated the view and a confirmation message appears.
8. To cancel, click **Cancel**.

Removing View

When removing a view, all view related data including the view attribute details are removed. All Subviews of the view are also removed. DEFAULT view on any category cannot be removed. In case of a system view, a warning message appears before removal of the view.

To remove the view:

1. In the **Tools & Settings** menu, select **Object Modeling** > **View** > **Manage**.
2. Perform a search for the view.

   Results displays the list of views based on the search.
3. Select the view that you want to remove and click **Delete**.

   You have removed the view and a confirmation message appears.

Making Preferred View

To set a view as the preferred view:

1. In the **Tools & Settings** menu, select **Object Modeling** > **View** > **Manage**.
2. Perform a search for the view.

   Results displays the list of views based on the search.
3. Select the view that you want to set as the preferred view in search.
4. Click **More** and select **Make Preferred**.
5. In **Reason for Change**, enter your reasons for changes.
6. Click **OK**. You have set a view as the preferred view, and a confirmation message appears.

Managing Saved Searches

This procedure allows you to assign a default search to a particular view.

To manage saved searches:

1. In the **Tools & Settings** menu, **Object Modeling** > **View** > **Manage**.
2. Perform a search for the view.
3. **Results** displays the list of views based on the search.
4. Select the view for which you want to assign default search.

5. Click **More** and select **Assign Default Search**.
6. Click **Manage Saved Searches**. If there are no "Saved Searches", you must create a new Saved Search and then try to assign a default search to the view.
7. Enter information in the following fields:
   - **Created Date**
   - **Modified Date**
   - **Created User: User ID**
   - **Modified Used: User ID**
8. Click **Search**, to search with your favorite view.
9. Click **OK**, to return to the previous screen.

Reordering View

To reorder the display order for a View:

1. In the **Tools & Settings** menu, **Object Modeling** > **Category** > **Manage**.
2. Select the **Browse** tab and select the category whose view(s) you want to reorder.
3. On the **Views** tab, select the view that you want to reorder.
4. Click **More > Reorder**.
5. In **Views: Reorder**, enter the display order for each view to be shown in the View drop-down list.
6. Click **OK**. You have reordered the view and a confirmation message appears.

> **Note:** The application displays only searchable views when reordering view.

Toggling View Appearance in Search

You can toggle the view only if you had selected the Show in Search option when creating the View.

To toggle the appearance of the view while performing a search:

1. In the **Tools & Settings** menu, select **Object Modeling** > **View** > **Manage**.
2. Perform a search for the view.

   Results displays the list of views based on the search.
3. Select the view for which you want to toggle the view appearance.
4. Select the view. Click **More** and select **Toggle "Show in Search"**.
5. Enter the reason for change and click **OK**. You have toggled views and a confirmation message appears.

Subview

A Subview is a subset of a view. It contains a collection of result attributes on the main view. A view can have many subviews. Subviews are defined in situations where you do not always want to view all the attributes connected to the view. Once you define a subview, you can switch to it on a result page and view only the attributes which are part of the subview. Results page displays only non-system subviews.

Creating a Subview

To add a new subview:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Subview** > **New**
2. In **Preface**, select a category for which you want to add the subview.
3. Click **Next**.
4. In the **General SubViewInformation** tab, enter information for the following fields:
   - **View Name** - Enter the name of the parent view.
   - **Subview Name** - Enter the name of the subview that is being created.
   - **Subview Label** - Enter the level of the subview to be displayed in the application.
   - **System** - Select this if the subview is to be marked as a system subview.
   - **Description** - Write a brief description.
5. Click **Next**. The Attributes tab displays the attributes from the parent view.
6. Select the attributes that you want to include in the Subview.
7. Click **Next**.
8. In the **Attribute Details** tab, specify the display order for each attribute.
9. Click **Finish**. You have added a new subview and a confirmation message appears.

Managing Subview

You can add, search, modify, duplicate, reorder, remove, and set preferred subview.

viewing Subview Details

You can also view the details of the subview attributes in a hierarchical format. If there are any cross-category attributes added to a subview, the information about the Owner Category and Parent Foreign Key attribute is available.

To view details for the subview using search:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Subview** > **Manage**.
2. Perform a search for the **Subview**.
3. In **Name**, click on the Subview name for which you want to see the details. **Subview: Details** displays the details such as View Name, Owner Category, Subview Name, Subview Label, and the associated details.

Editing Subview

You can change the details of the existing subview attributes, add, remove and reorder subview attributes. Once you edit a subview, all existing objects in the application created on that subview are invalidated. On editing a subview that is in use, the application displays a warning.

To edit details for the subview:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Subview** > **Manage**.
2. Perform a search for the Subview.

   When you perform a search, **Results** displays the list of subviews based on the search. Select the subview for which you want to edit the details.
3. Click **Edit**.
4. In **Subview: Edit**, enter the information in the various fields. You cannot change the view information, while editing a subview.
5. Click **OK**.
6. Enter the reason for change and click **OK**. You have edited the subview and a confirmation message appears.

> **Note:** You can also edit details for the associated subviews for a category from **Object Modeling** > **Category** > **Manage**. Select the **Category** and click the **Subviews** tab. Select the view and click **Edit**.

Duplicating Subview

To duplicate a subview:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Subview** > **Manage**.
2. Perform a search for the Subview.
3. When you perform a search, **Results** displays the list of subviews based on the search. Select the subview that you want to duplicate.
4. Click **More > Save As**.

> **Note:** You can also duplicate the associated subviews for a category from **Object Modeling** > **Category** > **Manage**. Select the Category and click the **Subviews** tab. Select the view and click **More > Save As**.

5. In **Subview: Duplicate**, click **Clear**.
6. Enter the information for the following:
   - **Subview Name** - Enter the subview name.
   - **Subview Label** - Enter the subview label.
7. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated subview without changing the associated details. To cancel, click **Cancel**.

   You have duplicated the subview and a confirmation message appears.

Removing Subview

To remove a Subview:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Subview** > **Manage**.
2. Perform a search for the Subview.
3. In **Results**, select the Subview that you want to remove and click **Delete**.

You have removed the subview and a confirmation message appears.

Note: You can also edit details for the associated subviews for a category from **Object Modeling** > **Category** > **Manage**. Select the Category and click the **Subviews** tab. Select the view and click **Delete**.

Reordering Subview

To reorder the display order for a subview:

1. In the **Tools & Settings** menu, **Object Modeling** > **Category** > **Manage**.
2. Select the **Browse** tab and select the category whose subview(s) you want to reorder.
3. On the **Subviews** tab, select the subview that you want to reorder.
4. Click **More > Reorder**.
5. In **Subviews: Reorder**, enter the display order for each subview.
6. Click OK. You have reordered the subview and a confirmation message appears.

Setting Preferred Subview

To set a Subview as the preferred view:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Subview** > **Manage**.
2. Perform a search for the subview.
3. When you perform a search, **Results** displays the list of subviews based on the search.
4. Select the subview that you want to set as the preferred subview.
5. Click **More >Make Preferred**.
6. You have set preferred subview. A confirmation message appears and a tick mark appears next to the view in the Subviews tab.

Note: You can also edit details for the associated subviews for a category from **Object Modeling** > **Category** > **Manage**. Select the Category and click the **Subviews** tab. Select the view and click **More > Make Preferred**.

Enumerated Valid Value

Enumerated Valid Values (EVV) are preassigned values for attributes. Recipe Management for Pharmaceuticals allows you to add or change enumerated valid values. When you want to add a new attribute that supports multiple choice values, you define a new EVV. You can add, modify, duplicate, and remove an EVV. You can also localize EVVs.

Creating an Enumerated Valid Value

To add an enumerated valid value:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Enumerated Valid Value** > **New**.
2. In the **New EVV** tab, enter information for the following fields:

- **EVV Name** - Enter name of the enumerated valid value.
- **Description** - Write a brief description about the EVV.
- **Data Type** - Select the data type from the dropdown list.
- **Is System** - Select Yes, if you want a system EVV.
- **Display In Result As** - Select the display In result from the dropdown list.

3. Click **Next**.
4. In the **Set EVV Values** tab, enter information for the following:
   - **Value** - Enter the value of EVV. The value is the internal system key.
   - **Display Value** - Enter the display value of EVV. The display value is the key value that is used in the configuration files for localization and customization.
   - **Description** - Write a brief description.
   - **Is Active** - Select Yes, if you want the EVV to be active and hence, usable within the application.
   - **Display Order** - Enter value for the display order.
5. To specify more Enumerated Valid Values, enter the number of values that you want to add in the text box next to Add Row(s) and click Add Row(s). The rows are added to the table. For each row, specify the value details.
6. Click **Finish**. You have added an EVV and a confirmation message appears.

Managing Enumerated Valid Value

With appropriate rights, you can modify, duplicate, and remove enumerated valid values.

Searching Enumerated Valid Value

To search for EVV:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Enumerated Valid Value** > **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search Enumerated Valid Value definition area, use the dropdown menus to fill in criteria of the EVVs you are interested in finding.
4. When you have filled in sufficient criteria, click **Search**.
5. In **EVV Name**, click on the EVV name for which you want to view the details.

Editing Enumerated Valid Value

To edit EVV:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Enumerated Valid Value** > **Manage**.
2. Perform a search for the EVV.
3. Select the EVV for which you want to edit the details and click **Edit**.
4. Enter information for the various fields.
5. Click **OK**.

6. Enter the reason for the changes that you have made and click **OK**. You have edited the EVV and a confirmation message appears.

Duplicating Enumerated Valid Value

You can create a new instance of an existing EVV with the same details, but with a different name.

To duplicate an EVV:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Enumerated Valid Value** > **Manage**.
2. Perform a search for the EVV.
3. In **EVV Results**, select the EVV that you want to duplicate and click **More > Save As**.
4. In **Duplicate Enumerated Valid Values**, click **Clear**.
5. Enter the EVV name.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated EVV without changing the associated details. You have duplicated the EVV and a confirmation message appears.
7. To cancel, click **Cancel**.

Removing Enumerated Valid Value

To remove an EVV:

1. In the **Tools & Settings** menu, select **Object Modeling** > **Enumerated Valid Value** > **Manage**.
2. Perform a search for the EVV.
3. In **EVV Results**, select the EVV that you want to remove and click **Delete**.
4. Enter the reason for removal and click **OK**. You have removed the EVV and a confirmation message appears.

> **Note:** You cannot remove EVVs that are in use.

Localizing EW Value

For localization purposes, you can customize EVVs so that EVV values are displayed in a particular language.

To localize an EVV:

1. In your installation directory, go to the AGILE_HOME\AgilePharma\config\locale folder.
2. Open the CFMDisplayLabels_$lang$.properties file for the language you want to customize.
3. Enter the Display Value of the EVV value into the file and set it equal to its localized value. The format should be DISPLAY_VALUE=LOCALIZED_VALUE, e.g. ACTIVITY_TYPE_OTHER=Other.
4. Save file.
5. In Recipe Management for Pharmaceuticals , in the Tools & Settings menu, select **Administration > Cache > Manage**.

6. On the Manage page, select **Localization Cache**.
7. Click **Reload Cache**.

   For information about how to localize other labels, see Customizing and Localizing Labels.

Unit Of Measure

The Unit Of Measure (UOM) defines the unit values for a measurement that is performed. For example, a material's density can have a unit of measure defined as g/ml for grams per liter. A boiling point can be represented as a unit value of Celsius, or "C".

Units of Measure can be added individually or can be grouped for providing a list of possible units defined for an attribute. UOMs can define a conversion from one unit of measure to another.

You can add, modify, duplicate, or remove UOMs, UOM Groups, and UOM Conversions.

Creating a Unit of Measure

To add new UOM:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM** > **New**.
2. In **Add Unit of Measure**, enter information for the following fields:
   - **Name** - Enter the name of the UOM.
   - **Symbol** - Select the UOM symbol.
   - **Description** - Write a brief description of the UOM.

   To specify more UOMs, enter the number of UOMs that you want to add in the text box next to **Add Row(s)** and click **Add Row(s)**. The rows are added to the table. For each row, specify the details.
3. Click **Finish**. You have added the UOM and a confirmation message appears.

> **Note:** You can also add new UOMs when you perform a search.

Managing Units of Measure

You can view, edit, duplicate, and remove Units of Measure.

Searching UOM

To search for UOM:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM** > **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search UOM definition area, use the dropdown menus to fill in criteria of the UOMs you are interested in finding.
4. When you have filled in sufficient criteria, click **Search**.

Viewing UOM Details

To view UOM details:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM** > **Manage**.
2. Perform a search for the UOM.
3. **UOM Results** displays a list of UOMs.
4. In **Name**, click on the UOM for which you want to view the details.

Editing UOM

To modify a UOM:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM** > **Manage**.
2. Perform a search for the UOM.
3. Select the UOM for which you want to edit the details and click **Edit**.
4. Enter information for the various fields.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. You have edited the UOM and a confirmation message appears.

Duplicating UOM

You can create a new instance of an existing UOM with the same attributes, but with a different name.

To duplicate a UOM:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM** > **Manage**.
2. Perform a search for the UOM.
3. **UOM Results** displays a list of UOMs.
4. Select the UOM that you want to duplicate and click **More > Save As**.
5. In **Duplicate Unit of Measure**, enter information for the following fields:
   - **Name** - Enter the name of the UOM.
   - **Symbol** - Select a symbol from the drop-down list.
6. Click **Clear** to reset the screen.
7. Click **Save and Edit** to add the description or click **OK** to save the duplicated UOM without changing the description. You have duplicated the UOM and a confirmation message appears.

Removing UOM

To remove a UOM:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM** > **Manage**.
2. Perform a search for the UOM. **UOM Results** displays a list of UOMs.
3. Select the UOM that you want to remove and click **Delete**.

   > **Note:** You cannot remove UOMs that are in use.

4. Enter the reason for removal and click **OK**. You have removed the UOM and a confirmation message appears.

Unit of Measure Group

A Unit of Measurement Group is a collection of one or more Units of Measurement. A collection of UOMs with similar characteristics can be gathered and assigned a name to form a UOM Group.

Creating a Unit of Measure Group

To add new UOM group:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Group** > **New**.
2. In the **New UOM Group** tab, enter information for the following fields:
   - **Name** - Enter the name of the UOM group.
   - **Description** - Write a brief description of the UOM group.
3. Click **Next**.
4. In the **UOM Search** tab, click **Add** to add UOMs to the group. You can change the display order for each UOM that you add.
5. Click **Finish**. You have added a new UOM group and a confirmation message appears.

> **Note:** You can also add new UOM group when you perform a search.

Managing UOM Groups

You can search, view, edit, duplicate, and remove a UOM Group.

Searching UOM Group

To search for UOM group:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Group** > **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search UOM Group definition area, use the dropdown menus to fill in criteria of the UOM Groups you are interested in finding.
4. When you have filled in sufficient criteria, click **Search**.

Viewing UOM Group Details

You can view the UOM details in UOM Group Details. You can view information such as Name, Description and a list of UOMs that belong to the group.

To view UOM group details:

In the **Tools & Settings** menu, select **Object Modeling** > **UOM Group** > **Manage**.

Perform a search for the UOM group.

UOM Group Results displays a list of UOM groups.

In **Name**, click on the UOM group for which you want to view the details.

Editing UOM Group

To edit UOM group details:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Group** > **Manage**.
2. Perform a search for the UOM group.

   UOM Group Results displays a list of UOM groups.
3. Select the UOM group for which you want to edit the details and click **Edit**.
4. Enter information for the various fields.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. You have edited the UOM group and a confirmation message appears.

Duplicating UOM Group

You can create a new instance of an existing UOM group with the same attributes, but with a different name.

To duplicate a UOM group:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Group** > **Manage**.
2. Perform a search for the UOM group.

   UOM Group Results displays a list of UOM groups.
3. Select the UOM group that you want to duplicate and click **More > Save As**.
4. In **Duplicate UOM Group**, click **Clear**.
5. Enter the name for the new group.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated UOM group without changing the associated details. To cancel, click **Cancel**.

Removing UOM Group

To remove a UOM group:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Group** > **Manage**.
2. Perform a search for the UOM group.

   UOM Group Results displays a list of UOM groups.
3. Select the UOM group that you want to remove and click **Delete**.

   Note: A UOM group that is in use cannot be removed.
4. Enter the reason for removal and click **OK**. You have removed the UOM group and a confirmation message appears.

Unit of Measure Conversion

You can convert one Unit of Measure to another using a conversion factor or formula. A conversion formula is defined as a string expression, in which the macro @ORIGINAL_VALUE represents the value being converted.

You cannot specify conversion between UOMs if they are not from the same UOM Group.

Adding New UOM Conversion

To create a new UOM conversion:

1. In the **Tools & Settings** menu, select **Object Modeling > UOM Conversion > New**.
2. In Add UOM Conversion, enter information for the following:
   - **From UOM** - Using the search function, select the UOM to be converted.
   - **Conversion Factor** - Enter the conversion factor.
   - **Web Service Operation** - Using the search function, select the web-service operation name.
3. To specify more UOM conversions, enter the number of conversions that you want to add in the text box next to **Add Row(s)** and click **Add Row(s)**. The rows are added to the table. For each row, specify the details.
4. Click **Finish**. The confirmation message appears. You have added a new UOM conversion
5. **To UOM** - Using the search function, select the UOM to convert into.

> **Note:** If a UOM Conversion is added with a specified Web-service operation, that Web-service would be invoked each time a conversion is required between the two UOMs. Also, a Web service-based conversion will not be allowed from Search screens and the UOMs shown in the dropdown list on the Search screen would be restricted to only the UOMs in the UOM Group associated with the field and having formula-based conversion. All UOMs having Web-service-based conversions will not be displayed in this dropdown list.

Managing UOM Conversions

You can search, edit, duplicate, and remove a UOM Conversion.

Searching UOM Conversion

To search for UOM conversion:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Conversion** > **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search UOM Conversion definition area, use the dropdown menus to fill in criteria of the UOM Conversions you are interested in finding.
4. When you have filled in sufficient criteria, click **Search**.

Editing UOM Conversion

You can only edit the UOM Conversion details.

To edit UOM conversion:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Conversion** > **Manage**.
2. Perform a search for the UOM conversion.

UOM Conversion Results displays a list of UOM conversions.

3. Select the UOM conversion for which you want to edit the details and click **Edit**.
4. Enter information for the various fields.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. You have edited the UOM conversion details and a confirmation message appears.

Duplicating UOM Conversion

You can create a new instance of an existing UOM conversion with the same attributes, but with a different name.

To duplicate a UOM conversion:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Conversion** > **Manage**.
2. Perform a search for the UOM conversion.
3. Select the UOM conversion that you want to duplicate and click **More > Save As**.
4. In **Duplicate UOM Conversion**, click **Clear**.
5. For **From UOM Name** and **To UOM Name**, click the icon and select the UOMs.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated UOM conversions without changing the associated details. To cancel, click **Cancel**. You have duplicated the UOM conversion and a confirmation message appears.

Removing UOM Conversion

To remove a UOM conversion:

1. In the **Tools & Settings** menu, select **Object Modeling** > **UOM Conversion** > **Manage**.
2. Perform a search for the UOM conversion.

   UOM Conversion Results displays a list of UOM conversions.
3. Select the UOM conversion that you want to remove and click **Delete**.
4. Enter the reason for removal and click **OK**. You have removed the UOM conversion and a confirmation message appears.

Multiple Language Support in Recipe Management for Pharmaceuticals

Recipe Management for Pharmaceuticals is an internationalized application that permits companies to enter non-English label data, and allows users to see their user interface in their preferred language, which is set in PLM. For more information about how to set a user's language preference and for more details about multiple language support in PLM, see the Agile PLM Administrator Guide.

Recipe Management for Pharmaceuticals supports multiple-language support for the following:

- Category names
- View names
- View attribute names

- Filter view names
- List entry labels (Pick List Values)

The items in the previous list can be localized or simply customized to suit your company's needs.

Customizing and Localizing Labels

This section describes how to customize labels or localize labels. You can customize/localize Enumerated Valid Value values, category names, view names, view attribute labels, and filter names.

Unlike the PLM system, Recipe Management for Pharmaceuticals does not store localized strings in the database. The localization string key is stored in the database, while the actual localization string, or customized string, is stored in the CFMCustomLabels_$lang$.properties file. To localize or customize a label, you must override the value set in the corresponding configuration file by setting a new value in the CFMCustomLabels_$lang$.properties file. For example, if you want to use a display value that is different from one that is defined in the CFMDisplayLabels_en_US.properties file, you must create an entry in the CFMCustomabels_en_US.properties file and assign the value that you want displayed in the UI.

Note: You must choose the CFMCustomLabels properties file according to the chosen language preference.

You can override values that have been set in any of the following configuration files:

- CFMCategoryLabels - contains category names
- CFMViewLabels - contains view names
- CFMSubviewLabels - contains filter view names
- CFMViewAttributeLabels - contains view attribute names
- CFMDisplayLabels - contains EVV value names

WARNING: The files in the list above should not be modified at any time. The only exception is the CFMDIsplayLabel file, which is used for localization purposes only. See Localizing EVV Value for more information.

To customize or localize a label:

1. In your installation directory, go to the AGILE_HOME\AgilePharma\config\locale folder.
2. Open the CFMCustomLabels_$lang$.properties file for the appropriate language.
3. In the designated section, enter the new key/value pair that will be overriding the original value. The format should be KEY=CUSTOMIZED_VALUE, e.g. ACTIVITY_TYPE_OTHER=Other.
4. Save file.
5. In Recipe Management for Pharmaceuticals , in the Tools & Settings menu, select **Administration > Cache > Manage**.
6. On the Manage page, select **Localization Cache**.

7. Click **Reload Cache**.

9 Integration

This chapter provides details on creating and managing Applications, as well as how to set up and test Web Services.

Application

The administrator creates and manages the application.

Creating an Application

To create an application:

1. In the **Tools & Settings** menu, select **Integration** > **Application** > **New**.

   The **New Application** page appears.

2. In the **General** tab, enter information for the following:

   - **Application Name -** Enter the name of the application.
   - **Application User ID -** Enter a unique user ID to the application.
   - **Application User Password -** Enter a valid password to log into the application.
   - **Confirm Application User Password -** Retype the application user password to confirm.
   - **Inbound XSL -** Enter the XSL file name to convert the incoming request to a CfmXML. This file should be saved in config\integration\xsl directory.
   - **Outbound XSL -** Enter the XSL file name to convert the outgoing request to a CfmXML. This file should be saved in config\integration\xsl directory.
   - **Maximum Payload objects -** Enter the maximum number of objects to be sent back in response.

3. Click **Finish** to create the new application.

The confirmation message appears "You have successfully added web service application".

Managing Application

You can search, edit, duplicate, and remove Application.

Searching Application

To search an application:

1. In the **Tools & Settings** menu, select **Integration** > **Application** > **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search Application Setup definition area, use the dropdown menus to fill in criteria of the applications you are interested in finding.
4. When you have filled in sufficient criteria, click **Search**.

Editing Application

To edit an application:

1. In the **Tools & Settings** menu, select **Integration** > **Application** > **Manage**.
2. On the Search Application Setup page, click **Search**.
3. Select the application name and click **Edit**
4. The **Application: Edit** screen appears. Enter information in the fields that you wish to make changes and Click **OK**.

Removing Application

To remove an application:

1. In the **Tools & Settings** menu, select **Integration > Application > Manage**.
2. The Search Application Setup page appears, click **Search**.
3. Select the application name and click **Remove** to remove the record permanently.

Duplicating Application

To duplicate an application:

1. In the **Tools & Settings** menu, select **Integration** > **Application** > **Manage**.
2. The Search Application Setup page appears, click **Search**.
3. Select the application name and Click **Duplicate**.
4. Enter the application name to be duplicated in **Application Name**.
5. To add a note or an attachment to the duplicate application, select **Notes or Attachment**.
6. Click **Save and Edit** to edit the duplicate application details. Make the necessary changes and Click **OK**.
7. Enter the reason for changes in this record and Click **OK**. You have successfully updated the application, and a confirmation message appears.

Web Service

You can create and manage a Web service.

Creating a Web Service

To create a Web Service:

1. To enter Web service values from WSDL file, on the **Tools & Settings** menu, select **Integration > Web Service > New**.
2. In the **Preface** tab, enter information for the following:

- **Application ID: Application Name** - Enter the application name
- **Web Service Values** - Select From WSDL file or Manual Entry

3. If you select From WSDL file then click **Browse** and select the WSDL File Name.
4. Click **Next**.
5. In the **General** tab, enter information for the following fields:
   - WebService Name
   - Target Name Space
   - Target End Point Address
   - **Port Name**
6. In the **Operation List** tab, enter information for the following fields:
   - Operation Name
7. Click Next.
8. Click **Finish**. The confirmation page appears. You have created a new Web service.

Managing Web Service

You can search, edit, duplicate, and remove a Web Service.

Searching Web Services

To search for a Web Service:

1. In the **Tools & Settings** menu, select **Integration** > **Web Service** > **Manage**.
2. Select a search view from the **View** dropdown list.
3. In the Search Web Services definition area, use the dropdown menus to fill in criteria of the Web services you are interested in finding.
4. When you have filled in sufficient criteria, click **Search**.

Editing Web Service

To edit a Web Service:

1. In the **Tools & Settings** menu, select **Integration > Web Service > Manage**.
2. Perform a search.
3. Select the Web service you want to edit.
4. Click **Edit**. Enter information in the following fields:
   - **Target End Point Address**
   - **Target Name Space**
   - Port Name
   - WebService Name
   - Application ID
5. Click **OK**.
6. Enter reason for change, and click **OK**. The confirmation message appears. You have edited a Web service.

Duplicate Web Service

To duplicate a Web Service:

1. In the **Tools & Settings** menu, select **Integration** > **Web Service** > **Manage**.
2. Perform a search.
3. Select the Web service you want to duplicate.
4. Click **More > Save As**. Enter information in the following fields:
   - **WebService Name**
   - **Target Name Space**
5. Click **Save and Edit**.
6. Click **OK**. The confirmation message appears. You have duplicated a Web service.

Removing Web Service

To remove a Web Service:

1. In the **Tools & Settings** menu, select **Integration** > **Web Service** > **Manage**.
2. Perform a search.
3. **Results** displays a list of Web service names.
4. Select the Web service name and click **Delete**.

Testing a Web Service

To test a Web service:

1. In the **Navigation** menu, select **Integration** > **Test a Service**.
2. In **Web Service: Test** enter information for the following fields:
   - **Application** - select the required option from the dropdown list
   - **Service** - select the required Web service option from the dropdown list
   - **Operation** - select the required option from the dropdown list
   - **Input XML** - the content of the file is displayed
   - **Test XML File Name** - click Browse to select the XML file name
3. Click **View Test XML from File** to view the content of the file.
4. Click **Submit XM**L.

Note: The Input file must be a XML file.

10
People

This chapter provides information on how to manage users, user groups, roles, and privileges.

Overview of People Management in Recipe Management for Pharmaceuticals

A company has people who fulfill the responsibilities of the organization. In Agile PLM, people are represented by the User business object. For the Recipe & Material Workspace solution, users are created in Agile PLM and are assigned the PLM privilege **Recipe & Material Workspace UI Access**.

Roles that are applied within Recipe Management for Pharmaceuticals by the administrator further define user access and responsibilities in the pharmaceutical Workspace's business environment. For example, the Equipment Manager can create an Equipment User Group and assign all equipment personnel to it.

Managing Users in Recipe Management for Pharmaceuticals

Every person in the enterprise who is going to work in Recipe & Material Workspace must represented by a **Users** business object that is created by the administrator in Agile PLM.

Each user must be assigned the privilege mask that permits access to the Recipe Management for Pharmaceuticals user interface in Web Client. For more information, see Accessing Recipe & Material Workspace and User Configuration. You may also consult the chapter on Users in Agile PLM Administrator Guide.

The rest of the information in this section assumes you are working with "User" business objects that have been assigned the privilege to access the Recipe Management for Pharmaceuticals solution interface.

Further User Configuration within Recipe Management for Pharmaceuticals

Each Recipe Management for Pharmaceuticals user is identified by a unique User ID from Agile PLM; many other attributes of the User object were created in PLM.

Recipe & Material Workspace has additional user attributes, user roles, and requirements for users.

Every Recipe Management for Pharmaceuticals user must be assigned to a department, a set of sites, a primary site, and roles for each site depending on their responsibilities.

It is mandatory that you associate each Recipe Management for Pharmaceuticals user to:

- a Company;
- a Department;
- Sites, including a Primary Site;
- Recipe Management for Pharmaceuticals roles;
- an Recipe Management for Pharmaceuticals user must be able to view the list of subscription alerts.

Here are some further details about these requirements:

- **Company** - the user has to belong to a company; the user can be associated with only one Company.
- **Department** - the user belongs to only one department at any given time.
- **Site** - a user can be associated with one more sites; a user can be assigned to any site regardless of the company that the site is associated with. Although each user must have a primary site, the association with additional sites is not mandatory.
- **Primary Site** - one of each user's site assignments must be designated as the primary site. When you assign sites to a user, you must specify one of the sites as the primary site.
- **Role** - roles control the user's access to the various functionalities in Recipe Management for Pharmaceuticals . A role is assigned to the user at the sites selected for the user. A user can have multiple roles at a site.

More aspects of user configuration within Recipe Management for Pharmaceuticals are provided in subsequent sections.

Searching for a User

To search for a user:

1. In the **Search** dropdown menu, select **People** > **User**.
2. In the Search field, enter the "*" wild-card or another value, and click the **Execute Search** button.
3. In the Results area, on the row of the user you want, click the checkbox and click **Edit**, or simply double-click the username link.

Editing User

To edit a user:

1. In the **Search** dropdown menu, select **People** > **User**.
2. Enter a value, and click the **Execute Search** button.
3. In the Results area, on the row of the user you want, click the checkbox and click **Edit**, or simply double-click the username link.
4. Enter information for the various fields. The user-object fields are listed below.
5. When you are done, click **OK**.

   The confirmation message appears.

The two tabs on a user object are:

- **General** - displays information such as First Name, Last Name, Company Name, Display Name, Effective Start Date, Effective End Date and Title.
- **Details** - has two subtabs: **Main** and **Sites and Roles**.

User General Tab

In the **General** tab, you can modify information for the following fields: Company, Effective End Date, Title, and Other Title.

User Details Tab

The **Details** tab has the following subtabs:

- **Main** - to add or modify a user's address, department, and contact details.
- **Sites and Roles** - to add or modify a user's site, and to assign or remove roles for the user.

User Details>Main Subtab

In the **Main** subtab, enter or modify information for the following fields:

- Secondary Email
- Other Email
- Employee Type
- Manager User ID
- Mail Drop
- Education
- Address
- City
- State
- Zip code
- Country
- Work Phone
- Cell Phone
- Pager
- Fax
- Department

User Details>Site and Roles Subtab

To add or modify a site or roles:

1. In the **Sites and Roles** subtab, click **Add a Site and Roles**.
2. In **Select Site**, select a site that you want to assign to the user and select the **Select Roles** tab.
3. In **Select Roles**, select the roles that you want to assign to the user for the selected site.
4. Click **OK**. The sites and the roles that you specified are displayed in the **Site** subtab.

5. Select the site and role.
6. To add a site, click **Add a Site and Roles**.
7. To remove a site, click **Delete**. Enter the reason for removal and click **OK**. The site is removed.
8. To set a site as the primary site, select the site and click **Set to Primary**.

Setting and Unsetting Super User

A "super-user" gets all the menu rights of an administrator.

To set or unset a SuperUser:

1. In the **Search** dropdown menu, select **People** > **User**.
2. Find and open the user that you want to set/unset as a super-user.
3. Click **More** > **Set SuperUser** to set as a super user.
4. Click **More** > **Unset SuperUser** to unset the user as a super-user.

A confirmation message appears.

Cannot Duplicate a User

Because you cannot create a user in Recipe Management for Pharmaceuticals , you also cannot duplicate an existing user. This procedure must be done in Agile Java Client > **Admin** tab.

Cannot Remove a User

Just as you cannot create a user in Recipe Management for Pharmaceuticals , you also cannot remove an existing user. This procedure must be done in Agile Java Client > **Admin** tab.

Cannot Activate or Deactivate a User

Just as you cannot create a user in Recipe Management for Pharmaceuticals , you also cannot deactivate or re-activate an existing user. This procedure must be done in Agile Java Client > **Admin** tab.

Managing Roles

A role defines an authority or right to perform a task for a user. Before creating a role, the tasks to be performed by the role have to be identified. Hence, a Role represents a combination of privileges that enable or restrict the users to view or edit functionalities in the Scale-up Management System application.

Once a role is created, you can assign it to users. Each user can have a different set of role for each site in the system. Each role has a validity period.

A user assigned with a role can view only the assigned menus and perform only the assigned actions on the permitted attributes.

A role is defined as in use, if it is assigned to a user or site, referred in a workflow or alert.

For example, if a user is assigned the Role of Campaign Approver he can perform the task of approving or disapproving a Campaign.

Creating a Role

To create a role:

1. In the **Create New** dropdown menu, select **People** > **Role**.
2. In the **General** tab, enter information for the following fields:
   - **Role Name** - Enter name of the role.
   - **Role Description** - Write a brief description about the role.
   - **Effective Start Date** - Enter the effective start date.
   - **Effective End Date** - Enter the effective end date.
3. Click **Next**.
4. The **Privileges** tab has two subtabs, **Actions** and **Attributes**.

   In the **Actions** subtab, select the kinds of business objects and other areas of action and permission for the new role. When you have finished, click **Next**.
5. In the **Attributes** subtab, specify the operations to be permitted for each of the category and object attributes - the operations are Create, Modify, and View.

   Click **Finish**. The role is created and the confirmation message appears.

Searching for Roles

To search for a role:

1. In the **Search** dropdown menu, select **People** > **Role**.
2. Type in the * wild-card, then click the **Execute Search** button.
3. Open a role from the list of returned roles by clicking its name, or click the checkbox on its row and click **Edit**.

Editing Role

To edit a role:

1. In the **Search** dropdown menu, select **People** > **Role**.
2. Perform a search for the role.
3. On the returned results, select the role for which you want to edit the details. Various UI buttons are enabled. Click the **Edit** button. The role object opens.
4. Modify information for the various fields.
5. Click **OK**.

Duplicating a Role

You can create a new instance of an existing role with the same attributes, but with a different name. You can associate this new role to new users and assign new activities.

To duplicate a role:

1. In the **Search** dropdown menu, select **People** > **Role**.
2. Perform a search for the role.
3. Select the role for that you want to duplicate. Click the **More** dropdown menu and select **Save As**.

4. Enter a new Role Name.
5. If you want to duplicate notes or attachments, click the Yes radio button for **Duplicate All Notes** or **Duplicate All Attachments**, respectively.
6. Click **Save and Edit** to change the associated details, or click **OK** to save the duplicated role without changing the associated details. To cancel, click **Cancel**.

Removing a Role

You can remove a role only if it is not in use. A role is "in use" in any of these cases:

- the role is assigned to a user,
- the role is assigned to a site, or
- the role has been referred in a workflow or an alert.

Activities on the role can be tracked through audit trail.

To remove a role:

1. In the **Search** dropdown menu, select **People** > **Role**.
2. Perform a search for the role. Open the role that you want to remove.
3. Click the **Delete** button.

   If the system detects that the role cannot be removed, it will display the reason in an error message.

   If the role can be removed, you are prompted to enter the reason that you are removing the role.
4. Click **OK**. You have removed the role, and a confirmation message appears.

Activating and Deactivating a Role

When you activate or deactivate a role, you must enter a reason for the change, with the start date, end date, and time. A role can be used only if it is active.

To activate a role:

1. In the **Search** dropdown menu, select **People** > **Role**.
2. Perform a search for the role you want to modify. If your search returns multiple roles, select the role that you want to activate.
3. Click **More** and select **Activate**.
4. In the **Reason for Activation** dialog, enter the start date, end date, and the reason for activation. Click **OK**.

To deactivate a role:

1. In the **Search** dropdown menu, select **People** > **Role**.
2. Perform a search for the role you want to modify. If your search returns multiple roles, select the role that you want to deactivate.
3. Click **More** and select **Deactivate**.
4. In the **Reason for Deactivation** dialog, enter the end date and the reason for deactivation. Click **OK**.

Managing User Groups

A group of users form a user group. Common responsibilities are assigned to a user group. For example, a set of users receive a particular alert message. No other groups of users such as roles, macros, or existing user groups can be members of a user group. A user group consists of specific users only.

Creating a User Group

To create a user group:

1. In the **Create New** dropdown menu, select **People** > **UserGroup**.
2. In the **General** tab, enter information in the following fields:
   - Name
   - Description
3. Click **Next**.
4. In the **Members** tab click **Add** to add members.
5. Click **Finish**.

> **Note:** You can add users from other user groups.

Searching User Group

To search for a user group:

1. In the **Search** dropdown menu, select **People** > **User Group**.
2. Enter a value, and click the **Execute Search** button.
3. In the Results area, on the row of the user group you want, click the checkbox and click **Edit**, or simply double-click the user group link.

Editing User Group

To edit a user group:

1. In the **Search** dropdown menu, select **People** > **User Group**.
2. Enter a value, and click the **Execute Search** button.
3. In the Results area, on the row of the user group you want, click the checkbox and click **Edit**.
4. Enter information in the various fields.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. You have edited a user group and a confirmation message appears.

Duplicating User Group

You can create a new instance of an existing user group with the same attributes, but with a different name. All the members of the existing user group are also duplicated in the new user group.

To duplicate a user group:

1. In the **Search** dropdown menu, select **People** > **User Group**.
2. Perform a search for the user group.
3. Select the user group that you want to duplicate and click **More** > **Save As**.
4. Click **Clear**.
5. In **Name**, enter a name for the user group.
6. Select **Notes** and **Attachment** if you want to add a note or an attachment to the user group.
7. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated user group without changing the associated details. To cancel, click **Cancel**.

Removing User Group

You can only remove user groups that you own and if it is not in use.

To remove a user group:

1. In the **Search** dropdown menu, select **People** > **User Group**.
2. Perform a search for the user group.
3. Select the user group that you want to remove and click **Delete**.
4. Enter the reason for removal and click **OK**. You have removed a user group and a confirmation message appears.

Managing Contacts

Contacts are persons who serve, directly or indirectly, for the organization. You can add external or internal contacts. An external contact does not have the access to use the application. An internal contact can use the application.

Creating a Contact

You can add external or internal contacts. An external contact does not have the access to use the application. An internal contact can use the application.

Creating an Internal Contact

To create an internal contact:

1. In the **Create New** dropdown menu, go to **People** > **Contact**.
2. Select **Type of Contact** and click **Next**.
3. In **Select User**, click the icon to specify the user that you want to add as an internal contact.
4. Click **Next**. **Contact: New** displays the contact details for the selected user.
5. Click **Finish**. You have added a new internal contact and a confirmation message appears.

Creating an External Contact

To create an external contact:

1. In the **Create New** dropdown menu, go to **People** > **Contact**.

2. Select **External** as the **Type of Contact** and click **Next**.
3. In **Select User**, click the icon to specify the user that you want to add as an external contact.
4. Click **Next**.
5. In **Contact (external)**, enter the information for the following fields:
   - Contact Name
   - Company Name
   - First Name
   - Last Name
   - Title
   - Email
   - Work Phone
   - Cell Phone
   - Fax
6. In **Address**, enter the contact address and ship to address details. If the contact address is the same as the shipping address, click **Same as Contact Address**.
7. For **Shipping Address**, enter information for the following fields:
   - Transportation
   - Dock
   - Floor
   - Building
   - Department
   - Address
   - City
   - State
   - Zip code
   - Country
8. Click Finish.

You have added new external contact and a confirmation message appears.

Searching Contact

To search for a contact:

1. In the **Search** dropdown menu, go to **People** > **Contact**.
2. Enter a value, and click the **Execute Search** button.
3. In the Results area, on the row of the contact you want, click the checkbox and click **Edit**, or simply double-click the contact link.

Editing Contact

To edit a contact:

1. In the **Search** dropdown menu, go to **People** > **Contact**.
2. Enter a value, and click the **Execute Search** button.
3. In the Results area, on the row of the contact you want, click the checkbox and click **Edit.**
4. Enter information in the various fields.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. The confirmation message appears.

Duplicating Contact

To duplicate a contact:

1. In the **Search** dropdown menu, go to **People** > **Contact**.
2. Enter a value, and click the **Execute Search** button.
3. Select the contact for that you want to duplicate and click **More >Save As**.
4. In **Duplicate Contact**, click **Clear**.
5. In the **Contact Name** field, enter the contact name.
6. Select the **Notes and Attachment** checkboxes if you want to add a note or an attachment to the environment condition.
7. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated environment condition without changing the associated details. To cancel, click **Cancel**.

Removing Contact

To remove a contact:

1. In the **Search** dropdown menu, go to **People** > **Contact**.
2. Enter a value, and click the **Execute Search** button.
3. Select the contact that you want to remove and click **Delete**.
4. Enter the reason for removal and click **OK**. You have removed a contact and a confirmation message appears.

11
Organizations

This chapter provides information about managing companies, sites, locations, departments, and site qualifications in Recipe Management for Pharmaceuticals .

Overview of Organization Management

The Recipe Management for Pharmaceuticals application has four organizational elements, which are interdependent:

- **Company**
- **Department**
- **Site** (and **Site Qualification**)
- **Location**

An organization can have multiple companies. Each company can have one or more sites and each site may comprise of one or more locations.

A site is physical location of the company or department. A site cannot exist without company and company cannot be created without having a default site.

A location is a place within a site. For example: room 23, shelf A.

Company Management

A company is the first organizational element. You can have more than one company in an organization. One company is identified as Corporate Company, which owns the application. A company is associated with one or many departments, sites and locations.

Creating a Company

Each company has a default site that is the parent site. When you add a company, you have to also add the default site.

You can have more than one company with the same name. Only the company ID has to be unique.

To create a company:

1. In the **Create New** dropdown menu, select **Organizations** > **Company**.
2. In **Add Company**, you will see the following tabs.
   - General

- Corporate Site
- Affiliates

3. In **General** tab, enter information for the following fields:
   - **Name** - Enter the name of the company.
   - **Description** - Enter a brief description about the company.
   - **Is Manufacturer** - Select Yes, if the company is a manufacturer.
   - **Is Supplier** - Select Yes, if the company is a supplier.
   - **Company Type** - Select the company type from the drop-down list.
   - **Risk** - Select the level of risk from the drop-down list.
4. Click **Next**.
5. In **Corporate Site** tab, enter information for the following fields:
   - **Site ID** - Enter the ID of the site.
   - **Site Name** - Enter the name of the site.
   - **Site Type** - Select the type of site from the drop-down list.
   - **Address** - Enter the address of the site.
   - **City** - Enter the city of the site.
   - **State** - Enter the state of the site.
   - **Zip code** - Enter the zip code of the site.
   - **Country** - Enter the country of the site.
6. Click **Next**.
7. In **Affiliates** tab, click **Add Row(s)** to enter the details of the vendors that are affiliated to your company. You can add more than one affiliate. To do this, enter the number of affiliates that you want to add in the text box next to **Add Row(s)** and click **Add Row(s)**. The rows are added to the **Affiliates** pane. For each row, click the icon to specify the company and select the affiliate relationship from the **Affiliate Relationship** dropdown.
8. Click **Finish**. You have added a company and a confirmation message appears.

> **Note:** You can also add new company when you perform a search. In the **Results** area, click **Add** to add a new company.

Managing Companies

You can search, edit, duplicate, and remove a company, and you can add a site to a company, and manage affiliates for a company.

Searching Company

To search for a company:

1. In the **Search** dropdown menu, select **Organizations** > **Company**.
2. In the Search field, enter the "*" wild-card or another value, and click the **Execute Search** button.

3. In the Results area, on the row of the company you want, click the checkbox and click **Edit**, or simply double-click the company's link.

Editing Company

To edit a company:

1. In the **Search** dropdown menu, select **Organizations** > **Company**.
2. Perform a search for the company.
3. Select the company you want to edit and click **Edit**.
4. Enter information for the various fields
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. You have edited company details and a confirmation message appears.

Duplicating Company

You can create a new instance of an existing company with the same attributes, but with a different name.

To duplicate a company:

1. In the **Search** dropdown menu, select **Organizations** > **Company**.
2. Perform a search for the company.

   Select the company that you want to duplicate and click **More > Save As**.
3. In the **Duplicate Company** tab, click **Clear**.
4. Enter the company name and the site name.
5. Select **Notes** and **Attachments** to specify if you want to add notes and attachments.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated role without changing the associated details.

   To cancel, click **Cancel**.

Adding Site from Company

To add a site for a company:

1. In the **Search** dropdown menu, select **Organizations** > **Company**.
2. Perform a search for the company.
3. Select the company for which you want to add a site.
4. Click **More** and select **Add Site**.

Managing Affiliates

You can enter the details of the vendors that are affiliated to your company. You can also add a new company and enter the relationship status of this vendor with your company. To add affiliates to a company, the affiliates must already exist in the system. If not, you must create a company and then proceed to add it as an affiliate.

To manage affiliates:

1. In the **Search** dropdown menu, select **Organizations** > **Company**.

2. Perform a search for the company.
3. Select the company for which you want to manage the affiliates.
4. Click **More** and select **Manage Affiliates**.
5. Click **New** to add an affiliate.
6. In **Affiliates**, click the look up icon to specify a company as an affiliate.
7. Select the affiliate relationship.

   You can add more than one affiliate. To do this, enter the number of affiliates that you want to add in the text box next to **Add Row(s)** and click **Add Row(s)**. The rows are added to the Affiliates pane. For each row, click the icon to specify the company and select the affiliate relationship.
8. Click **OK**.

Site Management

A site is the physical location for a company. A company can have many sites. Sites can have associations with other sites leading to a parent-child relationship. The site name must be unique.

There can be many types of sites such as Enterprise, Area, Process Cell, Unit, Equipment Module, Control Module, Subsidiary, Headquarter, Plant Site, Floor, Building, Lab, Containment Lab, Module, Warehouse and so on.

Sites that have privileges assigned to it are called Privileged sites. While assigning privileges, the user should only select roles for a parent privilege site and not its children. The roles selected for the parent is automatically applied to all its children privilege sites.

Site(s) are mandatory and need to be created while setting up a company.

Sites can be classified depending on its use as:

- Manufacturing - an area where the actual process of creating an API or Intermediate is conducted.
- Storage - define whether the lots stored needs be tracked and stored at a container level.
- Equipment Storage Area - stores equipment such as dryers, reactors, scales and so on.
- Material Storage Area - stores materials.

You can also define whether the Site should follow Clinical Supply (Good Manufacturing Practice).

Creating a Site

To add a site, you must first identify a company to which the new site is to be associated. The parent site associated with the company becomes the parent site for this new site.

In addition to specifying the basic site details, you can associate storage types, equipment category and material types with the site. You can do this only if the following conditions are true:

If you select the site as Storage Area, then you can enter the details for the storage area.

If you select the site as Equipment Storage Area or Material Storage Area, then select the appropriate equipment category or the type of material.

To create a site:

1. In the **Create New** dropdown menu, select **Organizations** > **Site**.
2. In the **Preface** tab, select the parent site to associate this new site.
3. Click **Next**.
4. In the **General** tab, enter information for the following fields:
   - **Site ID** - Enter the site ID.
   - **Site Name** - Enter the name of the site.
   - **Description** - Write a brief description about the site.
   - **Site Type** - Select the type of site.
   - **Manufacturing Area** - Select Yes, if the site is a manufacturing area.
   - **Operating Mode** - Select the operating mode from the drop-down list.
   - **Environmental Condition** - Select the environmental condition from the drop-down list.
   - **Has Privilege** - Select Yes, if the site has privilege.
   - **Is Storage Area** - Select Yes, if the site is a storage area.
5. Select **Is Storage Area** to enable the following:
   - **Secured** - Select Yes, if the storage area is secured.
   - **Quarantine** - Select Yes, if the storage area is quarantined.
   - **Contains Equipment** - Select Yes, if the storage area contains equipment. This selection is a one-time decision and cannot be modified when editing site details
   - **Contains Material** - Select Yes, if the storage area contains material. This selection is a one-time decision and cannot be modified when editing site details
   - **Container Tracking** - Select Yes, if the storage area has container tracking.
6. Select **Container Tracking** based on the following decisions:
   - Select, if you want to track individual containers received in a lot.
   - Do not select, if you want to track only the lot and not the individual containers present in that lot.

   Note: This selection is a one-time decision and cannot be modified when editing site details. Recipe Management for Pharmaceuticals does not recognize those containers that were treated as one lot without container tracking selected, when the lot was received at a site.

7. Click **Next**.
8. In the **Details** tab, enter information for the following fields:
   - Address

- City
- State
- Zip code
- Country
- If the address is same as the parent site, then select Same as Parent.

9. Click **Finish**. You have added new site and a confirmation message appears.

Managing Sites

You can search, edit, duplicate, and remove sites.

Searching Site

To search for a site:

1. In the **Search** dropdown menu, select **Organizations** > **Site**.
2. In the Search field, enter the "*" wild-card or a known name, and click the **Execute Search** button.
3. In the **Results** area, on the row of the site you want, click in the checkbox and perform required action.

Editing Site

To edit a site:

1. In the **Search** dropdown menu, select **Organizations** > **Site**.
2. Perform a search for the site.
3. Select the site you want to edit and click **Edit**.
4. Enter information for the various fields.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. You have edited site details and a confirmation message appears.

Duplicating Site

You can create a new instance of an existing site with a different name. If you duplicate a parent site, the children sites are not duplicated.

To duplicate a site:

1. In the **Search** dropdown menu, select **Organizations** > **Site**.
2. Perform a search for the site.
3. Select the site that you want to duplicate and click **More > Save As**.
4. Specify the **Parent Site ID, Site ID,** and the **Name** for the site.
5. Select **Notes** and **Attachments** to specify if you want to add notes and attachments.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated site without changing the associated details. To cancel, click **Cancel**.

   You can also duplicate a site from the **Browse** tab.

Removing Site

You can remove a site only if it is not in use and is not associated with users, locations, alerts, or workflows. You can not remove a parent site which is associated with a child site.

To remove a site:

1. In the **Search** dropdown menu, select **Organizations** > **Site**.
2. Perform a search for the site.
3. Select the site that you want to remove.
4. Click **Delete**. The site is removed.

Note: You can also remove a site from the **Browse** tab.

Moving Site

To move the site to a new location or new parent site:

1. In the **Search** dropdown menu, select **Organizations** > **Site** > **Manage**.
2. Perform a search for the site.
3. Select the site that you want to move.
4. Click **More** > **Move**.
5. Select where you want to move the site and click **OK**. The site is moved.

Note: You can also move a site from the **Browse** tab.

Location Management

Location is the actual physical location of a material or equipment within a site.

For example, at a warehouse site called Floor 7, Material X is stored at Bay 4, Row 5, and Column 6.

Every Location has a unique ID. The name of the location need not be unique.

A location belongs to only one site. You cannot move it from one site to another.

Creating a Location

To create a location:

1. In the **Create New** dropdown menu, select **Organizations** > **Location**.
2. In the **Select Site** tab, select the site to which you want to associate the location.
3. Click **Next**.
4. In the **Add Locations** tab, click on **Add Row(s)**.
5. Enter the following information:
   - **Location ID** - Enter the location ID.
   - **Name** - Enter the location name.
   - **Description** - Write a brief description about the location.

- **Bay** - Enter the bay in which the location is present.
- **Row** - Enter the row in which the location is present.
- **Stack** - Enter the stack in which the location is present.
- **Height** - Enter the height of the location.
- **Column** - Enter the column of the location.
- **Is Available** - Select the checkbox if the location is available.

> **Note:** You can add more than one location. To do this, enter the number of locations that you want to add in the text box next to **Add Row(s)** and click **Add Row(s)**. The rows are added to the Add Locations tab. For each row, enter the location details.

6. Click **Finish**. The confirmation message appears.

Managing Locations

You can view details, edit details, duplicate, and remove locations.

Searching Location

To search for a location:

1. In the **Search** dropdown menu, select **Organizations** > **Location**.
2. In the Search field, enter the "*" wild-card or another value, and click the **Execute Search** button.
3. In the Results area, on the row of the location you want, click the checkbox and click **Edit**, or simply double-click the location's link.

Editing Location

To edit a location:

1. In the **Search** dropdown menu, select **Organizations** > **Location**.
2. Perform a search for the location.
3. Select the location for which you want to edit and click **Edit**.
4. Enter information for the various fields.
5. Click **OK**.
6. Enter the reason for the changes that you have made and click **OK**. You have edited a location and a confirmation message appears.

Duplicating Location

You can create a new instance of an existing location with the same attributes, but with a different name.

To duplicate a location:

1. In the **Search** dropdown menu, select **Organizations** > **Location**.
2. Perform a search for the location.
3. Select the location that you want to duplicate and click **More > Save As**.

4. In the **Duplicate Location** tab, click **Clear**.
5. Enter the **Location ID**.
6. Click **Save and Edit** to change the associated details or click **OK** to save the duplicated location without changing the associated details.

   To cancel, click **Cancel**.

Removing Location

To remove a location:

1. In the **Search** dropdown menu, select **Organizations** > **Location**.
2. Perform a search for the location.
3. Select the location that you want to remove and click **Delete**.
4. Enter the reason for removal and click **OK**. The location is removed.

Department Management

A company can have many departments. Every department belongs to a parent department. A department can be assigned to many users, but a user cannot have access to more than one department.

To add a department you must associate it with the parent department. If you do not, then the department is associated with the default department.

Creating a Department

To create a department:

1. In the **Create New** dropdown menu, select **Organizations** > **Department**.
2. In **Department: New**, under the **General** tab, enter information for the following fields:
   - **Parent Department ID** - Enter the parent department ID.
   - **Department ID** - Enter the department ID.
   - **Name** - Enter the name of the department.
   - **Description** - Write a brief description about the department.
3. Click **Finish**. You have added a new department and a confirmation message appears.

Managing Departments

You can search, edit, duplicate, move, and remove departments.

Searching Department

To search for a department:

1. In the **Search** dropdown menu, select **Organizations** > **Department**.
2. In the Search field, enter the "*" wild-card or another value, and click the **Execute Search** button.
3. In the Results area, on the row of the department you want, click the checkbox and click **Edit**, or simply double-click the department's link.

Editing Department

You can create a new instance of an existing department with a different name and ID. If you duplicate a parent department, the children departments are not duplicated.

To duplicate a department:

1. In the **Search** dropdown menu, select **Organizations > Department > Manage**.
2. Perform a search for the department.
3. Select the department that you want to duplicate and click **Duplicate**.
4. In **Duplicate Department** click Clear.
5. Enter the **Department ID** and the **Name**.
6. Select **Notes and Attachments** to specify if you want to add notes and attachments.
7. Click **Save and Edit** to change the associated details, or click **OK** to save the duplicated department without changing the associated details. You have duplicated the department and a confirmation message appears.

   To cancel, click **Cancel**.

Duplicating Department

You can create a new instance of an existing department with a different name and ID. If you duplicate a parent department, the children departments are not duplicated.

To duplicate a department:

1. In the **Search** dropdown menu, select **Organizations** > **Department**.
2. Perform a search for the department.
3. Select the department that you want to duplicate and click **More > Save As**.
4. In the **Duplicate Department** tab, click **Clear**.
5. Enter the department ID and the name.
6. Select **Notes** and **Attachments** to specify if you want to add notes and attachments.
7. Click **Save and Edit** to change the associated details, or click **OK** to save the duplicated department without changing the associated details. You have duplicated the department and a confirmation message appears.

   To cancel, click **Cancel**.

Moving Department

To move the department:

1. In the **Search** dropdown menu, select **Organizations** > **Department**.
2. Click the **Browse** tab.
3. Select the department that you want to move and click **Move**.
4. Select where you want to move to and click **OK**.
5. Enter the reason for the change and click **OK**. You have moved the department and a confirmation message appears.

Removing Department

You can remove a department only if it is not in use and is not associated with users or sites. If you remove a parent department, all associated children department are also removed.

To remove a department:

1. In the **Search** dropdown menu, select **Organizations** > **Department** > **Manage**.
2. Perform a search for the department.

   Results displays a list of departments.
3. Select the department that you want to remove and click **Delete**.
4. Enter the reason for removal and click **OK**. You have removed the department and a confirmation message appears.

Site Qualification Management

The following sections describe how to manage a site qualification.

Creating a Site Qualification

You can add site qualification for a material designation category or for a specific material.

To create a site qualification:

1. In the **Create New** dropdown menu, select **Organizations** > **Site Qualification**.
2. In the **General** tab, select the **Date of Review** and **Qualification Ends On** date.
3. Select the type of audit. The options are **Questionnaire** and **Onsite Audit.**
4. Select the **Qualified For** option. The default is Material Type.
5. Click **Next**.
6. Select either **Add > Site** or **Add >Site plus Children.**
   - The **Site** option allows you to add a single site.
   - The **Site plus Children** option adds a site, as well as any child sites it has.
7. Select the site that you want to add and click **OK**.
8. Click **Next**. The **Details** tab has three subtabs:
   - Material
   - Audit
   - Questionnaire
9. If you have selected the **Qualified For** option as **Material Type**, then in the **Material** subtab, select any or all of the following options:
   - **Qualified for API** - Select Yes, if the material is qualified for API.
   - **Qualified for API Start Custom** - Select Yes, if the material is qualified for API start custom.
   - **Qualified for API Start Commercial** - Select Yes, if the material is qualified for API start commercial.

- **Qualified for Intermediate** - Select Yes, if the material is qualified for intermediate.
- **Qualified for Raw for API Starting Material** - Select Yes, if the material is qualified for raw API starting material.
- **Qualified for Raw Material** - Select Yes, if the material is qualified for raw material.

10. Click **Next**.
11. If you have selected the **Qualified For** option as **Material Specific**, then in the **Audit** subtab, enter the following details:
    - **Date Scheduled** - Enter the date scheduled.
    - **Date of Onsite Audit** - Enter the date of onsite audit.
    - **Audit Site** - Enter the package site.
    - **Audit Package Exists?** - Select Yes, if the qualification package is attached.
12. Click **Next**.
13. In the **Questionnaire** subtab, enter information for the following:
    - **Date Sent**- Enter the date the material was sent.
    - **Date Received** - Enter the date the material is received
    - **Questionnaire Package Location Site ID** - Enter the package site name.
    - **Qualification Package Exists? -** Select Yes, if qualification package is attached.
14. Click **Finish**. You have added a new site qualification and a confirmation message appears.

Managing Site Qualifications

To manage site qualifications:

1. In the **Search** dropdown menu, select **Organizations** > **Site Qualification**.
2. Perform a search for the site that requires qualification.
3. Open the site for which you want to add qualification.
4. Click **More** and select **Manage Qualification**. **Results** displays the qualifications for the site. In this pane, you can add, edit, remove and qualify the site qualification for a site.

Searching Site Qualification

To search for a site qualification:

1. In the **Search** dropdown menu, select **Organizations** > **Site Qualification**.
2. In the Search field, enter the "*" wild-card or another value, and click the **Execute Search** button.
3. In the Results area, on the row of the site qualification you want, click the checkbox and click **Edit**, or simply double-click the site qualification's link.

Editing Site Qualification

To edit a site qualification:

1. In the **Search** dropdown menu, select **Organizations** > **Site Qualification**.

2. Perform a search for the site qualification you want to edit.
3. In **Results**, select the site qualification you want and click **Edit**.
4. Modify the properties, and click **OK**.
5. Enter the reason for the changes that you have made and click **OK**. The site qualification is updated.

Removing Qualification

To remove a site qualification:

1. In the **Search** dropdown menu, select **Organizations** > **Site Qualification**.
2. Perform a search for the site qualification you want to remove.
3. n **Results**, select the site qualification that you want to remove and click **Delete**.
4. Click **OK**.
5. Enter the reason for the removal and click **OK**. The site qualification is removed.

12 General Administration

This chapter provides information about managing log files and other general administration tasks.

Manage Log Files

As part of general administration and maintenance of R&M Workspace, ensure that backup for the following log files are done periodically:

- The <servername>.log file is located in <AGILE_HOME>\domain\servers\<servername>\logs.
- The nohup.out file in the <CFM_HOME> directory.
- All log files in the <CFM_HOME>/logs directory.
- All log files in the <CFM_HOME>/bin directory.

These files are useful in reporting issues to Oracle support for troubleshooting.

Default Log Files

In the production environment, when a log file reaches a specified size, the system automatically closes it and creates a new one. Only the latest seven are retained by the system. Files earlier than the latest seven are regularly deleted by the system. It is therefore advised that you maintain a backup of twenty log files.

Rotate Log Files

Log file rotation ensures that log files do not grow indefinitely. It allows you to keep an efficient and useful amount of data, without using up too much disk space. You can choose to rotate log files at specific time intervals or when the current log file reaches a specific size.

To set up log file rotation:

1. Log on to the WebLogic server console.
2. Click the **Lock & Edit** button in the **Tools & Settings** tree/options.
3. In the left pane, expand **Environment** and select **Servers**.
4. In the **Servers** table, click the name of the server instance whose log files you want to configure for rotation.
5. Select **Logging > General**.

6. To move old messages to another file when the current log file reaches a specific size:

   a. In the **Rotation Type** list box, choose By **Size**.

   b. In the **Rotation File Size** field, enter the file size that triggers the server to move log messages to a separate file. After the log file reaches the specified size, the next time the server checks the file size, it will rename the current log file. After the server renames the file, subsequent messages accumulate in a new file named filename.log.

   c. If you want to limit the number of log files that the server creates to store old log messages, select the **Limit Number of Retained Files** check box. Then in the **Files to Retain** field, enter the maximum number of files. If the server receives additional log messages after reaching the capacity of the last log file, it overwrites the oldest log file.

7. If you want to move old messages to another file at specific time intervals:

   a. In the **Rotation Type** list box, choose **By Time**.

   b. In the **Begin Rotation Time** field, enter the start time.

   c. Use the following format: hh:mm, where hh is the hour in a 24-hour format and mm is the minute. At the time that you specify, the server rotates the current log file. If the time that you specify is already past, the server starts its file rotation immediately. Thereafter, the server rotates the log file at an interval that you specify in **Rotation Interval**.

   d. In the Rotation Interval field, enter the interval at which the server saves old messages to another file.

   e. If you want to limit the number of log files that the server creates to store old log messages, select the **Limit Number of Retained Log Files** check box. Then in the **Files to Retain** field, enter the maximum number of files. If the server receives additional log messages after reaching the capacity of the last log file, it overwrites the oldest log file.

8. In the **Log File Rotation Directory** field, enter the directory location where the rotated log files will be stored. Enter an absolute pathname or a pathname that is relative to the server's root directory. By default, the rotated files are stored in the same directory where the log file is stored.

9. To include a time and date stamp in the file name when the log file is rotated, in the **File Name** field, add java.text.SimpleDateFormat variables to the file name and surround each variable with percentage (%) characters.

   For example, if you enter the following value in the File Name field:

   myserver_%yyyy%_%MM%_%dd%_%hh%_%mm%.log, the server's log file will be named:

   myserver_yyyy_MM_dd_hh_mm.log.

   When the server instance rotates the log file, the rotated file name contains the date stamp. For example, if the server instance rotates its local log file on 4 March, 2008 at 10:15 AM, the log file that contains the old log messages will be named: myserver_2005_03_08_10_15.log.

   If you do not include a time and date stamp, the rotated log files are numbered in order of creation filename, where filename is the name configured for the log file. For example: myserver.log00007.

10. To activate these changes, in the Change Center of the Administration Console, click **Activate Changes**.

    Not all changes take effect immediately-some require a restart.

Manage Batch Size for Results Screens

The number of rows that appear in the results screens in the application can be configured. The batch sizes provided are 5, 10, 20, 30, 50, and 1000. If you require a specific number, edit the Enumerated Valid Value named "RowsPerPage".

To change the number of rows displayed in search results:

1. Navigate to **Tools & Settings > Object Modeling > Enumerated Valid Value > Manage**.
2. In the **EVV Name** field, type the value RowsPerPage.
3. Click **Search**.
4. Select the RowsPerPage row, and click **Edit**.
5. In the **Details** tab, edit the values as desired, and click **OK**.

   A confirmation message displays when the new values are saved.

Troubleshooting

If the application system response becomes slow, check the following:

- Check CPU usage and memory usage of the process at that point in time (in case of UNIX systems use the following commands: prstat and memstat, and mpstat.
- Using the application server console, check queue length and memory utilization in the performance monitoring tab.
- Check the CPU usage and memory usage of the database process (Oracle processes) at the same time on the database server.
- Check the network to see if the connectivity between the application server, the database and the Web server is established.

A

Configuration Files

Configuration information of the Recipe Management for Pharmaceuticals application, such as authentication type, audit trail enabling/disabling, the list of resource files and so on, is stored in a set of configuration files. These files can be used to change the initial settings in the Recipe Management for Pharmaceuticals application. The following sections briefly describe the parameters contained in some of these configuration files.

CFMConfig.xm

The CFMConfig.xml file is the main configuration file, which acts as the controller for Recipe Management for Pharmaceuticals . This file contains:

Properties to control all the major components of the application such as Audit Service, Logger Service, Alerts Engine, Workflow Engine, Timer Engine, and so on.

Relative location and names of other configuration files used in Recipe Management for Pharmaceuticals .

The following table lists and describes the attributes maintained in the CFMConfig.xml file.

Attribute	Default Value	Description
CFMAppServerInfo CFMApplicationServerName CFMApplicationServerVersion	No default values	This section contains information about J2EE Appserver configuration, on which the application is deployed.
CFMInitialContextFactory	weblogic.jndi. WLInitialContext Factory	This tag specifies the JNDI initial context factory used for all the lookups on the JNDI Tree of the J2EE Server by the R&M Workspace application. It is recommended not to modify this property.
CFMProviderURL	Values specified during installation.	This tag specifies the J2EE Server JNDI URL used for lookup of JNDI Objects, on the JNDI tree. The Recipe Management for Pharmaceuticals installer sets the correct host and port number. If the port number of the J2EE Server domain is modified after installation, only then this property must be modified.
CFMPrincipalUser	WebLogic	This tag specifies the user ID for logging into the J2EE Appserver.

Attribute	Default Value	Description
CFMPrincipalUserPwd	VvFM5XvM5jLDvuvz0JROHxcP5WMpoC	By default, the installer inserts the application server password in this tag after encryption. If the application server password is changed for any reason after Recipe Management for Pharmaceuticals installation, this value should be changed manually, using the password encryption utility.
CFMTransactionURL	This Cell is Blank	This is an application server specific property. This denotes the transaction provider for Audit Trail in Recipe Management for Pharmaceuticals . A typical values is 'javax.transaction.TransactionManager' for Oracle Weblogic. Ideally, this property should not be modified by the end user
CFMAdminEmail	This Cell is Blank	A workflow notification is triggered to be sent to a role or a user group needs to be notified as per the Workflow Definition. While the role or the usergroup is being resolved, when R&M Workspace application detects Inactive Users in the role or the user group, the workflow engine instead of sending the email notifications to the inactive users, sends it to the email ID captured in the tag <CFMAdminEmail> A workflow notification is triggered to be sent to a role or a user group needs to be notified as per the Workflow Definition. In case of workflow delegate feature, if User A delegates his/her Workflow task to User B and User B in turn delegates his/her workflow tasks back to User A, then this situation results in a cyclic dependency. In such a situation, R&M Workspace detects such cyclic dependencies and instead assigns the workflow notification to the email ID specified in the tag <CFMAdminEmail>
CFMCacheResetAtStart	False	This property controls the starting value of Autosequence IDs which the system generates for all objects for which autosequenced IDs are applicable. If this property is set to false, then the application will use the last sequence ID in the last used autosequence ID bucket as the starting point the next time the application server is started. If this is set to True, then the application will calculate the exact value of the last used sequence ID and then use this as the starting point. This does involve a performance cost, but ensures that autosequence ranges are used optimally. By default, this is set to True.

Attribute	Default Value	Description
CFMLoadCacheBeforeServerStartup	True	This denotes whether the application server must be started only after Recipe Management for Pharmaceuticals 's cache has been loaded. If this is set to False, the user will be able to access the application even before cache has been loaded. Cached data will be loaded during the first login if this was not already done during startup. This property is set to True by default.
CFMAuthenticationInfo	This Cell is Blank	This section has information about the various authentication mechanisms used in the system. There are three modes of authentication, namely, Local, LDAP, and SSO Authentication.
CFMRemoteLogin	FALSE	This tag specifies the authentication mechanism is local or a remote login. If this flag is set to True, it enables the application to connect to the external authentication modules, defined in CFMRemoteServer property. If this flag is set to False, the application uses the default local authentication mechanism (database authentication.)
CFMRemoteServer	LDAP	This tag specifies the server type for remote authentication. The possible values are LDAP and WS. If WS is selected as the authentication mode, the authentication Web service must be setup properly. Note: Typically, the Web service is used for SSO authentication mechanisms. If LDAP is selected as the authentication mode, LDAP configuration information must have the URL and other information set correctly.
AuthenticationPasswordLinks	This Cell is Blank	This section has information about managing passwords for users at the time of logging into the application. Based on the remote server supporting the password links, these flags can be used to decide if the links must be shown on the User Interface.
CFMShowPasswordResetLink	FALSE	This tag indicates if you have to show the Reset Password link on the Login page in the application. Possible values are TRUE or FALSE. This is applicable if the RemoteLogin tag is set to True.
CFMShowPasswordChangeLink	TRUE	This tag indicates if you have to show the Change Password link on the Login page in the application. Possible values are TRUE or FALSE. This is applicable if the RemoteLogin tag is set to True.
CFMLDAPAuthentication	This Cell is Blank	This section has information about the LDAP configuration and LDAP server.
CFMLDAPInitialContextFactory	com.sun.jndi.ldap.LdapCtxFactory	This tag specifies the LDAP initial context factory class implementation. This value is used by the authentication module. It is recommended not to modify this value.

Attribute	Default Value	Description
CFMLDAPProviderURL	ldap://LDAP_Server_Hostname:Port	This tag specifies the LDAP server URL in the ldap://hostname:port format.
CFMLDAPSearchBase	ou=?,o=?,dc=?	This tag specifies the LDAP user search string. This is the base search string appended to the username, provided by the user for authentication, on the application UI.
CFMLDAPSecurityPrincipal	,ou=?,o=?,dc=?	The search string must specify a valid LDAP user used for searching the LDAP directory, while importing users into the application.
CFMLDAPSecurityCredentials	This Cell is Blank	This tag specifies the security credentials (password) for the Security Principal.
CFMLDAPSecurityAuthentication	Simple	This tag specifies the authentication type used for the application login to LDAP server.
CFMLDAPViewName	PCM_VIEW_ USER_LDAP_SSO	This tag specifies the view used for LDAP user search. This view maps the LDAP user properties to the attributes in the user Category, so that the related data such as name, address, and so on can be copied from the LDAP directory to the application database. The view attribute labels must match the LDAP property for the data to be copied correctly.
CFMEmailInfo	This Cell is Blank	This section has information about the email server configured for the application. This information is used to send emails from the application.
CFMEmailHost	mailhost	This tag specifies the IP address of the email server.
CFMEmailPort	25	This tag specifies the Port number of the email server.
CFMEmailProtocol	SMTP	This tag specifies the protocol type used to send emails. It is recommended not to modify the type.
CFMEmailDefaultPriority	High	This tag specifies the email priority sent by the application. This priority is set on all emails sent from the application. The valid values are highest, high, normal, low, and lowest.
CFMEmailAttachmentSize	1MB	This tag specifies the maximum attachment size allowed during email dispatch. Typically, this is limited by the email server.
CFMLoggerInfo	This Cell is Blank	This section has information about the CFMLogger configuration properties. It controls the logs that are generated in the system including their location and file names.
CFMLoggerFactoryClass	This Cell is Blank	This refers to the factory class which provides logger instances. CFMJDKLoggerFactory is the standard factory class.

Attribute	Default Value	Description
CFMDefaultLogDirectory	Logs	This tag specifies the relative directory where the log files are stored. The path of the directory is relative to the CFM_HOME location.
CFMDefaultLogFile	CFMDebug	This tag specifies the default log file name where all the debug messages are stored. This file is created in the logs directory.
CFMSQLLogFile	CFMSql	This tag specifies the log file name where SQL logs are appended. This file is created in the logs directory.
CFMErrorLogFile	CFMError	This tag specifies the log file name where Error logs are appended. This file is created in the logs directory.
CFMAccessTimeLogFile	CFMAccessTime	This tag specifies the log file name where Access logs are appended. This file is created in the logs directory.
CFMLogPropertyFile	CFMLogger. properties	This tag specifies the Logger properties used by the logger service in the application. This configuration file is located in the <CFM_HOME>/config folder.
CFMMaxLogFileSize	1048576	This tag specifies the maximum log file size. Once the file size exceeds the maximum limit, the logs are created in new file. A backup file is created for the existing file.
CFMMaxAllowedFiles	7	This tag specifies the maximum number of backup files that are created, after which the log files are over-written. This value must be modified to an appropriate number.
CFMLogMessageFormatWithSession	{0} | {2} | {4} | {5} | {7}{6}	This is the format in which logs are written in the log file. The log format can be configured based on the available parameters for logging.
CFMLogMessageFormatWithoutSession	{0} | {5} | {7}{6}	This is the format in which the logs are written before the user has logged in. All session related parameters are not available during login.
CFMLogAccessTimeFormat	This Cell is Blank	The time format that is used to represent the information pertaining to application login access.
CFMLogDateTimeFormat	MM/dd/yyyy hh:mm:ss a	This tag specifies the date format used for logging the time when the log was created. This must be a valid Java date format.
CFMConfigFileInfo	This Cell is Blank	This section has information about the various configuration files used by the Persistence layer in the application
CFMSQLQueryFile	CFMSqlQuery.xml	This tag specifies the SQLQuery configuration file location that has the canned queries for loading or saving data in the metamodel tables. This file is located in the <CFM_HOME>/config directory. It is recommended not to modify this tag value.
CFMDBConfigFile	CFMDBConfig. xml	This tag specifies the Data Source connection information file name. This file is located in the <CFM_HOME>/config directory.

Attribute	Default Value	Description
CFMLocaleInfo>	This Cell is Blank	This section has information about the Locale configuration properties, used to load resource files. If the values are modified in this section, then the corresponding locale files must be present.
CFMDefaultLocaleLanguage	En	This tag specifies the default locale language code.
CFMDefaultLocaleCountry	US	This tag specifies the default locale country code.
CFMLocaleRelativeDir	config/locale	This tag specifies the locale file path. This is relative to CFM_HOME.
CFMResourcesLocation	CFMResources. xml	This tag specifies the resources file name. This file is located in the <CFM_HOME>/config directory.
CFMReportInfo	This Cell is Blank	This section has information about Reports configuration Properties.
CFMReportXMLDirectory	config	This tag specifies the report configuration file repository. This is relative to <CFM_HOME> directory.
CFMReportFileDirectory	Reports	This tag specifies the output directory for reports. This is relative to CFM_HOME> directory.
CFMReportTemplate	CFMReport.jrxml	This tag specifies the Template file name used for Exporting data in HTML, Excel, or PDF formats.
CFMAlerts	This Cell is Blank	This section has information about the Alert Engine configuration properties used in the application.
AlertEngineEnabled	TRUE	This tag indicates if the Alert Engine must be enabled for processing various alerts in the application. This value must not be modified, unless all alerts are disabled from the system. If the value is set to False, Email and Dashboard Alert Notification features does not work.
AlertFromEmailAddress	This Cell is Blank	This tag specifies the From Address for emails sent for alerts configured with Email.
CFMWebInfo	This Cell is Blank	This section has information about the various configuration properties for the application.
CFMWebConfigFile	CFMWebConfig. xml	This tag specifies the name of the application presentation layer configuration file. This file is located in the <CFM_HOME>/config directory.
CFMAuditTrailInfo	This Cell is Blank	This section has information about the Audit Trail Engine configuration properties.
CFMEnableAudittrail	TRUE	This tag indicates if the audit trail feature is enabled for the application. If the tag is set to True, changes to the objects in the application is audited.

Attribute	Default Value	Description
PreferredAuditTimeZone	GMT	This tag specifies the time zone in which all audit related data timestamps are stored in the database. Valid values include PST, EST, IST, and so on. This value is equal to the value returned by the Java API TimeZone.getID() method.
LogHardDeleteHistory	TRUE	When this property is set to True, the application will log information about all hard delete operations performed at any point of time.
ShowRFCPopup	FALSE	RFC is the 'Reason For Change' popup screen. This screen requires the user to enter a concise account of why a given business object is being changed from its prior state. By default, the RFC popup screen will not be displayed.
CFMApplication	This Cell is Blank	This section has information for the Integration Framework used in the application.
CFMApplicationId	Recipe Management for Pharmaceuticals	This tag specifies the application ID for the Integration Framework. This value is internal to the application. It is recommended not to modify this value.
RetryPoller	This Cell is Blank	This section contains properties related to retry polling for failed messages.
RetrySleepInterval	10000	This property determines the time interval based on which failed messages for Alerts will be queued and attempted again.
Timer	This Cell is Blank	This section has information about the Timer Engine configuration information for the application. It is recommended not to modify the tags.
EnableScheduler	TRUE	This tag indicates if the Timer Engine for the application must be enabled or disabled. It is recommended not to modify the value.
CreateWorkFlowTaskTimer	TRUE	This tag indicates if the Timer is disabled for the Workflow Module in the application. It is recommended not to modify this value.
CFMDaemon	This Cell is Blank	This section has information about the Daemon that runs within the application. The Daemon performs certain updates periodically based on the intervals specified within the section.
ResetDaemonTriggersAtFirstLogin	TRUE	Daemon threads monitor application state and perform background tasks. Enabling this flag will reset the state of all daemon threads during application startup.
RefreshObjectCountHourlyPeriodicity	24	This tag specifies the number of hours after which the Daemon refreshes the object count for every Category in the application, for the current day.
ExpireQualificationsHourlyPeriodicity	24	This tag specifies the number of hours after which the Daemon marks the Equipment Qualifications that has expired in the database for the current day.

Attribute	Default Value	Description
ExpireLotHourlyPeriodicity	24	This tag specifies the number of hours after which the Daemon marks the Material Lots that has expired on the current day.
ActivateInactivateObjectHourly Periodicity	24	This tag specifies the number of hours after which the Daemon activates or inactivates the business objects in the database, based on the start and end effective dates for the current day.
HasEffectivityCheckEnabled	TRUE	This tag indicates if the Daemon must activate or inactivate the business objects within the application.
ExpireWorkflowHourlyPeriodicity	24	This tag specifies the number of hours after which the Daemon cleans up the Workflow Delegation table for the Authorized Parties, who have subscribed for the Workflow Delegation functionality. If the records in the Workflow Delegation table are no longer valid on the current day, those entries are removed from the Workflow Delegation table.
ExpireSiteQualificationHourly Periodicity	This Cell is Blank	This tag specifies the number of hours after which the Daemon marks those Site Qualifications that have expired on the current day.
InventoryReevalExpireDaemon	24	This tag specifies the number of hours after which the Daemon marks the status of "Lot Release Processes" to "OutOfEvaluation". It also marks the corresponding Inventory (Lots/Containers) Status "To Be Evaluated"
AgileIntegrationHourlyPeriodicity	24	This Cell is Blank
CFMTemplateEngine	This Cell is Blank	This section contains properties pertaining to User Interface templates based on which screens are rendered.
location	config/ templates	The location where templates for the User Interface are stored. The path is relative to the location of CFM.HOME.
encoding	ISO-8859-1	The character encoding used in these templates.
outputEncoding	UTF-8	Encoding format for all output rendered based on the UI templates.
templateUpdateDelay	0	This tag specifies the interval at which the Free Marker Template Engine looks for any changes in the templates. 0 informs the Engine not to look for any changes.
AgileDetails	This Cell is Blank	This Cell is Blank
AgileHttpUrl	This Cell is Blank	This is the HTTP URL for the Agile instance.
AgileRmiUrl	This Cell is Blank	This is the RMI URL for the Agile instance.
AgileWebServiceUrl	This Cell is Blank	This is the URL for Agile core web services.

Attribute	Default Value	Description
CFMPrintableCategories	Recipe, Control Recipe, Process Step, Work Order	This property is applicable for Formatted Print. The value for this property is a set of comma-separated business object IDs. For all the business objects listed here, the History tab of all objects belonging to that business object will display an additional tab labeled 'Print'. This tab will display information about the history of all Formatted Print operations performed on the given object.

CFMDBConfig.xml

The CFMDBConfig.xml file contains a list of databases that is available for the users. For each database, this file contains:

- Logical database name.
- Data source name for the database set up in the J2EE server.
- Detailed information about the database such as vendor details.

The following table lists and describes the attributes in the CFMDBConfig.xml file.

Attribute	Default Value	Description
CFMDatabase	No default value	This tag is used to separate successive database configuration entries in the file. Each database configuration comprises of all the tags listed below.
CFMDatabaseName	CFMPCM	This tag specifies the database configuration name that is displayed on the login window of the application. This must be a unique name.
CFMDeleteType	Soft	This tag has a boolean value, Soft or Hard. Soft indicates that any delete command only marks the object as deleted but does not physically remove it from the database. Hard indicates that, on delete, all objects will be removed from the database.
CFMJNDIName	LSPDataSource	This tag specifies the JNDI name of the data source configured in the J2EE Application server for the Recipe Management for Pharmaceuticals database.
CFMSchemaOwner	TRUE	This tag has a boolean value, TRUE or FALSE. TRUE indicates that the database user for this datasource is the Schema Owner and the owner of all the objects in the database. FALSE indicates that the database user for this data source is not the Schema Owner but is a user for a private synonym created on the database. The user also has permissions to modify, update, and delete records (to perform DML operations only and not DDL operations.) If the value provided in the tag <CFMPrivilegedUsers> is False, the value is ignored.

Attribute	Default Value	Description
CFMPrivilegedUsers	CFMUSER, User 2	This tag has a comma separated list of users having the DML operations on this database schema. Private synonyms are created for this user. This user has permissions to modify, update, and delete records (to perform DML operations only and not DDL operations.) If any new categories are created using R&M Workspace metamodel module using the Schema Owner, the application creates the appropriate private synonym for each user listed in this tag.
CFMVendorType	Oracle	This tag specifies the vendor type of the relational database server used. The valid value for this tag is Oracle only.

Alert Message Generation Files

Alert notifications and dashboard messages can be configured to display content to suit your requirements. These configurations must be carried out in the related XSL files detailed below.

You must have basic knowledge of XSL, HTML syntax, and tags to configure message properties.

EmailNotification.xsl

This XSL file generates HTML content for email alert messages. The following table describes the various sections in an alert notification message and tells you what you can customize within each section.

Section	Description	What can be customized?
Header	Displays a general salutation such as Dear <user name>.	Recipient user name.
Alert Header	Displays the alert name, business object, and category.	Style attributes such as background color and font.
General information	Displays general information such as name, subscription name, subject, message, and so on.	Labels.
Alert criteria	Displays criteria and monitoring actions configured for this alert. Alert criteria is displayed only for alerts which have alert conditions specified. Alerts based on user actions do not have any criteria and are not displayed.	Label and content style.
Result table	Displays records that have met the alert criteria.	Table properties, table caption, and "Trigger Value" column color.
Footer	Displays customized text, disclaimers etc.	Can be completely removed or customized.

DashboardNotification.xsl

This XSL file generates HTML content for dashboard alert messages.

Section	Description	What can be customized?
Header	Displays configured alert details such as date, type of subscription, subject, priority etc.	Labels can be customized by editing the Dashboard Alert Details sub view.
Message Body	Displays the results table.	Number of records to display, table style properties, and "trigger value" style. You can also add more header columns.

Integration-related Files

Integration-related files are located at the following path:
<CFMHome>\config\integration

File Name	Description
cfmxml.xsd	Schema file for the cfmXML. cfmXML is a standard xml format used by Recipe Management for Pharmaceuticals . The integration framework processes all the requests in cfmXML format and converts them to an appropriate response by applying the outbound XSL file if required.
inboundPCMApp.xslt	This is a sample XSLT file. This folder contains all the XSLT files, which are used as inbound XSL files for different applications communicating with Recipe Management for Pharmaceuticals .
outboundPCMApp.xslt	This is a sample XSLT file. This folder contains all the XSLT files, which are used as outbound XSL files for different applications communicating with Recipe Management for Pharmaceuticals .
wsdlProcessor.xslt	This is an XSLT file used to parse the given WSDL, extract the information in the Recipe Management for Pharmaceuticals database using the integration Callable Web service with WSDL UI screen.

AgilePharmaMapping.xml

AgilePharmaMapping.xml is a mapping configuration file that allows you to map Agile and Recipe Management for Pharmaceuticals object attributes.

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Recipe & Material Workspace Keywords

The following keywords are reserved by the Recipe & Material Workspace system. That is, the keywords have particular meanings to the system and so cannot be redefined. For this reason, you cannot use them to name data objects such as Categories, Attributes, Views, Subviews, and so forth.

Keywords Reserved by Recipe Management for Pharmaceuticals			
ACCESS	ELSE	MODIFY	START
ADD	EXCLUSIVE	NOAUDIT	SELECT
ALL	EXISTS	NOCOMPRESS	SESSION
ALTER	FILE	NOT	SET
AND	FLOAT	NOTFOUND	SHARE
ANY	FOR	NOWAIT	SIZE
ARRAYLEN	FROM	NULL	SMALLIN
AS	GRANT	NUMBER	SQLBUF
ASC	GROUP	OF	SUCCESSFUL
AUDIT	HAVING	OFLINE	SYNONYM
BETWEEN	IDENTIFIED	ON	SYSDATE
BY	IMMEDIATE	ONLINE	TABLE
CHAR	IN	OPTION	THEN
CHECK	INCREMENT	OR	TO
CLUSTER	INDEX	ORDER	TRIGGER
COLUMN	INITIAL	PCTFREE	UID
COMMENT	INSERT	PRIOR	UNION
COMPRESS	INTEGER	PRIVILEGES	UNIQUE
CONNECT	INTERSECT	PUBLIC	UPDATE
CREATE	INTO	RAW	USER
CURRENT	IS	RENAME	VALIDATE
DATE	LEVEL	RESOURCE	VALUES
DECIMAL	LIKE	REVOKE	VARCHAR
DEFAULT	LOCK	ROW	VARCHAR2
DELETE	LONG	ROWID	VIEW

Keywords Reserved by Recipe Management for Pharmaceuticals			
DESC	MAXEXTENTS	ROWLABEL	WHENEVER
DISTINCT	MINUS	ROWNUM	WHERE
DROP	MODE	ROWS	WITH