Novell Teaming + Conferencing

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ADMINISTRATION GUIDE

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Contents

About This Guide

This guide provides administration information for administrators of Novell Teaming + Conferencing. Novell Teaming + Conferencing is implemented using ICEcore technology. In this manual, the term “ICEcore” applies to all versions of ICEcore unless otherwise noted.

Audience

This guide is intended for ICEcore administrators.

Contents of this Manual

This manual provides information about the following:

- Custom Entries
- Basic Workflows
- Advanced Workflow

Conventions

This manual uses the following conventions:

A greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

A trademark symbol (®, ™, etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux or UNIX, should use forward slashes as required by your software.

What you see	What it means
Click the *Add toolbar* item. Click the *Getting Started* link. Click the *Add Document* menu item. Click *Close*.	References to toolbar items, links, menu items, and buttons are presented in *italic* font.
Type `status`, then press Enter. Open the `ManagerGuide.pdf` file.	Text that you must type and file names are presented in `Courier` font.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most recent version of the ICEcore User Guide, visit the Novell Web site (http://www.novell.com/documentation/team_plus_conf/).

Additional Documentation

You may find more information in the ICEcore documentation, which is accessible from links within ICEcore:

- ICEcore Help system
- ICEcore Quick Start Guide
- ICEcore User Guide
- ICEcore Installation and Configuration Guide

The ICEcore online documents may be found from within the ICEcore Help system. To access the ICEcore Help system, after logging in (described later in this manual), click the *Help* link.

In the ICEcore Help system, click the *Getting Started Manuals* link to access copies of the online documents listed above.

Introduction

1

Companies are focused on creating efficient and cost-effective methods that enable them to bring their products or services to the marketplace. Thanks to the Internet, and to video and networking innovations, companies now have many tools at their disposal, and can enhance and streamline their existing business processes. This guide provides a general introduction to custom entries (forms and views), workflow, and instruction on how workflow is implemented using ICEcore.

1.1 Custom Entries

Custom entries allow you to design custom forms and views for specific types of entries. These custom entries allow you to configure your workspaces in ICEcore to manage the data and interactions for your company and teams in the most effective manner possible. These custom entries (and default entries) can be linked to workflow processes in ICEcore to manage your business processes in a comprehensive manner.

NOTE: A workflow process is an online representation of a business process. A workflow process allows the participants of the workflow to organize, automate, and track all aspects of the business process.

1.2 What is a Workflow Process?

When a business process becomes defined and put into operation through the use of software and other tools, it becomes a workflow process. The workflow process provides the online forms that participants use. A workflow process can also indicate the reassignment of work from one person to the next.

Well-designed workflow processes identify and integrate the possible outcomes of each task, as different outcomes change the way in which one task transitions to another. When a user makes a decision, the flow of work changes based upon his response. In a workflow process, a decision can be made either manually (by selecting a label from a drop-down list) or automatically ("after ten days of inaction occur"). Once a decision has been made, ICEcore sends the appropriate notification to the next participant in the workflow. Decisions, information, and a history of the completed work can be stored and later accessed in ICEcore.

Workflow allows you to move work quickly and efficiently throughout the organization. When developing an online workflow process, you should try to represent the associated business process in its fullest detail. To do this, workflow processes usually use a workflow-management system to support the design, implementation, testing, maintenance, and administration of processes.

NOTE: A workflow-management system is a software-based system that allows IT to create and manage the execution of workflows that serve their organization, and that assists participants in completing tasks within the business process.

Most workflow management systems provide a common set of tools. These tools allow IT to define the business processes, initiate and control specific tasks, or create rules for determining how specific data is processed and shared.

1.3 Workflow Tasks and Workflow States

To track work within a business process, a participant (most often a manager) checks the status of the work periodically. For example, the manager may request that the employees produce status reports using e-mail or may hold weekly status meetings. The purpose of these efforts is to communicate where within the business process the work currently resides. A manager who understands the status of the work can make appropriate decisions about who must perform subsequent tasks.

We could provide a label for that point in the process (for example, "an employee has submitted a time-off request" or more simply "submit"). The only outcomes that can result from the manager's actions while reviewing the submission are "approve" or "deny." These labels ("submit," "approve," and "deny") quickly communicate the state of the work at a given point in the process and who is responsible for the next task.

NOTE: A state is a label that identifies the result of a completed task and that indicates who is responsible for performing a subsequent task in the process (if any).

For example, a user submits a form to HR indicating that he wants to take a vacation day. Once the user has finished entering the Time Off Request form, the state transitions to Submit. Later in the process, once the request is entered into the Time Off database, the state transitions to the Record state.

NOTE: A transition indicates that work moved from one workflow state to another.

Notice that one or more discrete actions must be taken with the work in order for its state to change; however, a task may be composed of more than one discrete action. With an online workflow process, some actions can be automated. For example, once a user completes a form and clicks OK, ICEcore can automatically transition the work to the Submit state and can notify the manager through e-mail that the Time Off request is ready for review. As another example, the work can transition to Deny, if "more than ten days of inaction occur."

Other actions require that a participant use the workflow-management system to report the status of work manually. For example, before a manager begins reviewing of the request, he can select a label from a drop-down list that indicates that the work is to transition to the Review state. As another example, while in the Review state, the manager can manually select the Deny label.

NOTE: A state transition occurs when one or more discrete conditions are met. Depending on conditions that are met, a state may transition to one of potentially many subsequent states.

States allow participants to track and identify the progress of the work. By seeing the work in the Submit state, the user and HR know that the request has yet to be reviewed by the manager. Based upon the decision that the manager makes in the Review state, the state can transition to one of two different states. If the manager manually denies the request or if ten days of inaction occur, one of the required conditions has been met to make the state transition to the Deny state. When the state transitions to Deny, the actions required are different than if the state had transitioned to Approve.

Workflows, which are based upon business processes, are comprised of tasks that are completed by workflow participants. Tasks are associated with states that identify the status of the work. States transition based upon conditions that are defined in the workflow.

Custom Entries

2

ICEcore allows you to create custom entries with custom forms and views. These entries allow you to use unique forms and views when making specific types of entries. This chapter shows you how to design these entries and assign them to a workspace folder. The next chapter shows you how to create basic workflows in ICEcore. You can also design custom entries to enhance the functionality of your workflows. The advanced workflow chapter shows you some of the functionality of the Advanced Workflow Add-On module that you can purchase.

This chapter contains the following sections:

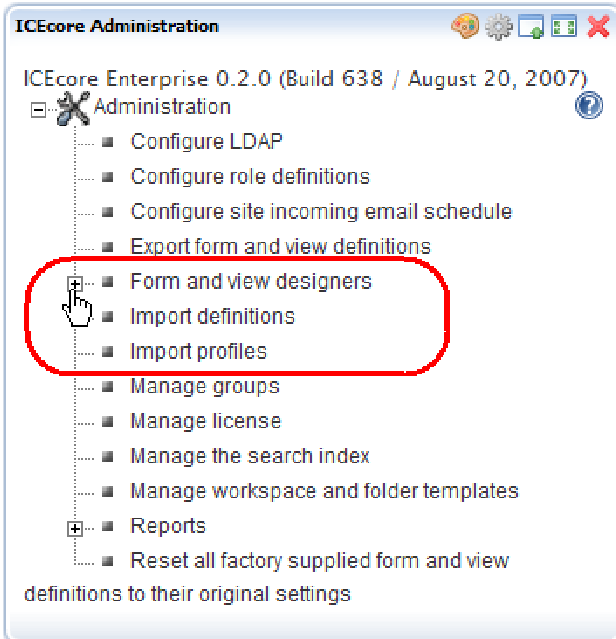
2.1 Creating a Custom Entry

The following procedures show you how to create a custom entry with a custom form and view. The example used in these procedures show you how to create a Time Off custom entry that can be added to a team workspace so that members can alert their team about the days on which they plan to be out.

The following procedures and topics are included in this section:

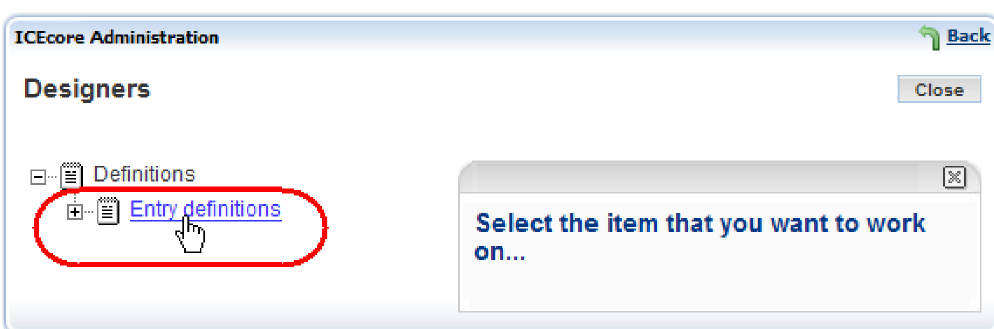
2.1.1 Create the Custom Entry

1 From the *ICEcore Administration* portlet, click the plus sign (+) to the left of *Form and view designers* to expand this section and view the available designers.



2 Click *Entry designer*.

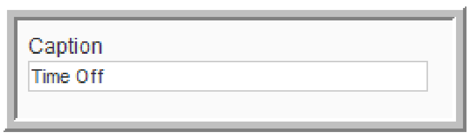
3 In the Designers window that appears, click *Entry definitions*.



4 On the right-side of the window, click *Add a new entry definition*.

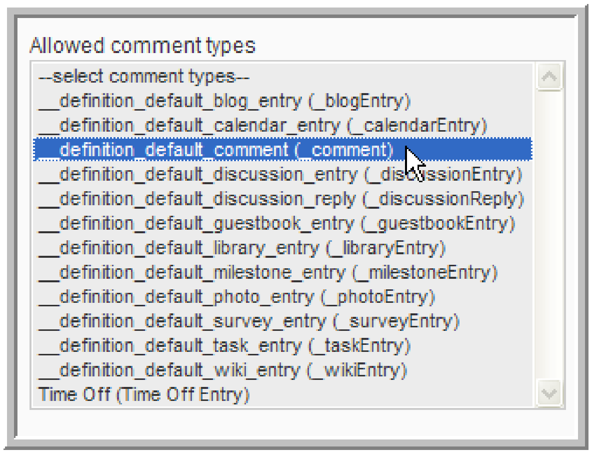
5 In the entry form that appears, type the name for this entry type into the *Name* field.

6 Type the name for the entry that you want to see in ICEcore into the *Caption* field.

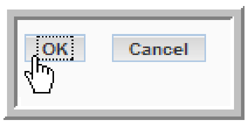


7 Select the family for this entry from the *Family* list box. Select the item type that is closest to the function of the item you are creating. People can use the family type when performing filtered searches. This custom entry has an *-unspecified-* family.

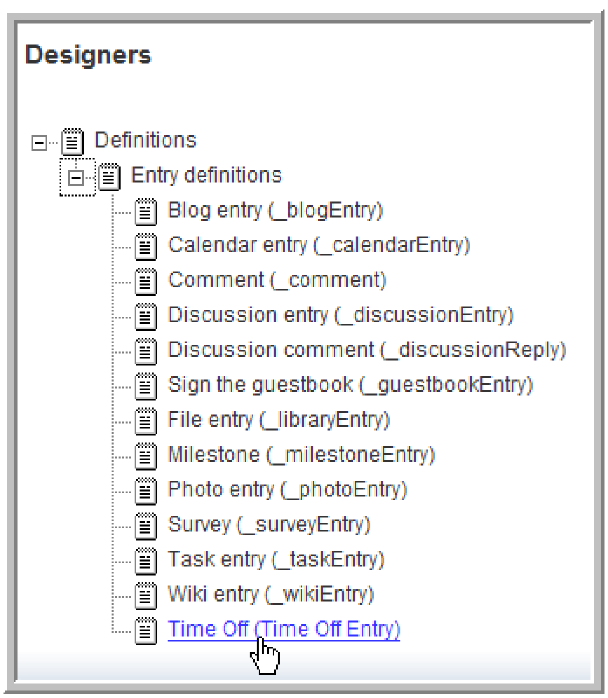
8 Select the comment types you want to allow for this new custom entry from the *Allowed comment types* list box (use the Ctrl key to select multiple comment types).



9 Click *OK* at the bottom of the entry form.

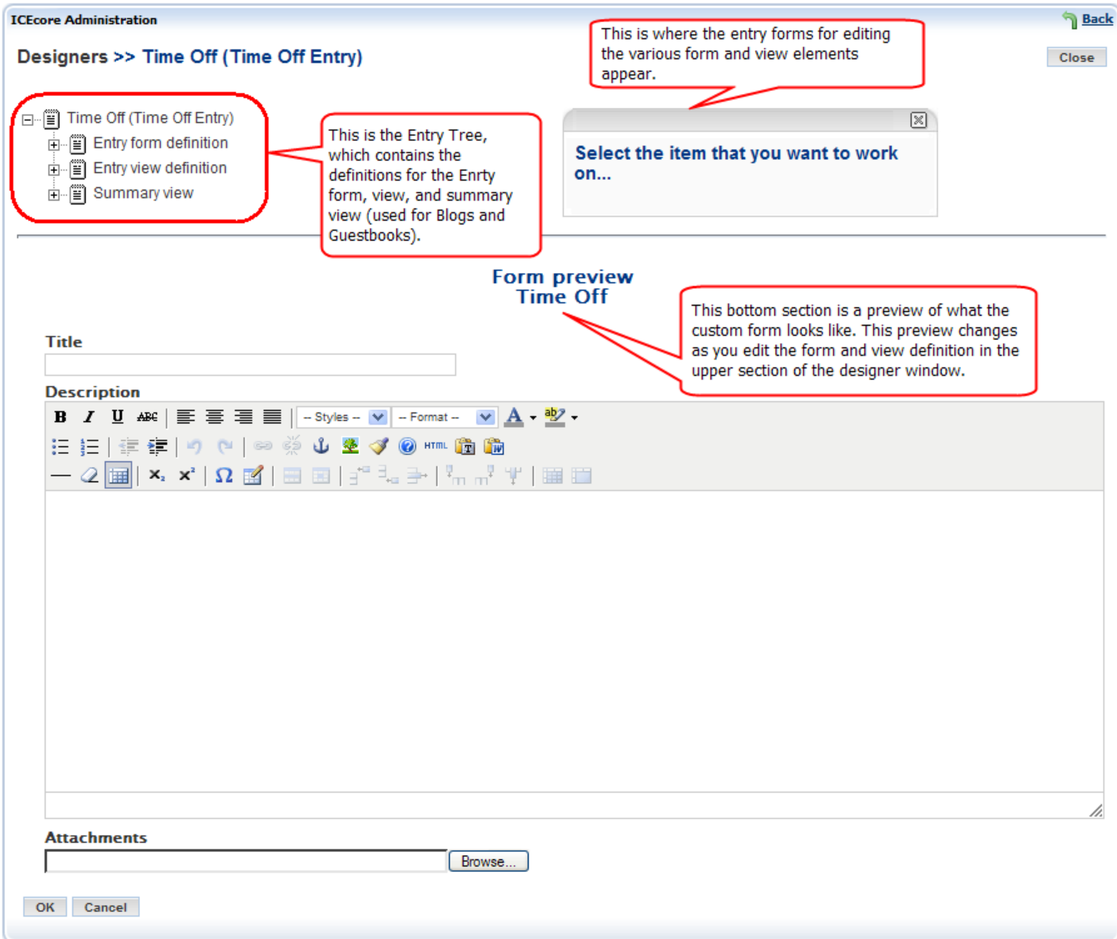


A custom entry named Time Off Entry now exists, which you can view under *Entry definitions* in the *Entry Designer* window.



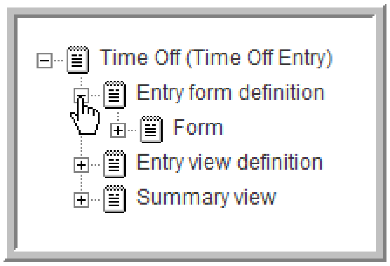
2.1.2 The Entry Designer Editing Window

The following image shows you the Designer window when working with a specific entry.

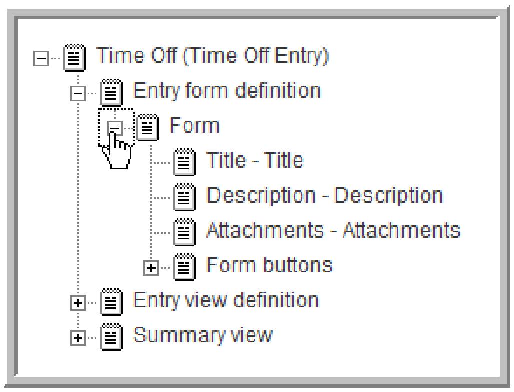


2.1.3 Create a Custom Form for an Entry

1 Click the plus sign (+) to the left of *Entry form definition* to expand this section.

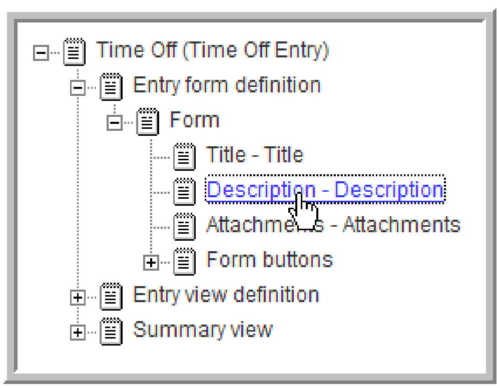


2 Click the plus sign (+) to the left of *Form* to expand this section and view the current elements in this form.



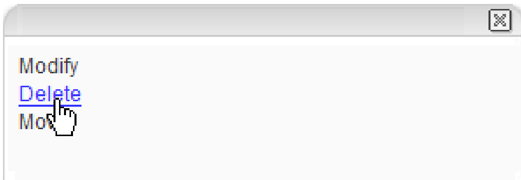
3 To delete an element:

3a Click the element (*Description*).

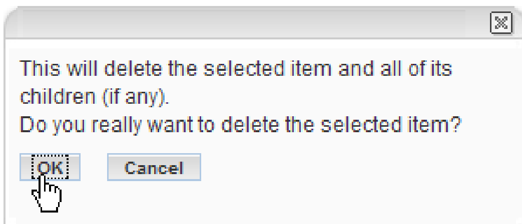


NOTE: For this custom form, a simple text box element is going to be used instead of the *Description* element.

3b In the option dialog that appears to the right, click the *Delete* option.



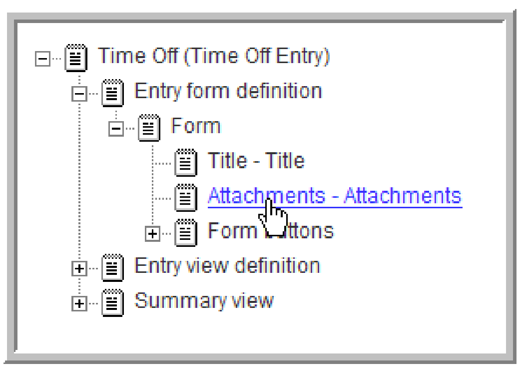
3c Click *OK* to confirm that you want to delete the *Description* element.



The *Description* element is deleted and is removed from the *Entry tree* and the *Form preview* area.

4 To hide an element from appearing in the form view:

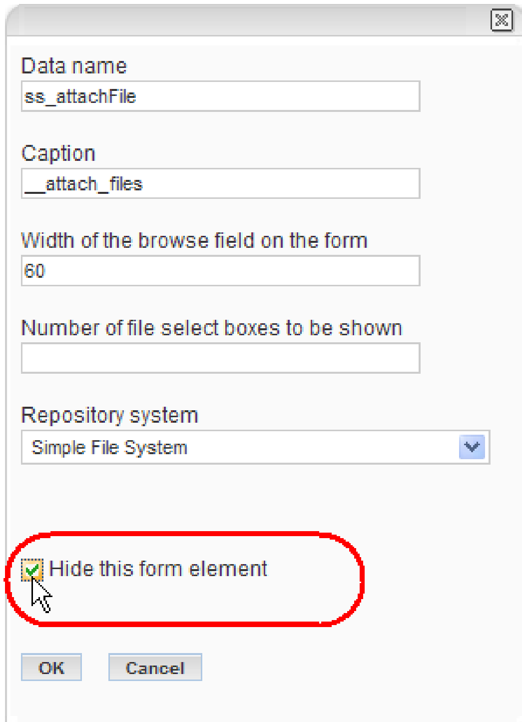
4a Click the element you want to hide (*Attachments*).



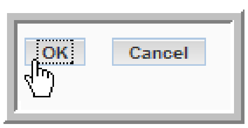
NOTE: This custom entry is for entering your time off, there is no need to attach files to these entries.

4b In the options dialog, click *Modify*.

4c In the *Attachments* element form that appears, select the *Hide this form element* option.



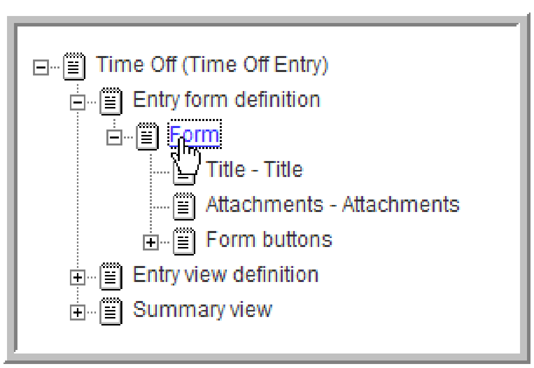
4d Click *OK*.



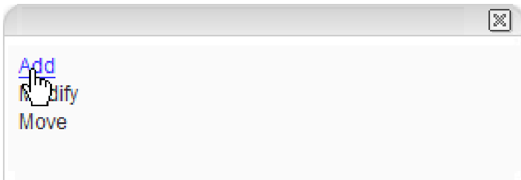
The *Attachment* element is removed from the *Form preview* area.

5 To add an element:

5a Click *Form*.

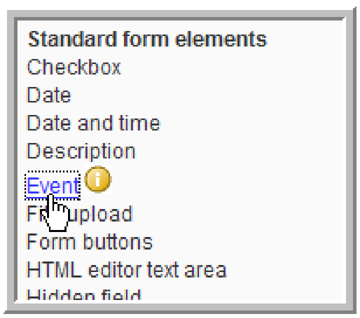


5b In the options dialog, click *Add*.

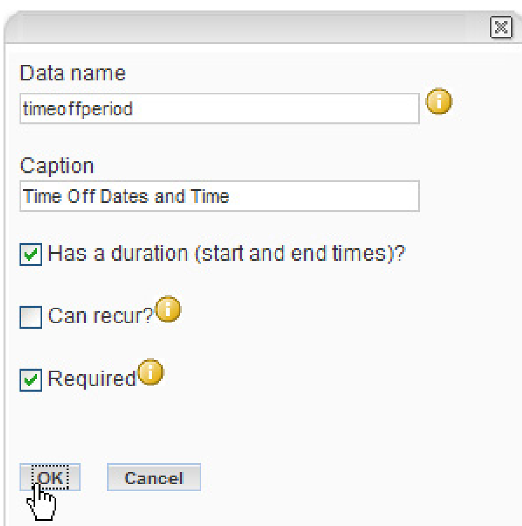


The *Standard Form Elements* and *Layout Options* appear to the right.

5c Click *Event* to add the *Event* element to use for entering the time off as an event with a start and end time.



5d Fill in the *Event* element form.



1. Type in the *Data Name*.

   NOTE: This is an internal-use, database name. Names for elements in one definition must be unique. The first character must be an alphabetic character (a-z, A-Z). For the rest, legal characters are alphanumeric characters (a-z, A-Z, 0-9), hyphens (-), and underscores (_).

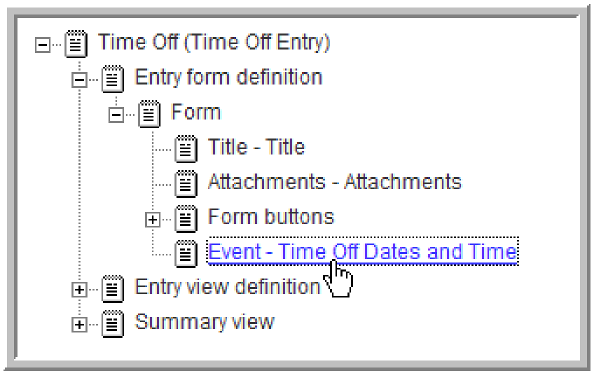
2. Type in the Caption name (the name used in ICEcore).
3. Select the *Has a duration (start and end times)?* option.

4. Select the *Required* option.
5. Click *OK*.

The *Time Off Dates and Time* element appears under *Form* and in the *Form preview* area at the bottom (below the other elements).

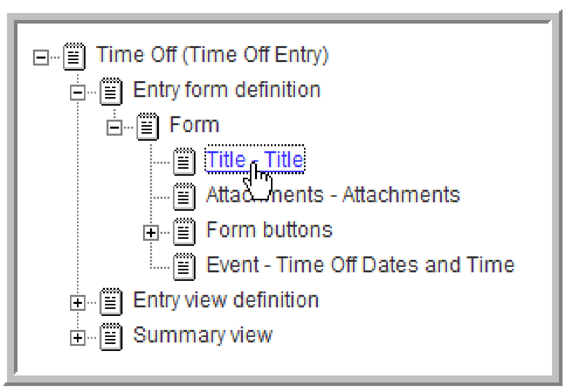
6 To move an element:

6a Click the *Time Off Dates and Time* element.

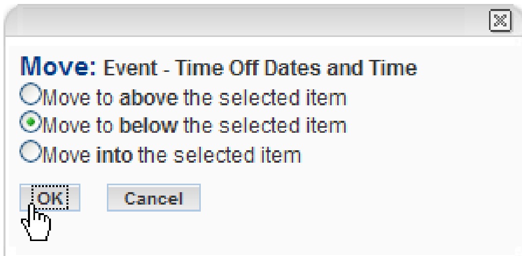


6b In the options dialog, click *Move*.

6c Click the element under *Form* that you want this element to appear under or above (*Title*).



6d Select the *Move to below the selected item* option and click *OK*.

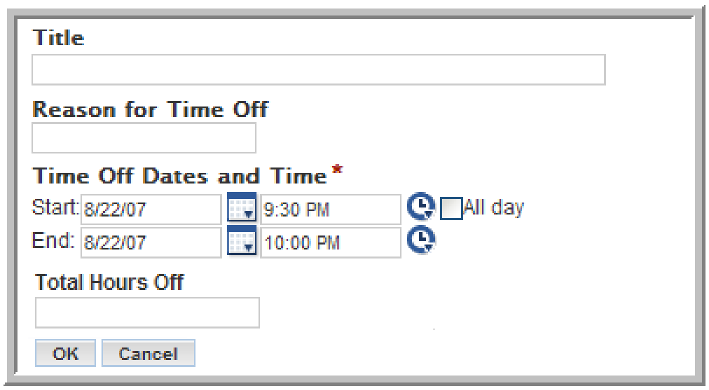


The *Time Off Dates and Time* element moves to below the *Title* element.

7 Add a required *Text* element named *Total Hours Off* and move it below the *Time Off Dates and Time* element.

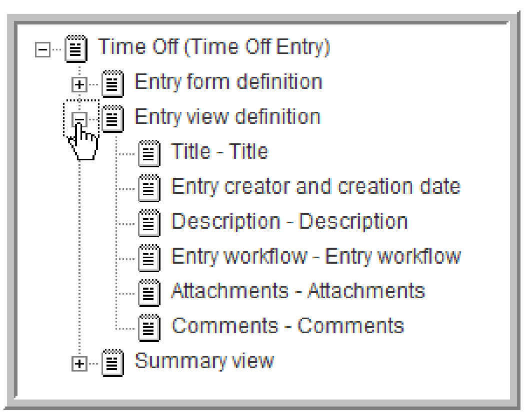
8 Add a required *Text* element named *Time Off Reason* and move it below the *Title* element.

Your custom form should now look like this:



2.1.4 Create a Custom View for an Entry

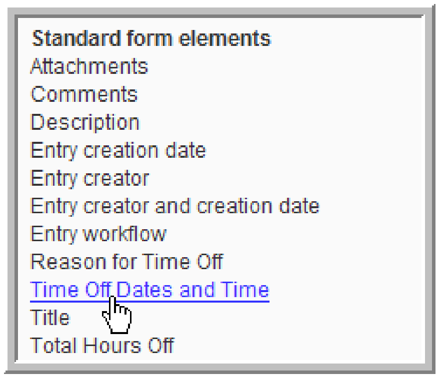
1 Expand *Entry view definition*.



2 Select and delete the *Description* and *Attachments* elements.

3 Click *Entry view definition*, click *Add* in the option dialog, and click *Time Off Dates and Time*.

NOTE: Any elements you added to the custom form appear in the list when you are adding elements to the custom view.

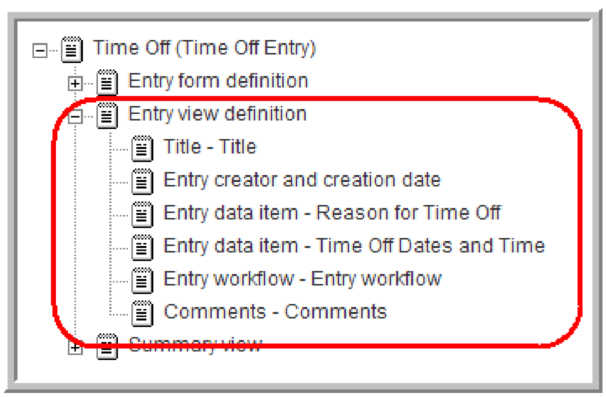


4 Click *OK*.

5 Click *Add* in the option dialog, click *Reason for Time Off*, and click *OK*.

6 Move the *Reason for Time Off* element below the *Entry creator and creation date* element and move the *Time Off Dates and Time* element below the *Reason for Time Off* element.

Your custom view for this custom entry should contain these elements in this order now:



NOTE: The Summary view is used for Blogs or Guestbooks. You can create a custom Summary view in the same manner as the custom view in this procedure.

2.2 Using a Custom Entry

Custom entries can be assigned to any folder, but you may want to configure specific folders for some types of custom entries depending on their purpose. For example, you might want a folder that only contains the *Time Off* custom entries.

For the *Time Off* custom entry, a team plans to create a special folder that only contains these specific entry types. The following procedures show you how to add this custom entry to a team folder and configure the folder to only utilize this entry type.

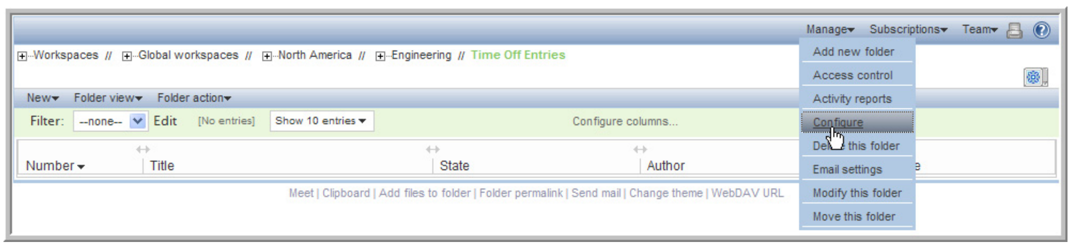
This section contains the following procedures:

- Section 2.2.1, "Configure a Folder to Use Your Custom Entry," on page 17
- Section 2.2.2, "Add a Time Off Entry," on page 19
- Section 2.2.3, "View the Time Off Entry," on page 20

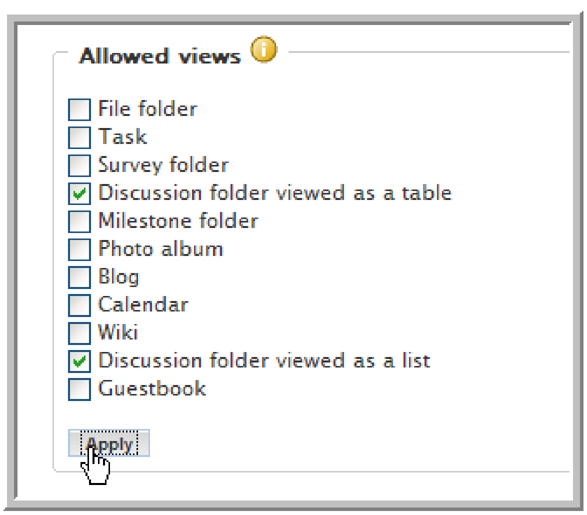
2.2.1 Configure a Folder to Use Your Custom Entry

1 Find the folder you want to use for the teams time off entries (*Engineering* > *Time Off Entries* for this procedure).

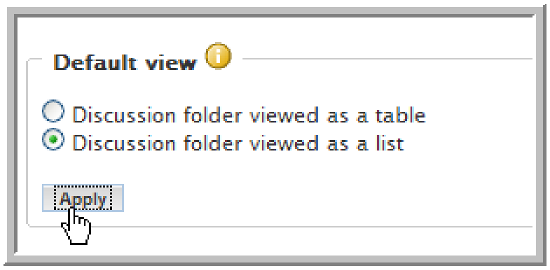
2 Select the *Manage* > *Configure* menu item.



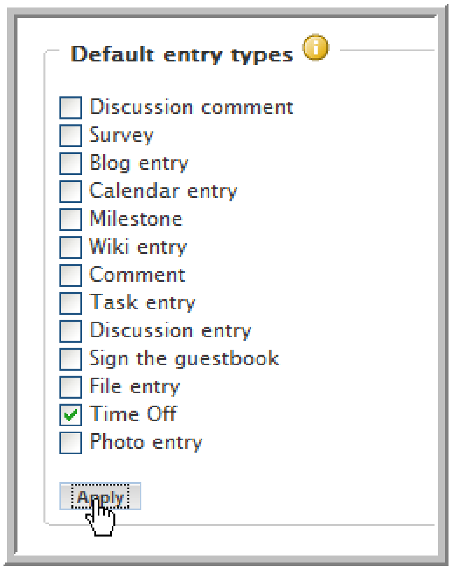
3 Under *Allowed Views*, select the *Discussion folder viewed as a table* and *Discussion folder viewed as a list* options (deselect any others) and click *Apply*.



4 Under *Default view*, select the *Discussion folder viewed as a list* option and click *Apply*.



5 Under *Default entry types*, select the *Time Off* entry type (deselect any others) and click *Apply*.



NOTE: Users can now only enter *Time Off* entries in this folder.

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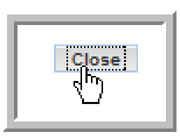
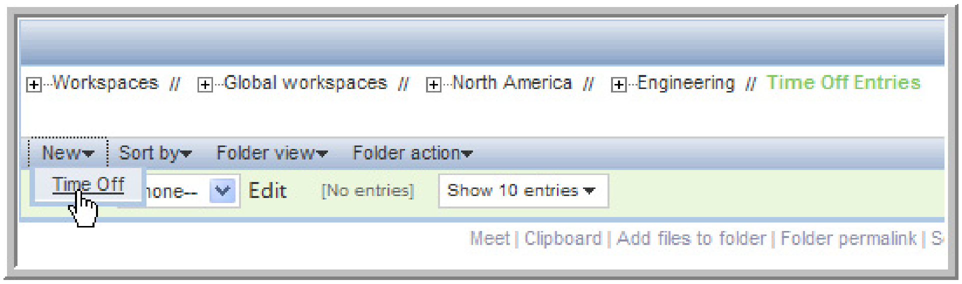
6 At the top or bottom of this window, click *Close*.



2.2.2 Add a Time Off Entry

1 Select the *New > Time Off* menu item.



NOTE: *Time Off* should be the only available menu item.

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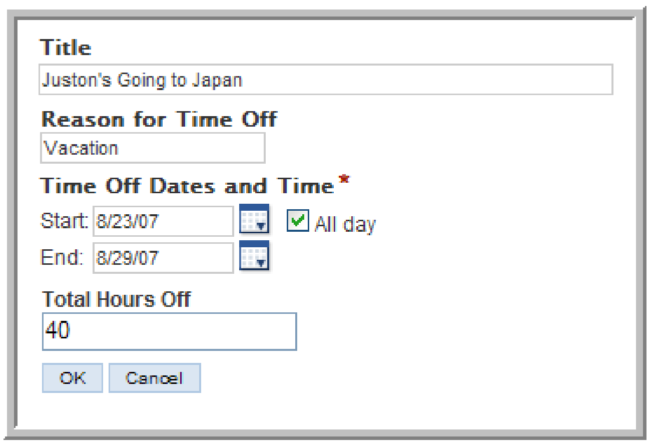
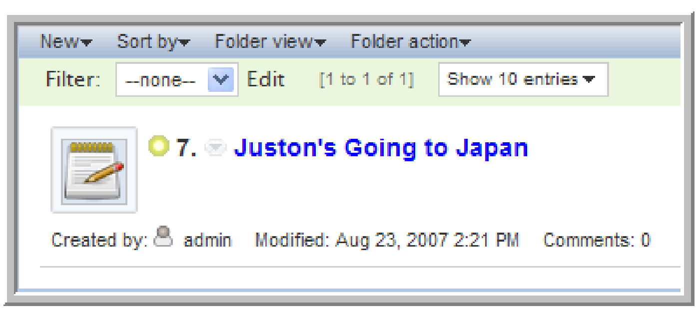
2 Fill out the Time Off entry form.

Type in a *Title*, *Reason*, select your time off period *Start* and *End* dates (time), and type in the *Total Hours Off*.



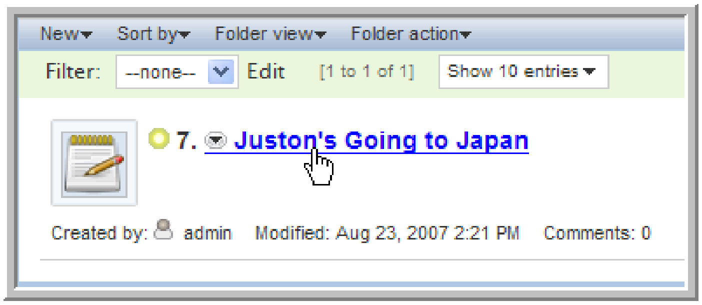
3 Click *OK*.

The new entry is added to the *Time Off* folder.

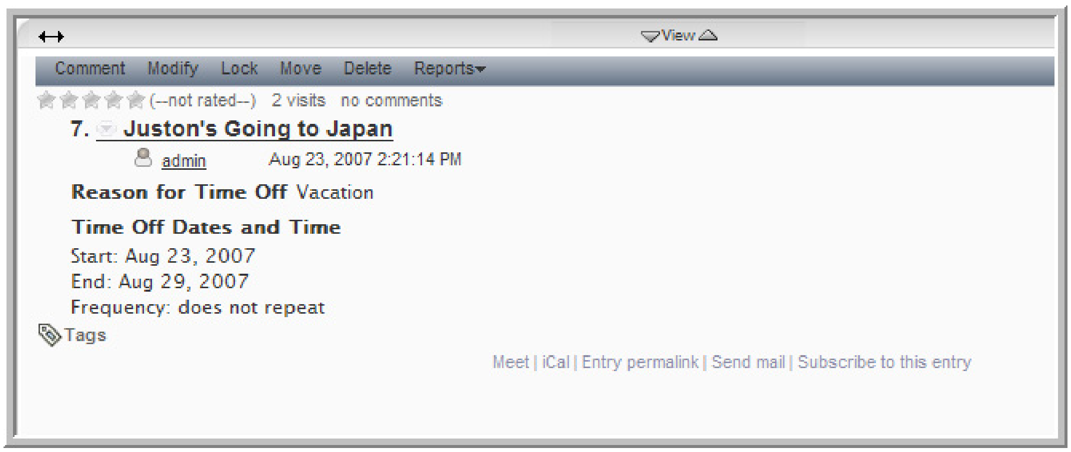


2.2.3 View the Time Off Entry

1 Click the title of the *Time Off* entry you want to view.



2 View the entry. You can see it displays the elements selected for this custom view.



Creating a Basic Workflow Process

3

When developing a workflow process with ICEcore, you use the ICEcore Administration portlet. In ICEcore, the completed workflow process is a separate function that can then be applied to entries using one of several methods ICEcore provides to start the workflow.

As one example, you can begin by creating a discussion topic in a folder, and then you can initiate an allowed workflow process for that entry (workflow availability is assigned in each folder's configuration). The topic enters into the first state of the initiated process, and the workflow begins only for that one particular entry. As another example, you can specify in a folder's configuration to initiate a specific workflow process automatically every time a user creates an entry of a specific type (including your own customized entries).

This chapter shows you how to implement a basic workflow design. The Advanced Workflow chapter expands the design (using ICEcore's Advanced Workflow add-on module) to more closely match the needs of a typical production-ready system (for example, using questions).

The following sections are covered in this chapter:

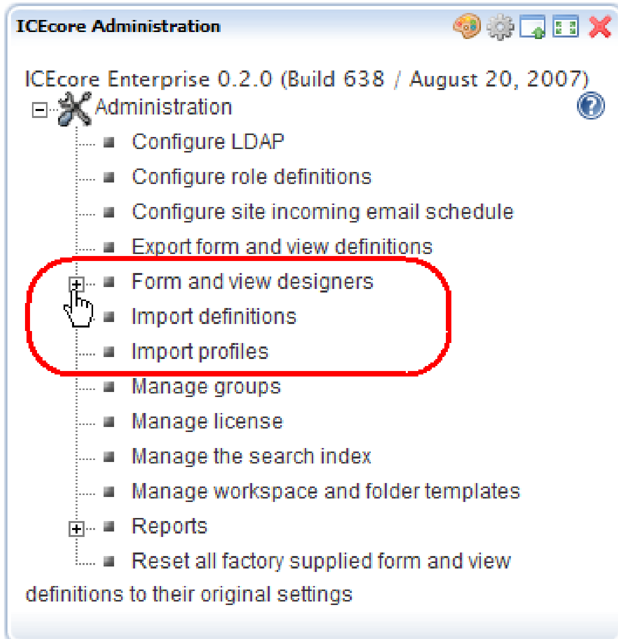
3.1 Creating a Workflow

The following procedures show you how to define a workflow, add the states it requires, and define the transitions it requires. The example used is the creation of a Paid Time Off (PTO) request workflow.

This section contains the following topics:

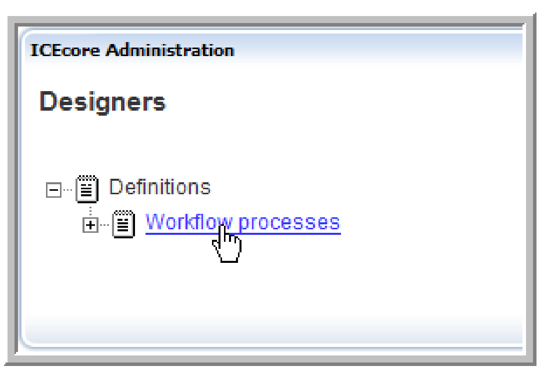
3.1.1 Define a Workflow

1 From the *ICEcore Administration* portlet, click the plus sign (+) to the left of *Form and view designers* to expand this section and view the available designers.

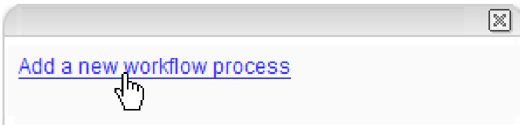


2 Click *Workflow designer*.

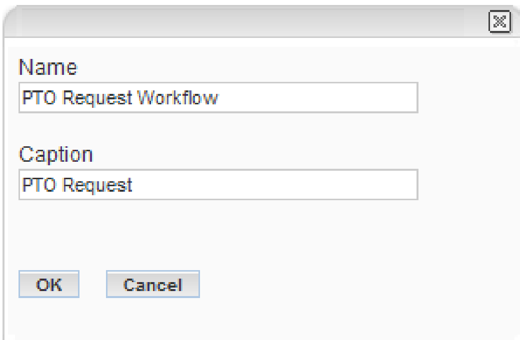
3 Click *Workflow processes*.



4 In the options dialog on the right, click *Add a new workflow process*.



5 In the form that appears on the right, type in the *Name* (workflow name) and *Caption* (name that appears in ICEcore) for this workflow.

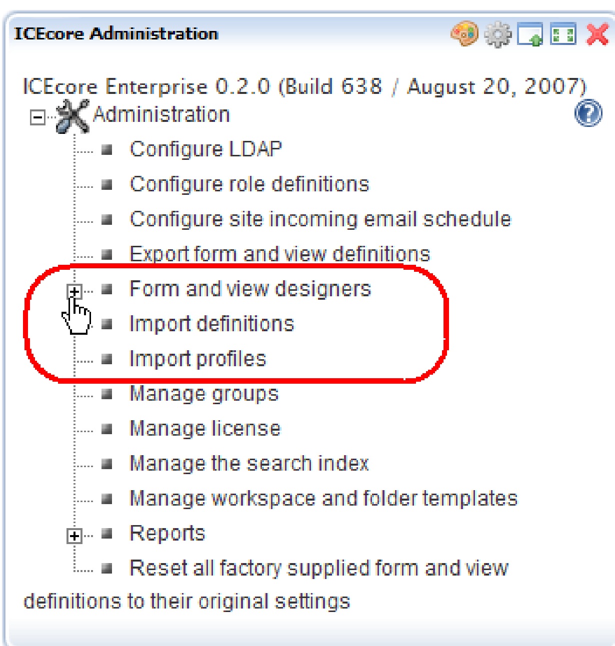


6 Click *OK*.

The PTO workflow is now defined in ICEcore.

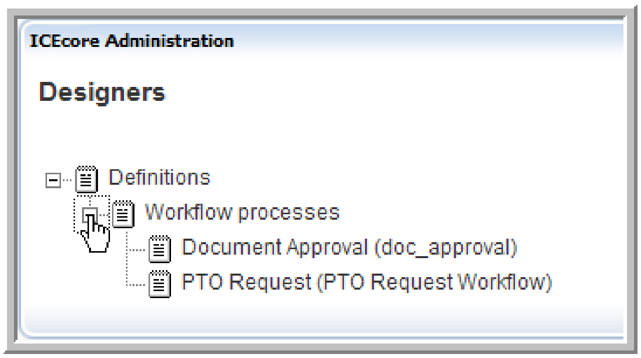
3.1.2 Add States to a Workflow

1 From the *ICEcore Administration* portlet, click the plus sign (+) to the left of *Form and view designers* to expand this section and view the available designers.

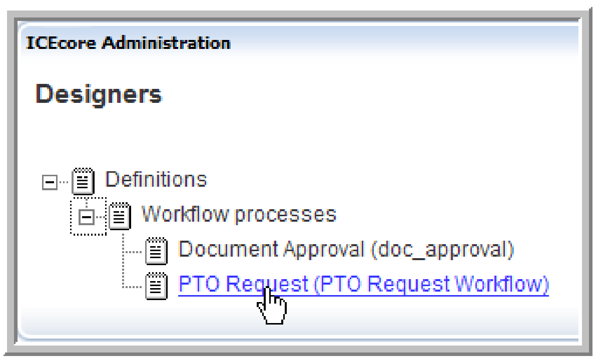


2 Click *Workflow designer*.

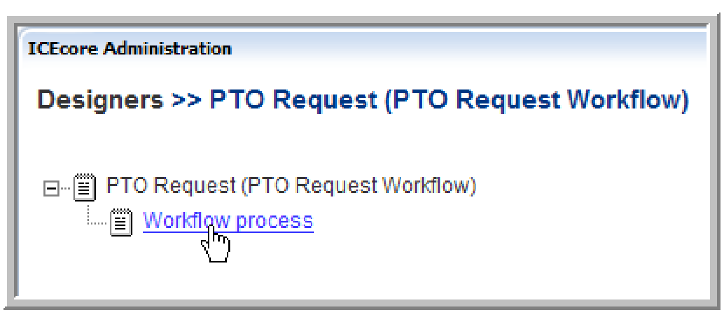
3 Expand *Workflow processes*.



4 Click *PTO Request*.

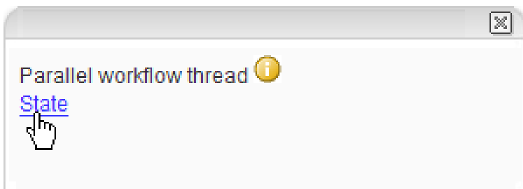


5 Click *Workflow process*.



6 In the options dialog on the right, click *Add*.

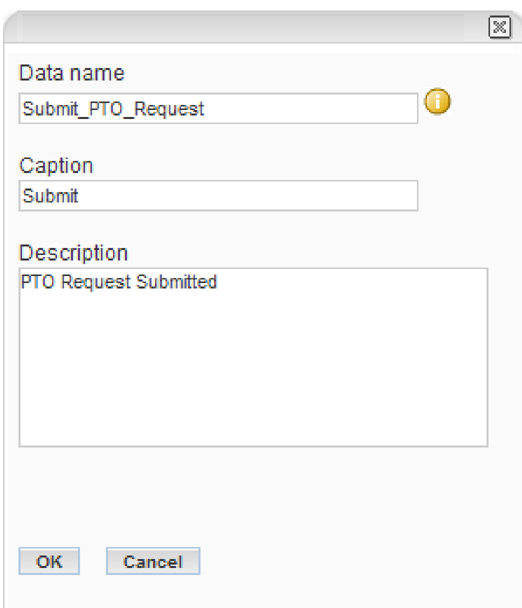
7 Click *State* to add a state to this workflow.



8 Type in the *Data Name* (database name), *Caption* (name used in ICEcore), and *Description* for this workflow as follows:

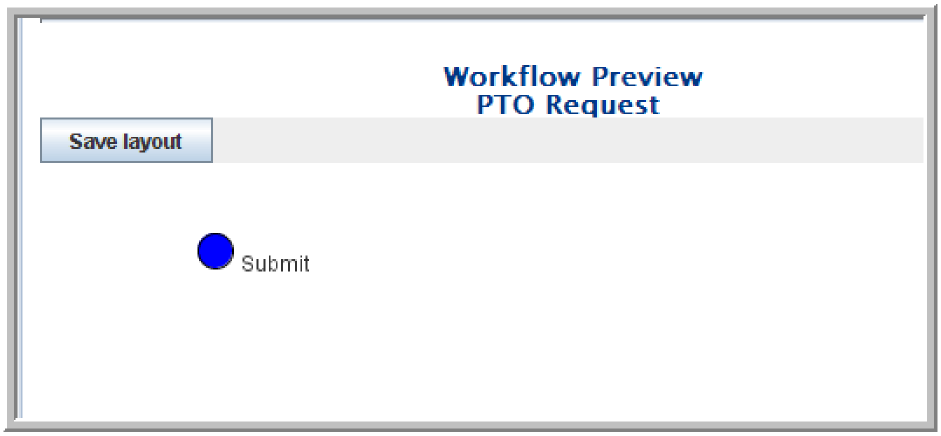
NOTE: The *Data Name* is an internal-use, database name. Names for elements in one definition must be unique. The first character must be an alphabetic character (a-z, A-Z). For the rest, legal characters are alphanumeric characters (a-z, A-Z, 0-9), hyphens (-), and underscores (_).

- *Data Name* = Submit_PTO_Request
- *Caption* = Submit
- *Description* = PTO Request Submitted

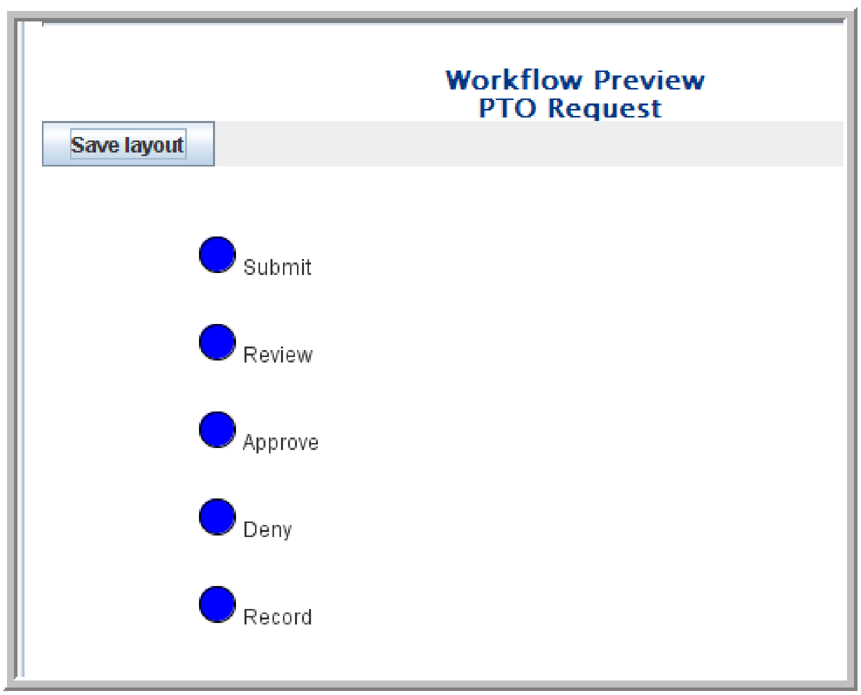


9 Click *OK*.

The new state is added to the workflow and appears in the Workflow Preview area at the bottom part of the window.



10 Repeat these steps to add the *Review*, *Approve*, *Deny*, and *Record* states.

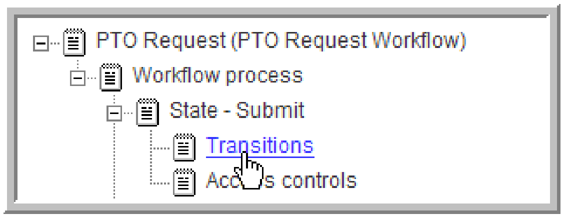


NOTE: Once the states are defined, the next step is to develop transitions that move an entry from one state to the next. You can also take action when a process enters into or exits from a state. For example, upon entry (or exit) you can send a notification, begin or end a parallel process, or set a variable.

3.1.3 Define Manual Transitions for a Workflow

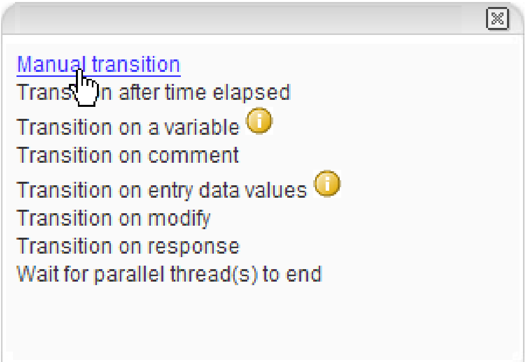
The following steps show you how to set up manual transitions (only manual transitions are available without the Advanced Workflow add-on module) between the states in this workflow.

1 Under *Workflow process*, expand *State - Submit* and click *Transitions*.



2 In the options dialog on the right, click *Add*.

3 In the options dialog, click *Manual Transition*.



NOTE: The *Manual Transition* is the only available transition in ICEcore unless you are using the Advanced Workflow add-on module.

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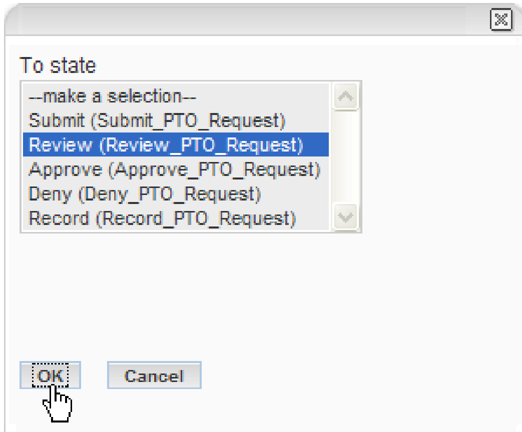
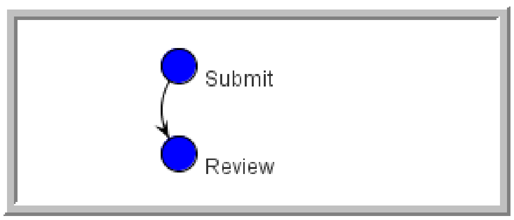
4 In the *To state* list box, select *Review (Review_PTO_Request)* and click *OK*.

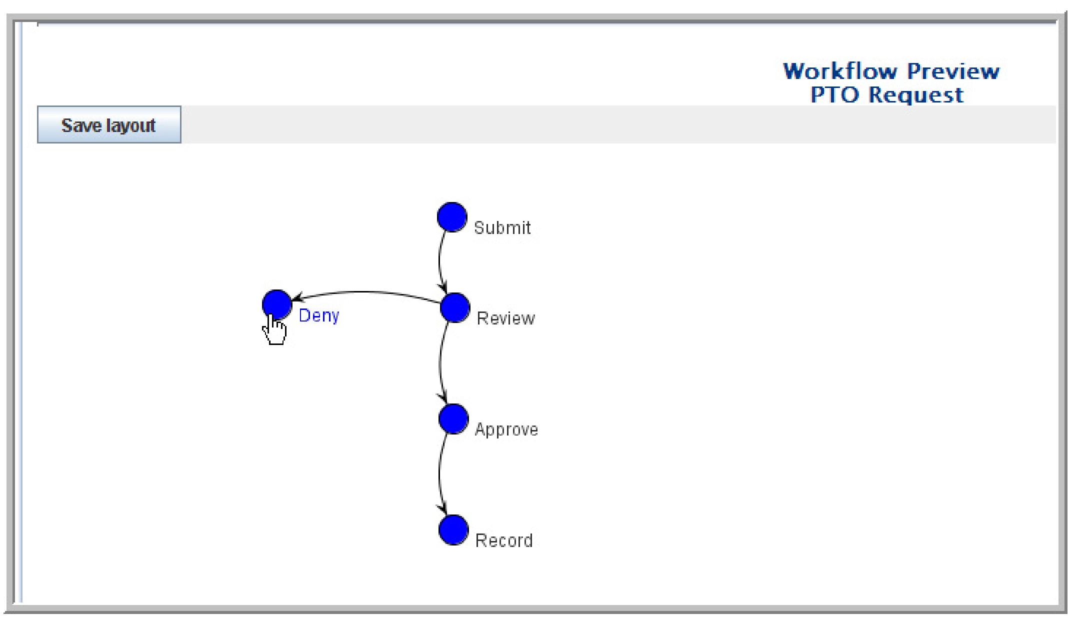


After you successfully complete the previous steps, the preview portion of the page displays an arrow in the flow chart that represents the newly defined transition.



5 Repeat these steps to create the following manual transitions:

- *Review* to *Approve*
- *Review* to *Deny*
- *Approve* to *Record*

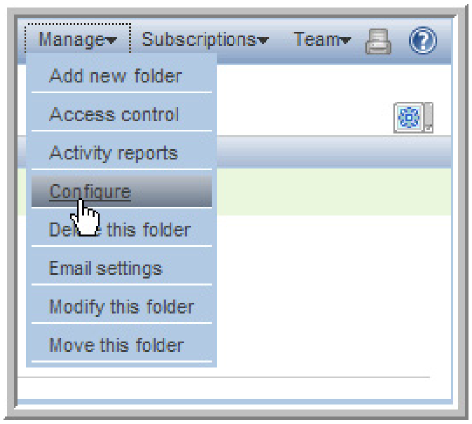


NOTE: You can drag each state to the position you want it to appear in the preview area and click *Save layout* to save these positions for ease of viewing.

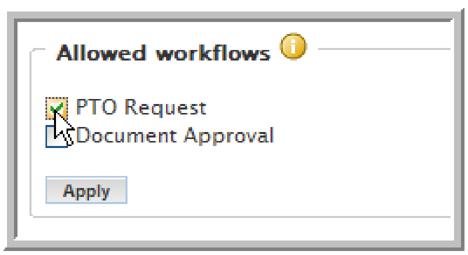
3.1.4 Configure a Folder to Use This Workflow

You need to configure each folder in which you want to use this new workflow.

1. Go to the *PTO Requests* folder in Human Resources.
2. Select the *Manage > Configure* menu item.



3. Under *Allowed Workflows*, select the *PTO Request* option.



4. Click *Apply*
5. Click *Close*.

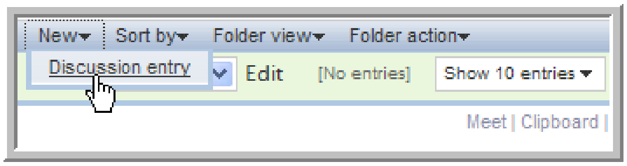
   User can now use the *Workflow > Start workflow: PTO Request* menu item when viewing entries in this folder to start this workflow process.

3.1.5 Test the New Workflow

After creating a minimally functional workflow process, verify that the transitions function properly. (At this state of its development, the process does not define specific access to the workflow based upon the participant. This means that any user with access rights to the folder that is associated with this workflow can transition the entry through the entire workflow.) This example uses John Waters.

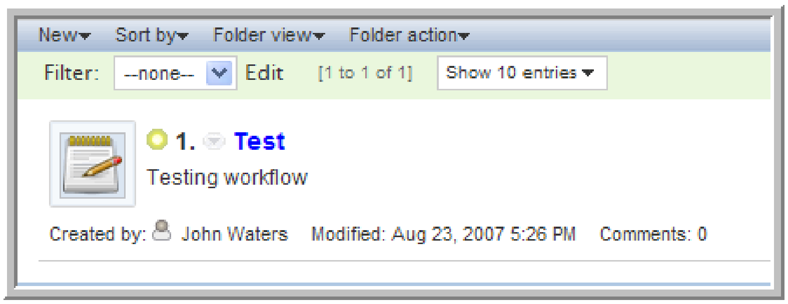
1. Log in as John Waters (jwaters).
2. Go to the *PTO Requests* folder in Human Resources.

3 Click *New* > *Discussion entry* menu item to add a discussion topic.

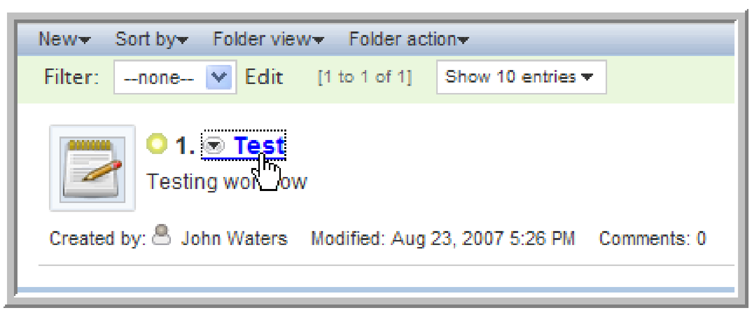


4 Type in the *Title* and *Description* information and click *OK*.

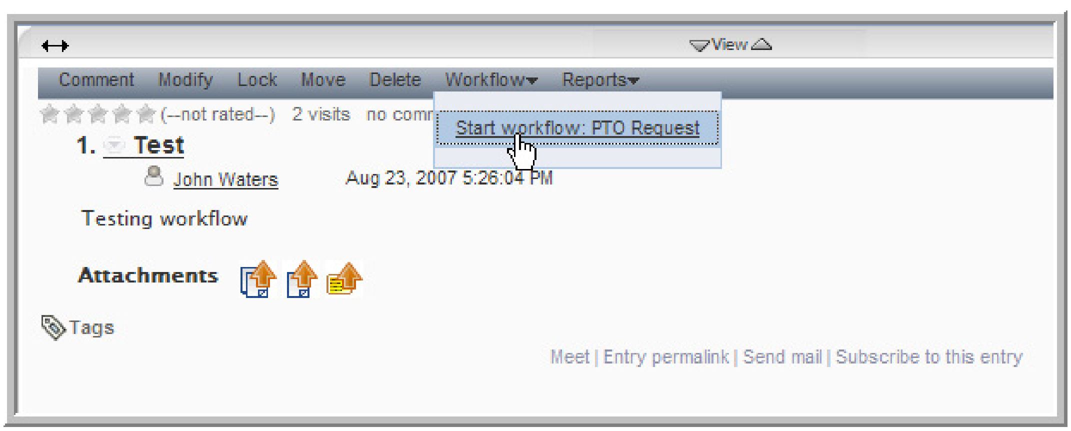
The new entry appears in the folder.



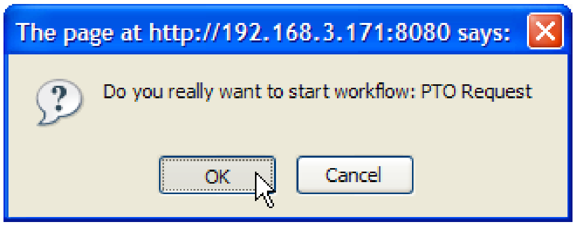
5 Click on the entry title to view the entry.



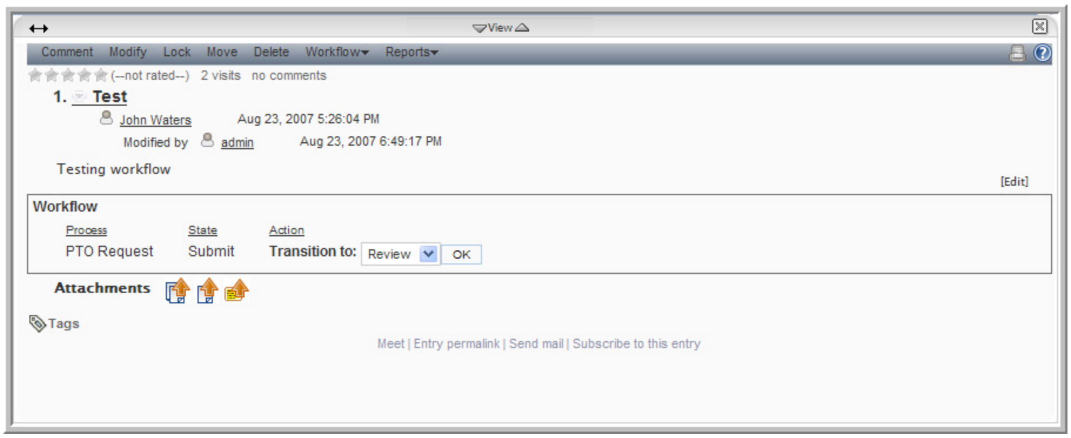
6 Select the *Workflow* > *Start workflow: PTO Request* menu item.



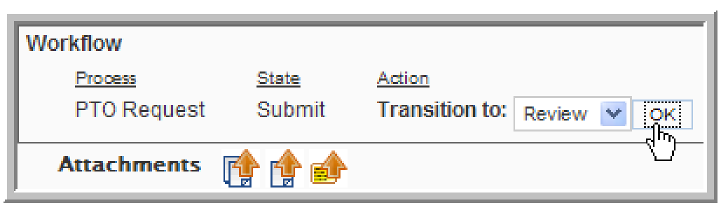
7 In the confirmation dialog that appears, click *OK* to start the *PTO Request* workflow.



The *PTO Request* workflow is added to entry with the entry in the initial *Submit* state.



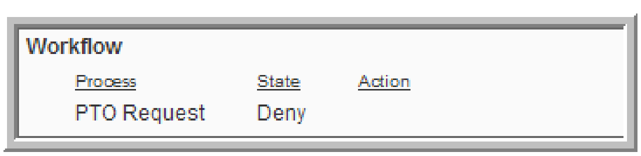
8 Select *Review* from the *Transition to:* drop-down list and click *OK*.



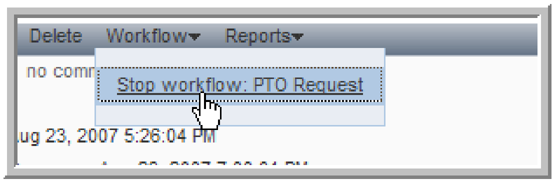
The *State* should change to *Review*.

9 Select *Deny* from the *Transition to:* drop-down list and click *OK*.

The state should change to Deny and there should be no actions available (the Transition to: drop-down list should be gone) since there are no transitions from *Deny*.



10 Select the *Workflow > Stop workflow: PTO Request* menu item to stop the workflow process.



11 Select the *Workflow > Start workflow: PTO Request* menu item to start the workflow process.

12 Transition the entry through all the states (except *Deny*) until you reach *Record* (no transitions exist from *Record*).

The manual transitions allow the user to change the state of this workflow, but in a real business process these transitions should be controlled by specific groups or individuals. The next section deals with setting access controls in the workflow.

3.2 Setting Access Controls

Using the access control feature, you can specify which participants may participate in causing an entry to transition from one state to another. Also, if the entry contains sensitive information at any time during the workflow process, you can restrict who may view the entry. This feature implements "per entry" access control, checking privileges for individual entries at each state in the workflow process.

What's in this Section?

The following sections describe how to set up access control in ICEcore as well as using various approaches with the workflow tools that set access control for one or more states:

- Section 3.2.1, "What is Access Control?," on page 33
- Section 3.2.2, "Set Access Rights," on page 34
- Section 3.2.3, "Summary," on page 37

3.2.1 What is Access Control?

When creating a workflow process using default settings, every user who can enter the discussion forum has access to view the entry and to participate in state changes. For almost all production-ready workflow systems, it is necessary to alter this default access control, so that:

- Only members of the team assigned to the business process may participate in the workflow process.
- Only designated responsible individuals participate in changing states.

NOTE: Access control is the term used to identify which users have the right to perform specific tasks at each state within the workflow process.

Planning Access Control

Before configuring access, identify the following:

- States — You defined these in the previous section.
- Access rights — For each state, define who can view, modify or delete, respond to, and participate in state transitions.
- Users or Groups — Map "participants" to usernames and group names within ICEcore.

Create a table to use for access-control planning as follows:

State	Participant	Access Required
Submit	The employee, or time off requestor	• Only the manager and employee can see an employee's request. • The manager is the only one allowed to transition the work to *Review*.

State	Participant	Access Required
Review	The manager	◆ The manager is the only one allowed to transition the work to *Approve* or *Deny*. ◆ Employees can review only their own pending requests in this state.
Approve	The manager and employee	◆ The manager, employee, and HR may view the request in this state. ◆ Only HR can transition to *Record*.
Deny	The manager and employee	The manager and employee can review requests in the *Deny* state.
Record	Human Resources	The manager, employee, and HR may view the work in this completed state.

Subsequent sections in this chapter describe how to implement this plan for access control.

3.2.2 Set Access Rights

An entry in the *Submit* state needs to be viewable by the person who created the *PTO Request*, but not by any of her or his peers. In addition, only a manager can transition the entry from *Submit* to *Review*, and from *Review* to *Deny* or *Approve*. Human Resources needs to transition the entry from Approve to Record.

1 From the *ICEcore Administration* portlet, click the plus sign (+) to the left of *Form and view designers* to expand this section and view the available designers.

2 Click *Workflow designer*.

3 Expand *Workflow processes*.

4 Click *PTO Request*.

5 Expand *Workflow process*.

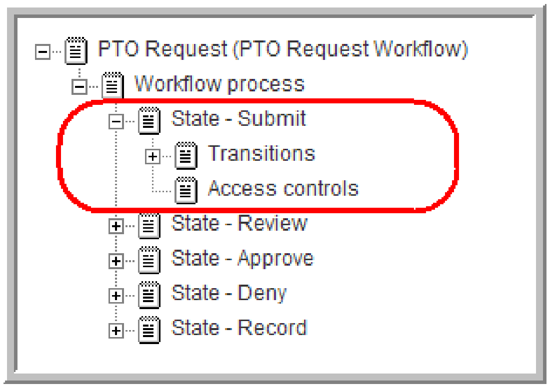
6 Add the *Access controls* to the workflow states:

6a Click *State - Submit*.

6b In the options dialog on the right, click *Add*.

6c Click *Access controls*.

Access controls is added below *Transitions*.



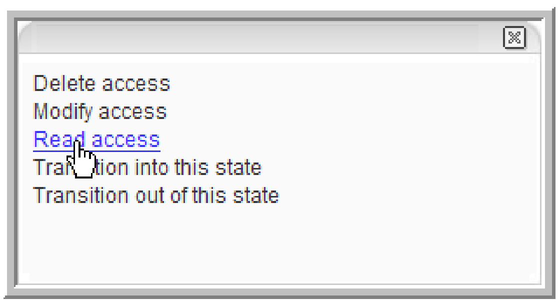
6d Repeat this for each state to add the *Access controls*.

7 Set the *Read access* rights:

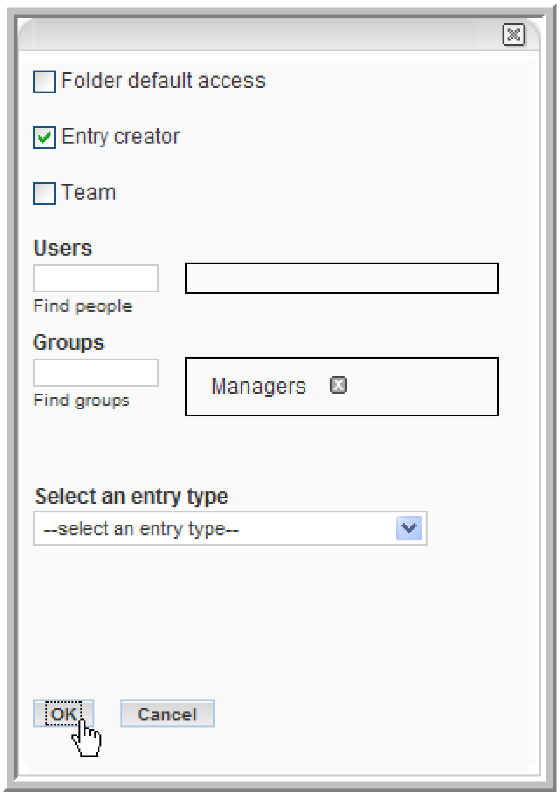
7a Under *State - Submit*, click *Access controls*.

7b Click *Add*.

7c Click *Read access*.



7d Deselect the *Folder default access* option, select the *Entry creator* option, add the *Managers* group, and click *OK*.



Now only the entry creator and managers can view these entries.

NOTE: The *Select an entry type* drop-down list allows you to add any user lists that might be assigned to specific entry types.

7e Repeat this for each state to add the *Read access* rights (make sure to give the *Human Resources* group *Read access* rights in the *Approve* and *Record* states).

8 Set the *Transition out of this state* access controls:

8a Under *State - Submit*, click *Access controls*.

8b Click *Add*.

8c Click *Transition out of this state*.

8d Deselect the *Folder default access* option, add the *Managers* group, and click *OK*.

Now only a Manager can transition the entry out of the *Submit* state.

8e Repeat this for the *Review* and *Approve* states with the following rights:

- *Review* — Managers group only
- *Approve* — Human Resources group only

9 Set the *Transition into this state* access controls:

9a Under *State - Review*, click *Access controls*.

9b Click *Add*.

9c Click *Transition into this state*.

9d Deselect the *Folder default access* option, add the *Managers* group, and click *OK*.

Now only a Manager can transition the entry into the *Review* state.

9e Repeat this for the *Approve, Deny,* and *Record* states with the following rights:

- *Review* — Managers group only
- *Approve* — Managers group only
- *Record* — Human Resources group only

The access rights for this workflow are now set. You can log in as the members of the various groups to walk through the workflow and test it.

NOTE: Both the *Transition out of this state* and the *Transition into this state* access rights have to be set correctly for all states in your workflow for the business process you are working with to map correctly.

3.2.3 Summary

Access control is an important aspect of workflow, because it allows a workflow designer to set levels of security and access to each task within the workflow.

While developing a workflow process, you can use workflow tools to set access for one state at a time or to work with more than one state simultaneously. Access control is comprised of who can see, modify or delete, respond to (a workflow question), or transition into or out of a specified state. When defining access control, you can specify all users, entry creators, or specific users and groups.

When you consider granting workflow access to an individual, make a distinction between times when more than one individual can use the workflow and when a specific individual always uses the workflow. The *Entry creator* individual applies to any ICEcore user who can create entries in that folder. However, there may be occasions when a specific user should be the only user who has certain access rights every time the workflow runs for an entry.

3.3 Notifying Participants

ICEcore can send e-mail notifications at different states of the workflow process. These notifications alert participants that the work has reached a state that requires their attention, provide information to managers who are tracking the process of the work, and provide a one-click method for a participant to view and work with the entry.

NOTE: In order to use workflow notifications, ICEcore must be configured to enable e-mail notifications. Refer to the ICEcore Installation and Configuration Guide for information on configuring e-mail servers and notifications.

What's in this Chapter?

This chapter includes instructions on creating the following types of notification:

- Notification of Request Submission - Define a notification that is sent whenever someone submits a *PTO Request*.
- Notification of Request Approval - Define a notification that is sent when the manager approves a *PTO Request*.
- Notification of Request Denial - Define a notification that is sent when the manager denies a *PTO Request*.
- Notification of an Overdue State - Define a notification that is sent whenever a state reaches a specified time limit.

The following sections walk you through these tasks:

- Section 3.3.1, "Define an On Entry Process:," on page 39
- Section 3.3.2, "Add a Notification to the On Entry Process," on page 40
- Section 3.3.3, "Test the Notifications," on page 42
- Section 3.3.4, "Summary," on page 43

To determine places in the process where a notification can be helpful, review the following table:

State	Participants	Action Required
N/A	The employee (time off requestor)	Enters the *PTO Request*.
Submit	The manager	Indicates that he has received the request.
Review	The manager	Reviews, and then approves or denies the request.
Approve	The manager and employee	The manager indicates that the request is approved. The employee must be notified when the request is approved.
Deny	The manager and employee	The manager indicates that the request is denied. The employee must be notified when the request is denied.
Record	Human Resources	HR enters the PTO Request into the Time Off database.

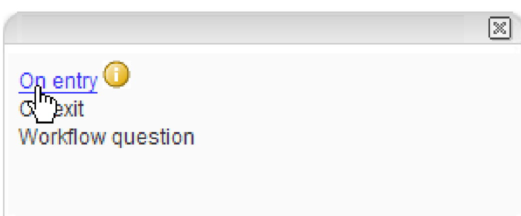
3.3.1 Define an On Entry Process:

You can take action when a process enters into or exits from a state. For example, upon entry (or exit) you can send a notification, begin or end a parallel process, or set a variable.

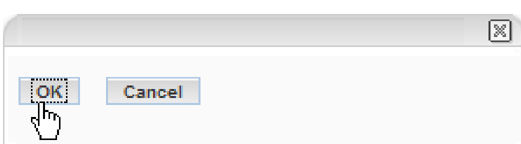
1 Expand *Workflow processes*.
2 Click *PTO Request*.
3 Expand *Workflow process*.
4 Click *State - Submit*.

5 In the options dialog on the right, click *Add*.

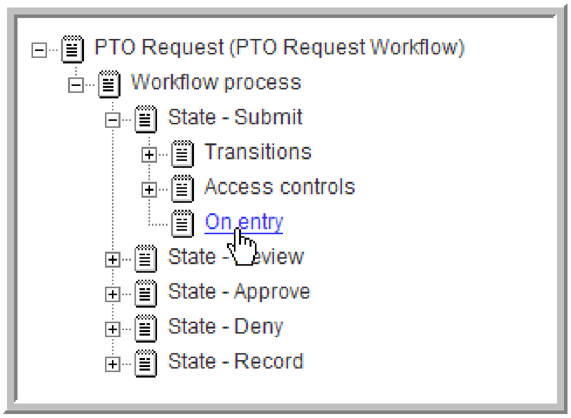
6 Click *On entry*.



7 Click *OK*.

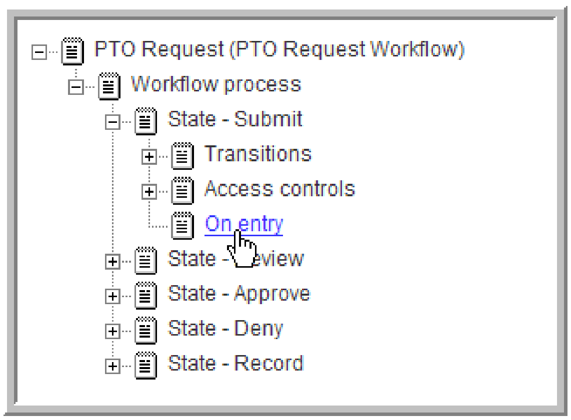


The *On entry* process is added to the Submit state.



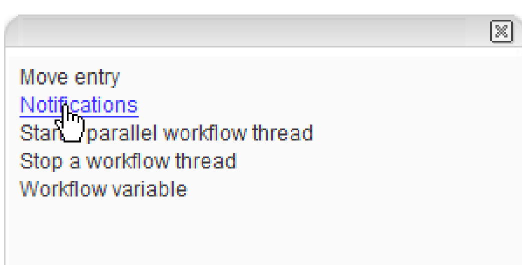
3.3.2 Add a Notification to the On Entry Process

1 Click *On entry*.

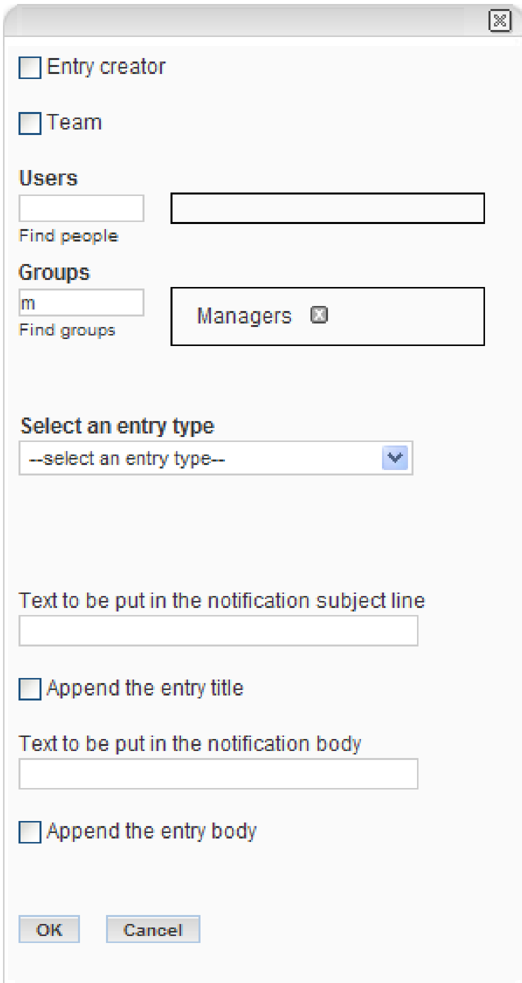


2 Click *Add*.

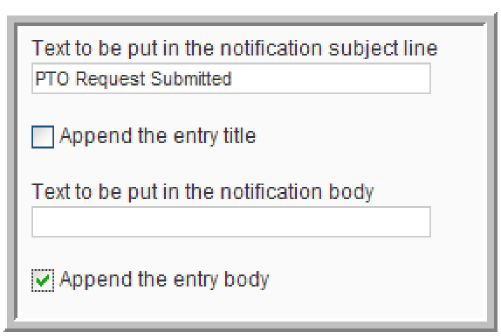
3 Click *Notifications*.



4 Add the *Managers* group to the form that appears.

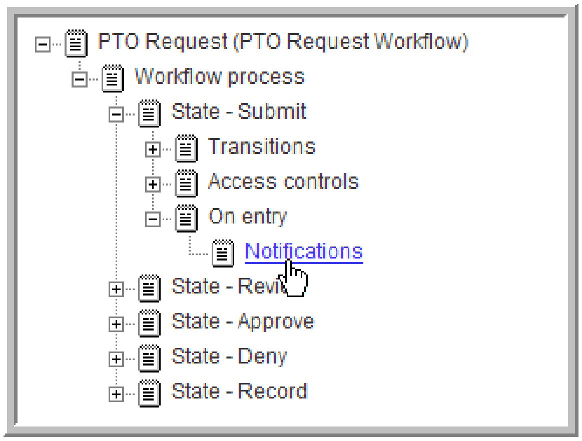


5 Type in a subject line for this notification and click the *Append the entry body* option to use the entry in the body of the notification e-mail.



6 Click *OK* to create the notification.

The *Notification* is added under the *On entry* process.



7 Repeat these steps to create a notification of request approval and a notification of request denied with the following settings:

- Notification of Approval — notify the *Entry creator* and the *Human Resources* group whenever the manager approves a PTO Request. The *Human Resources* group must record the time in the Time Off database and transition the request to the *Record* state.
- Notification of Denial — notify the *Entry creator* whenever the manager denies a PTO Request.

3.3.3 Test the Notifications

To test the notifications, log on as different users and move an entry through the workflow process. As the entry transitions, you should receive e-mail notification. If not, make sure that you configured e-mail settings on your server, and review the workflow notifications you have created.

3.3.4 Summary

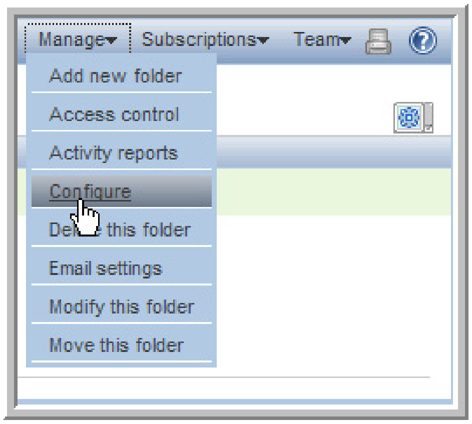
Notifications are a vital mechanism for maintaining the efficient and proper flow of work through the process. Notification can be sent to a number of different workflow participants, whenever a workflow process enters or exits a specific state. In addition to many other reasons, notifications can communicate approval, denial, completion, or overdue status.

3.4 Using the Workflow in a Folder

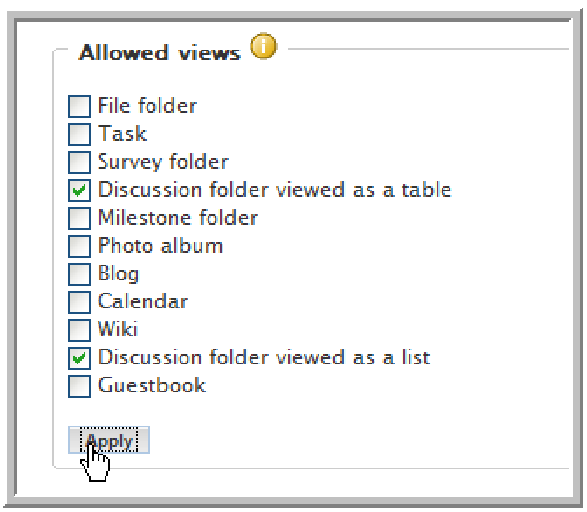
The following procedure shows you how to set up a folder to use this workflow with a custom entry (see Chapter 2, "Custom Entries," on page 3).

1 Go to the *PTO Requests* folder in Human Resources.

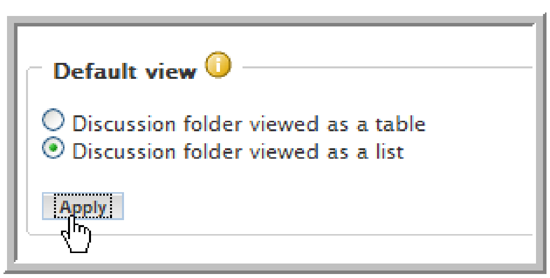
2 Select the *Manage > Configure* menu item.



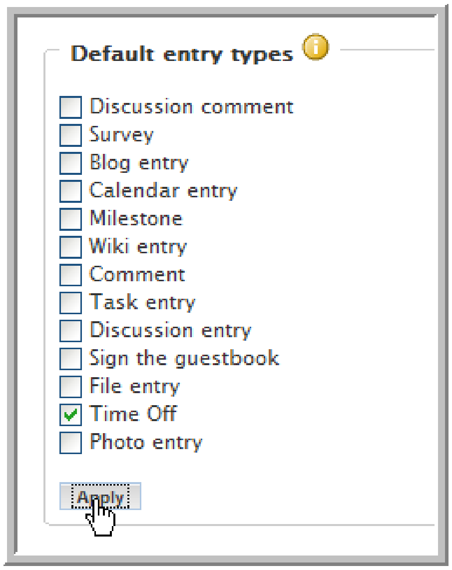
3 Under *Allowed Views*, select the *Discussion folder viewed as a table* and *Discussion folder viewed as a list* options (deselect any others) and click *Apply*.



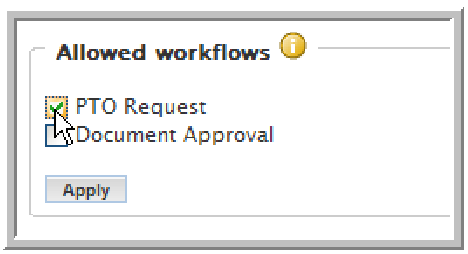
4 Under *Default view*, select the *Discussion folder viewed as a list* option and click *Apply*.



5 Under *Default entry types*, select the *Time Off* entry type (deselect any others) and click *Apply*.

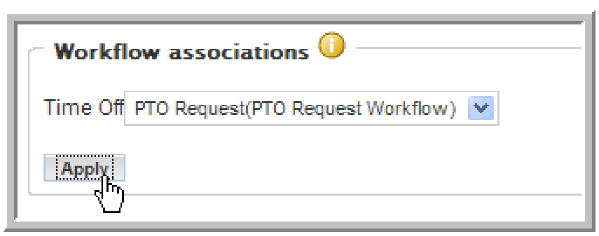


6 Under *Allowed Workflows*, select the *PTO Request* option.



7 Click *Apply*

8 Under Workflow associations, select PTO Request from the Time Off drop-down list and click *Apply*.



NOTE: A drop-down list appears for each *Default entry type* you select. When you use a drop-down list to select a workflow process, that process begins automatically whenever a user creates an entry of that type.

---

9 Click *Close*.

Users can now only enter *Time Off* entries in this folder, which automatically triggers the *PTO Request* workflow process.

Advanced Workflow

4

This chapter expands the workflow design in the previous chapter (using ICEcore's Advanced Workflow add-on module) to more closely match the needs of a typical production-ready system, (for example, using questions).

In the workflow designed in Chapter 3, "Creating a Basic Workflow Process," on page 19, ICEcore considers only one fact when determining if an entry's state should change: did someone transition the entry manually?

NOTE: You need to have purchased the Advanced Workflow add-on module to perform any transitions in your workflows besides manual transitions.

Despite the power of manual transitions, there are many times when a business process calls for a more complex set of conditions, such as when someone adds a reply to a question in the entry, or when a certain number of days have passed without a transaction occurring.

In many complex transition scenarios, it can be helpful to define a workflow question for your process.

What's in this Chapter?

This chapter provides instructions for creating questions within workflows and for configuring state transitions based upon responses to the workflow question, which appears when the entry is in a specific state:

NOTE: A workflow question allows the workflow process to use a set of answers to determine whether and how an entry should transition.

4.1 Adding a Question to the Workflow

NOTE: A question can be specific to one state. As another option, you can define a global question, which you can then associate with any number of states; this is helpful when multiple states require the same question and answer set. Each state can have only one associated question.

For example, consider the following table:

Condition	Causes the work to transition to…
The employee enters a PTO Request.	Submit
The manager indicates receipt.	Review
The manager approves the request.	Approve
The manager denies the request.	Deny
HR has entered the approved vacation	Record

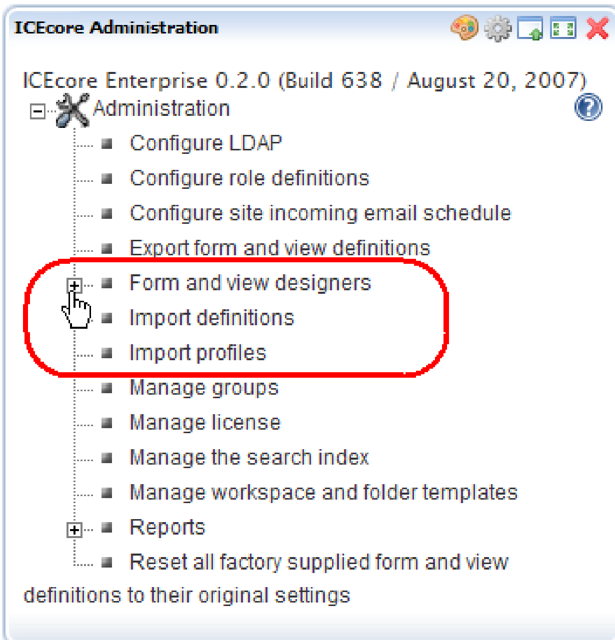
When reviewing the conditions table, look for conditions that can be automated. For example, the third and fourth items are excellent examples of conditions that can be determined automatically using workflow tools.

For example, you can alter the implementation of the *PTO Request* workflow, so that the manager's answer to a workflow question determines if a request is *Approved* or *Denied*. Given the design of the *PTO Request* workflow, the workflow question should appear to the manager in the *Review* state.

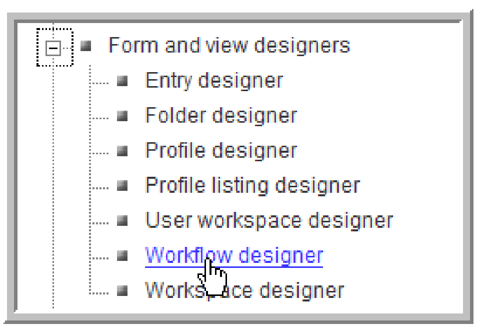
To add a Workflow Question and Responses to the Review State:

NOTE: The *Transition out of this state* access control determines who can view a Workflow question in a given state (see Section 3.2.2, “Set Access Rights,” on page 32).

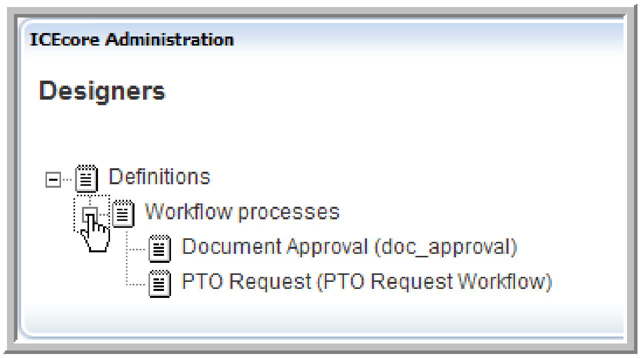
1 From the *ICEcore Administration* portlet, click the plus sign (+) to the left of *Form and view designers* to expand this section and view the available designers.



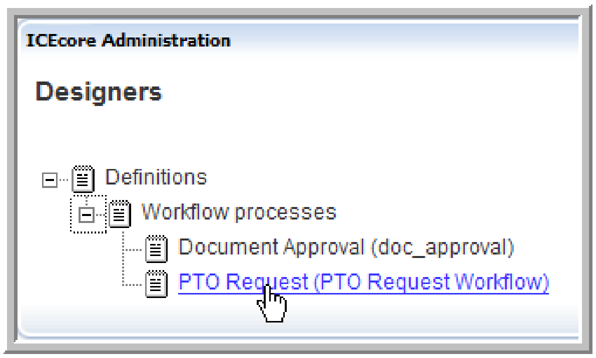
2 Click *Workflow designer*.



3 Expand *Workflow processes*.

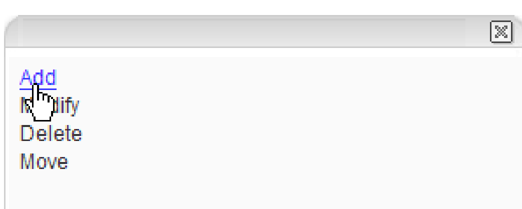


4 Click *PTO Request*.

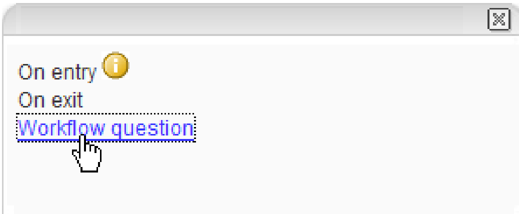


5 Expand *Workflow process* and click *State - Review*.

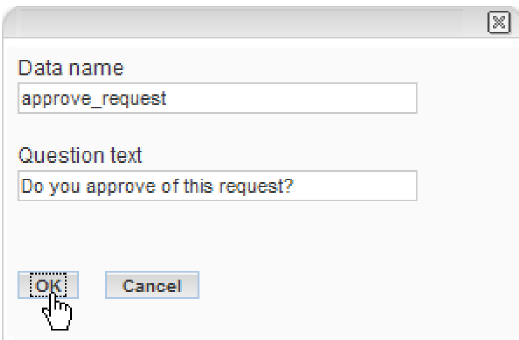
6 In the options dialog on the right, click *Add*.



7 Click *Workflow question*.

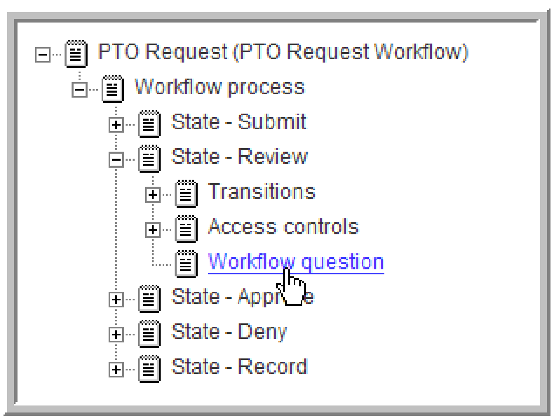


8 Type in the *Data name* (`approve_request`) and the *Question text* (`Do you approve of this request?`) and click *OK*.

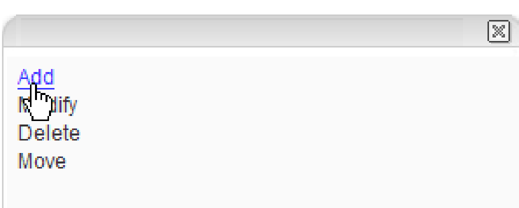


The *Workflow question* process appears below the *Review* state.

9 Click *Workflow question*.

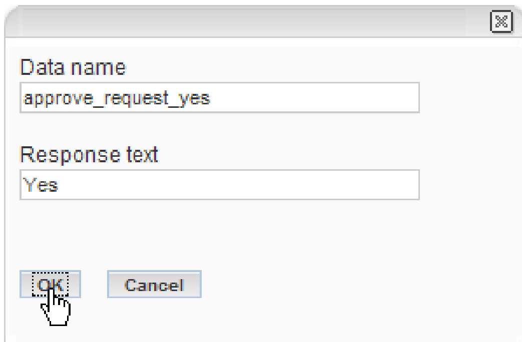


10 Click *Add*.



11 Click *Workflow response*.

12 Type in the *Data name* (`approve_request_yes`) and the *Response text* (`Yes`) and click *OK*.



The *Workflow response* is added below the *Workflow question*.

13 Repeat steps 9-12 to add a "`No`" response to this *Workflow question*.

4.2 Adding Transitions on Response

IMPORTANT: For the entry to transition to another state based on participants' responses to the workflow question, the responses must be associated with the new non-manual response transitions.

The following sections describe how to add response transitions and remove the manual transitions:

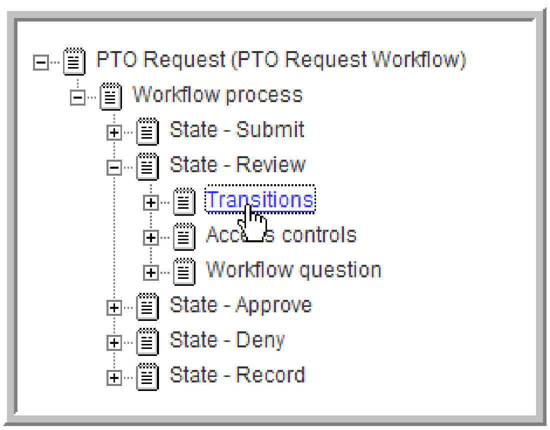
- Section 4.2.1, "Add the Response Transitions," on page 50
- Section 4.2.2, "Removing Older Transitions," on page 52

4.2.1 Add the Response Transitions

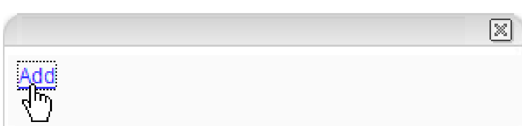
The question, "Do you approve of this request?" has two possible responses. To implement our design, both of the responses must have an associated transition.

NOTE: The *Transition out of this state* access control determines who can view a Workflow question in a given state (see Section 3.2.2, "Set Access Rights," on page 32).

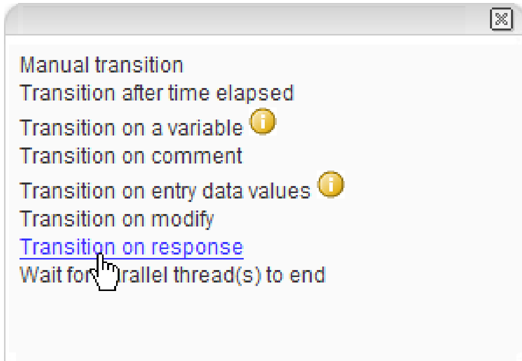
1 Expand *State - Review*.



2 Click *Add*.



3 Click *Transition on response*.



NOTE: Only the Manual transition option is available for basic workflow. All other transition types are part of the Advanced Workflow add-on module.

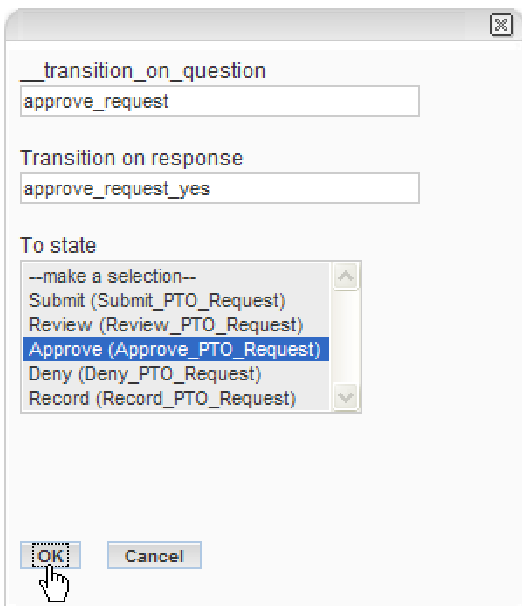
---

4 In the *__transition_on_question* field, type in the *Data name* for your *Workflow question* (`approve_request`).

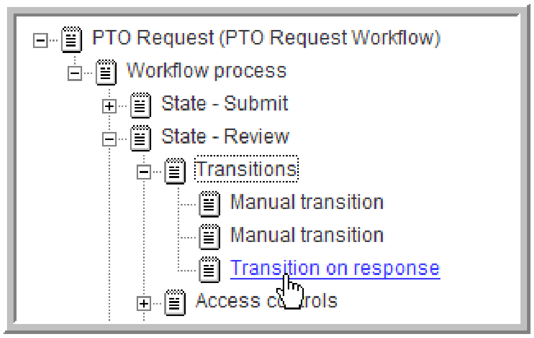
5 In the Transition on response field, type in the *Data name* for your *Workflow response* (`approve_request_yes`).

6 In the *To State* drop-down list, select the state to which you are transitioning (`Approve`).

7 Click *OK*.



The new *Transition on response* process is added under *Transitions*.



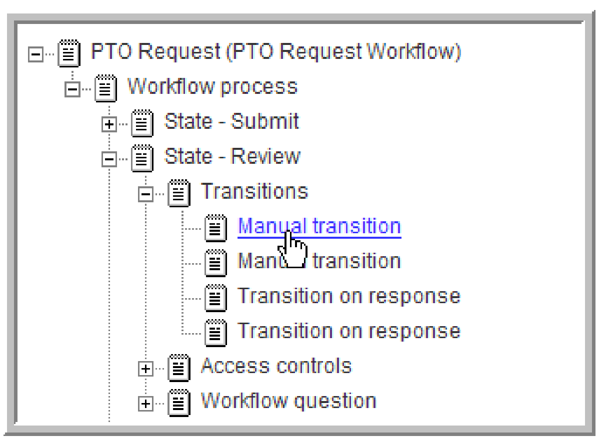
8 Repeat this procedure to add a *Transition on response* for the “No” *Workflow response* (`approve_request_no`) that transitions to the *Deny* state.

4.2.2 Removing Older Transitions

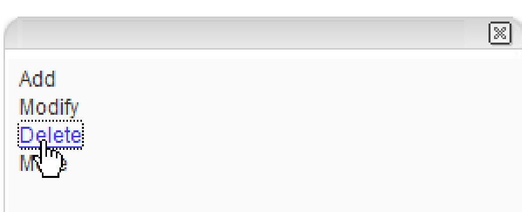
The creation of the Transition on response processes renders the existing manual transitions unnecessary.

To Remove Manual Transitions:

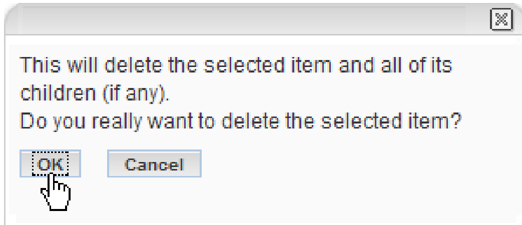
1 Under *State - Review* > *Transitions*, click the first *Manual transition*.



2 In the options dialog on the right, click *Delete*.

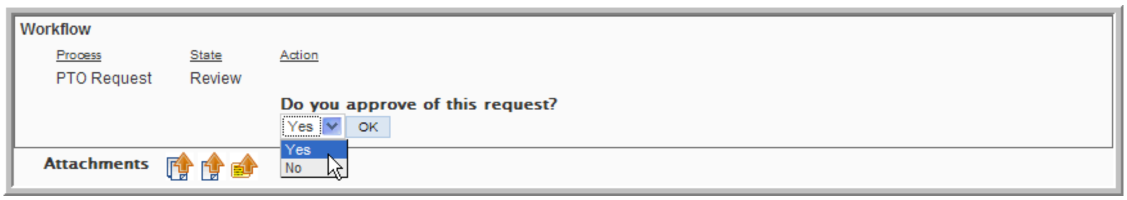


3 In the confirmation dialog that appears, click *OK* to delete the *Manual transition*.



4 Repeat this procedure to delete the remaining *Manual transition* for the *Review* state.

The Workflow section of an entry in the *Review* state now shows the question and answers for those users with the correct access rights (*Managers*).



ICEcore Glossary

Items that include an “(a)” are more relevant for ICEcore site administrators.

access control
The tool that determines who has the right to perform which tasks in which places. See also role-based access control.

accessibility mode
An optimized user interface that facilitates use by assistive devices, such as readers.

accessory
A section located at the top of a workspace or folder page that provides a summary view, most likely of the information contained within the item. For example, an accessory can show all of the entries within a folder authored by someone designated as a subject-matter expert.

advanced search
Extra search tools that allow you to specify more specific criteria (such as the author of an item or restricting the search to a portion of the workspace tree).

alias
See e-mail alias.

attachment
A file attached to an entry.

author
The person who created an entry.

blog
A folder contain a chronological listing of journal entries.

blog archive
A feature of blog folders that allow you to see entries authored in a specific month.

buddy list
A list of people whose presence you want to check and whom you contact frequently.

calendar
A folder containing entries for scheduled appointments.

clipboard
A tool that gathers people’s names. Later, when using a tool that requires names, you can take them from your clipboard.

comment
A reply to an entry.

community tag

A keyword tag applied to an item by the owner of a workspace or folder. Other users of the workspace or folder can perform searches based on community tags.

configuration (a)

A set of tools that alter the way item content is presented. There are many types of configuration, ranging from setting allowable views for an item, selecting a color scheme, creating custom entries, and creating workflow processes.

default view

The configuration of the information you see when you first view a workspace or folder. Some items may be configured to allow alternate views, which you can select.

definition (a)

A set of elements for both the form and view of a workspace, folder, or entry.

designer (a)

A tool used to create definitions or workflow processes.

discussion

A folder whose entries are discussion topics and comments about those topics.

e-mail alias

An alternative e-mail address for an e-mail account. To enable e-mail posting into a folder, you must provide an e-mail alias for the one account used to post into all folders in your ICEcore installation. Consult with your ICEcore site administrator for further assistance; site administrators, consult with the IT person responsible for creating e-mail accounts to create new aliases.

e-mail notification

An e-mail message that ICEcore sends indicating new or changed entries in a folder (and subfolders).

entry

An item in a folder.

favorites panel

A tool used to save links to workspaces and folders most important to you, providing a method of accessing these places quickly.

file folder

A folder whose entries are configured to highlight an attached file and to facilitate file management.

filter

A setting that limits a folder listing to only the entries that match the filter's search criteria. For example, you can create a filter that shows only the contents of a folder authored by you or that were created past a certain date.

folder

A container for entries and other folders. Each folder has a type, such as blog, wiki, or calendar, that determines its appearance and features.

form (a)
An HTML form used to create a workspace, folder, or entry.

global workspace
workspace that, by default, allows everyone to participate.

guestbook
A folder or accessory whose entries indicate who has visited the place.

help mode
A dimmed page and information icons (“i”). When you click on an information icon, ICEcore presents a panel of information about that section of the page.

inherit (a)
A process by which a workspace or folder automatically uses configuration settings from its parent.

instant message (IM)
A quick communication between teammates using the Zon messaging software.

Liferay (a)
The portal software within which ICEcore runs by default.

meeting
An online communication by teammates using the Zon messaging software. Zon provides tools that assist with online meetings, such as people designated as running the meeting, a way for participants to “raise their hands,” and a whiteboard.

milestone
A folder that, by default, summarizes the status of tasks in a task folder as they relate to meeting project milestones.

navigator
A set of tools that you can use to go anyplace within ICEcore you want to go. The tools include “My workspace,” “Favorites,” viewing your teams, search, Help, and a workspace tree.

owner
The person who created the workspace, folder, or entry.

parallel workflow process (a)
A set of state transitions that happen at the same time as other state transitions. A state in the main thread initiates the parallel process, and a state later in the main thread can wait for the completion of the parallel thread.

parent (a)
A workspace or folder that contains another workspace or folder. The item contained within the parent is sometimes called its child.

participant
An access role that, generally, by default, allows people to author entries in a folder.

permalink

A web address (URL) for an ICEcore workspace, folder, or entry that you can copy, paste, and send to a teammate so that they may access a page directly by specifying the address to their web browser.

personal tag

A keyword tag that you apply to an item, and that only you can see and use.

personal workspace

A workspace that serves as a person's homepage in ICEcore, including contact information, pictures, a personal blog, and more.

photo gallery

A folder whose entries are pictures.

portal page

A web page that can run various application in sections of its page. For example, Google and Yahoo use portal pages. Sections within a portal page may display the local time, the local weather, your favorite stock quotes, and more.

portlet

A section on a portal page. ICEcore runs in portlets.

presence

The state of being connected to a communications service and available for communication. Presence information is indicated by status icons (Online, Away,

project-management workspace

A workspace configured to facilitate the tracking of tasks and completion of complex project work.

role-based access control

A mechanism that controls access by assigning people and groups to roles, and the roles determine the rights assigned to those people. See the online Help for a list of ICEcore default role definitions.

site administrator

The person or people who have the right to perform any task anyplace in the ICEcore installation.

state

See workflow state.

subscription

A way to track new or changed items in ICEcore.

tag

A keyword that anyone can apply to a workspace, folder, or entry to make it easier to find. See also personal tag and community tag.

task

A folder that, by default, contains entries that track progress with completing an assignment.

team

An access role that, by default, allows people to participate in a workspace or folder, to do some minor administrative tasks, and to communicate easily with each other.

team workspace

A workspace that restricts participation to only teammates.

template (a)

A set of default configuration settings used to create a new workspace or folder. A template includes at least one definition, access control, a possible hierarchy of defined items, and possibly more.

view

A presentation of an item's content. For example, you can view a discussion folder in either a list or table format. By default, most folders use one view (calendar folders use a calendar view, blog folders use a blog view, and so on.)

visitor

An access role that, by default, allows people to read entries and make comments on them (but not create new entries).

WebDAV

The Web Distributed Authoring and Versioning protocol. If your system provides a tool that uses this protocol, it allows you to manage ICEcore file-folder entries using the WebDAV window.

wiki

A folder whose entries are authored by all participants.

workflow

An online representation of a business process (for example, document review, paid time-off requests, document sign off, and so on). An entry can have an associated workflow process, which places the entry into various workflow states.

workflow state

A status label for an entry in a workflow process. A state determines who has the right to work with an entry (including who may see it), who needs to be notified, who needs to perform the next task, and which subsequent states are possible.

workspace

A container for folders and other workspaces.

workspace tree

A tool that allows you to navigate the hierarchy of workspaces, subworkspaces, folders, and subfolders within ICEcore.