**NetResults ProblemTracker**

# Administration Guide Help Topics

**NetResults ProblemTracker**

# Administration Overview

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Admin

Welcome to Administration Guide for **NetResults ProblemTracker**.

This guide provides information about customizing and maintaining your ProblemTracker system. Topics such as user administration, email and workflow configuration settings within each workgroup (database) are covered in this guide. Information on installation and security are provided in the Installation Help Guide.

ProblemTracker is available in two versions: **ProblemTracker** and **ProblemTracker Enterprise Edition**. ProblemTracker Enterprise Edition includes all of the features of ProblemTracker plus some additional features such as Alerts, Discussions, and the Inet Page to provide improved support for enterprise wide use.

Prior to using the operations described in this guide, you should create a new workgroup using the information in the Workgroup Management System Guide. The Workgroup Management System is the central interface for creating multiple workgroups within your ProblemTracker system.

Click here for the ProblemTracker User's Guide. Typical operations done by end users are covered in this guide.

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# Administration Guide Glossary

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## Glossary of Terms

Click on the term to read more about it within the Help section listed to the right.

- Add (Define Record) - Customizing the Data Record
- Add (Edit User Group) - User Administration - Privileges
- Add Attachments via Add Page - User Administration - Privileges
- Add Item - Customizing Menu Values
- Add New Group - Workflow Properties
- Add Notification - Email Notification Preferences
- Add State - Workflow States
- Add Transition - Workflow Transitions
- Add User - User Administration - Users
- Admin (Navigation Bar button) - Admin Overview
- Admin (Privilege) - User Administration - Privileges
- Alerts - Alerts
- All - Customizing the Data Record
- Available Users to Add - User Administration - Users
- Background Color - Customer Bug Page
- Banner Background Color - General Preferences
- By default include "Group" Users for Record Visibility... - General Preferences
- Can be Assignee for Add - User Administration - Privileges
- Character Set - General Preferences
- Check DB Values - Customizing Menu Values
- Configure Field Visibility for - User Administration - Groups
- Copy Field Value for Next Add - Customizing the Data Record
- Custom HTML (Bottom of Page) - Customer Bug Page
- Custom HTML (Top of Page) - Customer Bug Page
- Customer Bug Page - Customer Bug Page
- Database Type - General Preferences
- Date Delimiter - User Preferences

- Date Format - User Preferences
- Default State - Workflow Properties
- Define Record - Admin Overview
- Define Workflow - Admin Overview
- Delete (Notification) - Email Notification Preferences
- Delete (Privilege) - User Administration - Privileges
- Delete (Transition) - Workflow Transitions
- Delete All Records - Permanently Deleting Multiple Records
- Delete State - Workflow States
- Dependent Pulldowns - Customizing Pulldown Menu Dependencies
- Discussion - Discussion
- Display Order Button in Top Bar - General Preferences
- Edit (Define Record) - Customizing the Data Record
- Edit (Notification) - Email Notification Preferences
- Edit (Transition) - Workflow Transitions
- Edit Attachments (Privilege) - User Administration - Privileges
- Edit Fields (Privilege) - User Administration - Privileges
- Edit Groups - User Administration - Groups
- Edit Items - Customizing Menu Values
- Edit Query Result Set - User Administration - Privileges
- Edit Record Visibility - User Administration - Privileges
- Edit Source Code List (Privilege) - User Administration - Privileges
- Edit State - Workflow States
- Edit User - User Administration - Users
- Email Configuration - Admin Overview
- Email Header Encoding - General Email Configuration
- Enable File Attachment - Customer Bug Page
- Enable Record Level Security - General Preferences
- Enable Session Locking with Administrator Override - General Preferences
- Enable Source Code Control Integration - General Preferences
- Field Visibility - User Administration - Groups
- From Email Account - General Email Configuration
- General Preferences - Admin Overview
- Group Level Field Visibility - Customizing the Data Record

- Groups - User Administration - Groups
- Help (Privilege) - User Administration - Privileges
- History (Privilege) - User Administration - Privileges
- History Comment Required - Workflow Transitions
- In Use - Customizing the Data Record
- Include in Inet Page - Customizing the Data Record
- Inet Page Options - Admin Overview
- Item Dependencies - Customizing Menu Values
- Item Label - Customizing Menu Values
- Label - Customizing the Data Record
- License Type - User Administration - Users
- Limit Record Visibility to a Users Own Groups - General Preferences
- Load Default Values - Setting Notification Preferences
- Load Defaults - Workflow Properties
- Logoff (User Sessions) - User Administration - User Sessions
- Maintenance - Admin Overview
- Maximum Records per page - User Preferences
- Multi Part Email - General Email Configuration
- New Assignee - Workflow Transitions
- New State - Workflow Transitions
- None - Customizing the Data Record
- Not In Use - Customizing the Data Record
- Not Visible - User Administration - Groups
- Options Menu - Admin Overview
- Order (Pulldown Menu Options) - Customizing Menu Values
- Order (Transition) - Workflow Transitions
- Order (Workflow State) - Workflow States
- Override Record Level Security - User Administration - Privileges
- Parent Pulldown - Customizing Pulldown Menu Dependencies
- Password - User Administration - Privileges
- Path to srcsafe ini file - General Preferences
- Path to ss exe file - General Preferences
- Query (Privilege) - User Administration - Privileges
- Record Order - Customizing the Data Record

- Related to Parent menu items - Customizing Menu Values
- Remove - Customizing the Data Record
- Remove Records from Database on "Delete" operation - General Preferences
- Required - Customizing the Data Record
- Reset (Notification) - Email Notification Preferences
- Restrict Task Operation to Current Assignee - General Preferences
- Save Group Queries - User Administration - Privileges
- Save Group Report Formats - User Administration - Privileges
- Send Email - Admin Overview
- Sender Email Account - General Email Configuration
- Set Default - Customizing Menu Values
- Set Default Email Preferences - Setting Notification Preferences
- Set Email Preferences - Setting Notification Preferences
- Set Global Email Options - Setting Notification Preferences
- Set Server Configuration - General Email Configuration
- SMTP Email Server - General Email Configuration
- Sort Order - Customizing the Data Record
- Source Code Control Product - General Preferences
- State Name - Workflow States
- State Groups - Workflow Properties
- Task (Privilege) - User Administration - Privileges
- Task Fields - Customizing Workflow
- Time Format - User Preferences
- Transition Label Style - Workflow States
- Transition Name - Workflow Transitions
- Transitions - Workflow Transitions
- Truncate Text and TextArea fields - Setting Notification Preferences
- User Administration - Admin Overview
- User ID - User Administration - Privileges
- User Preferences - User Preferences
- User Sessions - User Administration - User Sessions
- Value is Public - Customizing Menu Values
- View Attachments (Privilege) - User Administration - Privileges
- View Fields (Privilege) - User Administration - Privileges

- View Record History (Privilege) - User Administration - Privileges
- View Source Code List (Privilege) - User Administration - Privileges
- View User Information (Privilege) - User Administration - Privileges
- Visible - User Administration - Groups
- Workflow Properties - Workflow Properties

## Overview

This section discusses general issues related to tracking defects, and how these issue are addressed by ProblemTracker features. If you are not familiar with defect tracking, or do not have a particular development process in mind, this section can serve as a good general introduction to the subject and starting point for customizing ProblemTracker to your needs.

## Defect Tracking

Defect tracking is the process by which a company accepts change requests to a product (could be a bug report, a feature enhancement, etc.) and handles each request across multiple organizations (Development, QA, etc.) each of which must perform some task to complete the handling of the change request.

Some key issues in designing an effective defect tracking process are:

**Data Record**
What data must be kept to allow the request to be correctly and completely processed?

**Workflow**
What steps are required to process the request, and what organizations should be assigned responsibility for each step? What data must be entered at each step?

**Notification**
At each step, who should the request be assigned to for processing, and who should be notified of significant events?

**Security**
How trusted is each user of the system? What operations are required at each step of the process?

A successful defect tracking process answers these questions and describes a life cycle for each request such that every request is accounted for and all requests are processed as required by the needs of the organization. ProblemTracker is an application that provides the framework for implementing such a process in an organization.

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# The Data Record



Each change request is processed by several individuals, each requiring some information to perform their task. ProblemTracker creates a data record for each request entered into the system. This record allows the organization to keep all the information related to the request in a central location, and perform searches over all the data to look up particular records.

An important activity in designing the defect tracking process is identifying what information will be required for the data record. ProblemTracker provides the following fields for every record:

**Record Number**
Unique numeric identifier for the record.

**Product**
The product that the request is for.

**Status**
The current state of the record in the defect tracking process (workflow)

**Assignee**
Person who the record is currently assigned to.

**Reporter**
Person who entered the record.

In addition to these required fields, you can customize the data record with your own fields. It is recommended that you identify the organizations involved in your process and obtain a list of data required by each to determine what fields should be included the data record.

ProblemTracker allows you to use the following data types:

**Integer**
An integer numeric value.

**Float**
A floating point number.

**Text**
A text string up to 80 characters.

**TextArea**
A very large text string. The maximum size determined by the amount of data supported by the TextArea type

on your web browser, and the particular database in use.

**Url**
A 255 character string that is a valid formatted URL.

**Date**
A string of the format MM/DD/YYYY HH:MM:SS AM/PM (US Default). ProblemTracker may also be configured to use the '-' and '.' delimiters as well as the "DD MM YYYY" and "YYYY MM DD" format for the date representation portion of this string. ***Please note that the usage of the alternative date formats is dependent on the localized settings for the database in use. Make sure your localized database settings accept the selected alternate format prior to entering your date/time strings.***

**Pulldown**
A pulldown menu. You can customize all values in the menu.

**Release Number**
A combination of four pulldown menus. You can customize all values in the menu.

**YesNo**
A pulldown with the values Yes and No.


Customization of the data record is performed by clicking on the **Admin** icon in the Button Bar and then clicking on the **Define Record** button. Detailed information about creating your data record can be found in the Customizing the Data Record Help section.

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# Workflow



## Overview

Central to a defect tracking process are the states that define the process. Each state encompasses its own rules regarding what action must be taken, by what individual, what data is involved, and where the request should go next within the process. The states and the behavior and rules associated with them are collectively called the workflow.

## States and Transitions

In general, a state in the process can be defined as one or more actions that must be performed in a serial fashion by a single individual. In most cases, it will be a single task that must be performed by team member, for example, a developer must fix a bug, or a QA engineer must test a bug fix. By identifying the tasks that must be performed to process a request, you will have a good starting point for defining your workflow.

Once the states have been identified, you must determine the order in which they occur, and whether there are points where a record could be returned to a previous state. This information defines the state transitions. In the simplest case, the states are arranged in a single linear order, where at each point in the workflow, the only option is to cause the request to move to the next defined state. However, in some cases you may wish to give an individual the choice to move the record to one of several possible states. This is called *branching*. Branching from one to several possible states is useful in cases where an individual is entrusted with this decision making capability.

ProblemTracker allows you to define any number of states in your workflow, and also optionally an unlimited number of transitions to and from each state.

Admin To add, remove, or edit a state in the workflow, click on the **Admin** icon in the Button Bar and then click on the **Define Workflow** button. Detailed information on configuring your workflow can be found in the Customizing Workflow Help section.

## Transition Data

Another important issue is determining what data should entered by a user when they have completed their assigned task. This information is kept in the data record, and generally is either used to process a state further down the workflow, or to log information about how the user completed the task.

Rather than just present the entire data record for editing to the user when marking the task complete, only the necessary information should be presented. This eliminates the need for each user to know what fields are important for each state transition. ProblemTracker allows this via the Task operation. This operation presents the user with only the fields defined for the particular state transition, and automatically changes the record state.


To define the set of fields to present for each state transition:

1. Click on the **Admin** icon on the Button Bar
2. Click on the **Define Workflow** button
3. Click on the **Transitions** button to the left of the desired state on the list in the Define Workflow section
4. Each transition listed for the state has a Task Fields button. Click on the **Task Fields** button to define the set of fields to present for each transition.

More information about Transitions and Task Fields can be found in the Workflow Transitions Help section.

Note that if all users are sophisticated enough to understand the entire workflow, it may be acceptable or preferable to have all users to mark a task complete by using the Edit operation instead, as this allows full access to all fields of the data record.

## Transition Assignments

One final issue related to workflow is who should be assigned to each state. On a state transition it may be desirable to automatically assign the record to either a particular individual, or to a manager who will then assign it to particular individual.

There are many options available to choose from when determining your workflow. For example:

**Option 1 - Assign to individual**
Choosing to automatically assign a record to a particular user on a state transition has the advantage that no manager intervention is required, and the record becomes the user's responsibility as soon as possible. However, it does not allow for flexibility in scheduling resources - for example if you have several individuals who are capable of handling the task, only one of them can be assigned the job under this scheme.

In addition to choosing a specific user as the assignee, you can choose a new assignee from a list of users that are members of a particular user group (such as the "Developers" group), assign the record to the "Reporter" (the user who added the record), or allow users to assign records to themselves (e.g. you can set up a "queue" in ProblemTracker to allow users to pick up records from the queue and assign the record to his or herself).

**Option 2 - Assign to manager**
Assigning to the manager responsible for the state means that a manager must manually assign the record to another user for completion. This allows the manager to allocate resources more dynamically. One drawback to this scheme, is that it is difficult for someone to determine if the record is waiting to be assigned for completion, or if it has been assigned and is in the process of being handled.

**Option 3 - Assign to manager using a state**
Another option is to define a separate state for the task of assigning the record to an individual for processing. That is, when a task is marked complete, it is assigned to a new state with a particular manager. The only task associated with the state is for the manager to assign it to somebody, at which point it moves to the state associated with actually handling the work. For example, rather than a single state called "Scheduled" which covers both assignment and completion of the task, you might define two states called "Scheduled" and "In Development". In this case the "Scheduled" state only covers the assignment, while the "In Development" state

covers the actual work.

**Option 4 - Assign to last assignee for new state**

In some cases, you may want to assign a record to a user who was previously assigned to it in a state earlier in the workflow process. This option is useful in situations where an approval decision is made. For example, when a QA engineer has to verify a fix. If the fix cannot be verified, the QA engineer may need to move the problem record back to the state where the fix is completed and assign to problem record to the original developer who completed the fix.

ProblemTracker is flexible enough to support any of these options, as well as others not listed. A complete list of options can be found in the Workflow Transitions Help section.

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# Email Notification



An important aid to timely and smooth processing of the defect tracking process is automatic notification of events. Standard Internet email is the most widely accepted form of notification.

There are several events that could trigger notification:

- Adding a record
- Editing a record
- Deleting a record
- Performing the Task operation on a record
- Change of record state
- Change of assignment

For each of these events, a set of users may be affected. When a problem record is added, the following users may be interested:

- The user who is currently assigned to the problem record
- The user who reported the problem record
- The manager assigned to the state of the record when it is added
- User groups within your database

When an edit or task operation is performed on a problem record, the following users may be interested:

- The user who is currently assigned to the problem record
- The individual assigned to the record if the Assigned To field is changed during the Edit / Task operation.
- The individual who was the previous assignee if the Assigned To field is changed during the Edit / Task operation.
- The individual who reported the problem record.
- The manager assigned to the process state of the record when the Edit / Task operation is performed.
- The manager assigned to the new process state of the record if the State field is changed during the Edit / Task operation.
- The manager assigned to the previous process state of the record if the State field is changed during the Edit / Task operation.
- User Groups within your database

When a problem record is deleted, the following users may be interested:

- The individual who is currently assigned to the record.
- The individual who reported the problem record.
- The manager assigned to the process state of the record when it is deleted.
- User Groups within your database

On a change of record state, the following users may be interested:

- The individual who is currently assigned to the record.
- The individual who reported the problem record.
- The manager assigned to the new process state.
- The manager assigned to the original process state.
- User Groups within your database

On a change of record assignment, the following users may be interested:

- The individual the record is being assigned to.
- The individual the record was assigned to before the change of assignment.
- The individual who reported the problem record.
- The manager assigned to the current process state of the record.
- User Groups within your database

Determining which users and under what events notification should occur is really a trial-and-error process, determined by the personal working habits and preferences of users of the system. The issue should be discussed and tested with the users in your organization until consensus is reached on the desired behavior.


Email Notification Preferences can be customized by clicking on the **Admin** icon in the Button bar, then clicking on the **Email Configuration** button. Details on setting your email preferences can be found in the Email Configuration Help section.

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# Security

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The basic purpose of security is to limit access to a resource on a per user basis. Resources may either be operations, or data. For example, you may wish to restrict some users from editing records, and other from viewing only certain records.

When used to limit access to operations, security can help to ensure that the desired workflow chain is maintained. For example, by removing the option to edit all fields in the data record, users can be prevented from mistakenly entering the wrong information or altering previously entered information.

Security can also be used to help protect data, allowing only select groups of individuals to operate on particular records. This is useful if you wish to prevent a group of users from viewing records that are of no concern to them, for example customers or users working on different projects.

ProblemTracker allows you to set security for both operations and data using a User Group security model similar to that used by Microsoft Windows NT. You can create any number of user groups and assign access to operations and other privileges to each group. Individual users can then be assigned to groups. Being a member of a group means that you obtain all the rights and privileges assigned to the group. For example, to be able to access the Admin operations, you must be a member of a group(s) that has the Admin privilege assigned to it.

In addition, when you create a record, you can selectively make it visible to any group of which you are a member using the Record Visibility feature. All other groups will not be allowed access to the record.

Admin Information on customizing user group privileges can be found in the Privileges Help Section. The Record Visibility feature is discussed in the General Preferences section.

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# Putting It All Together

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Once you have determined how to handle the issues involved in a defect tracking process, you can implement it. There are many ways to do this, two of the largest challenges being maintaining the request information, and dissemination of the current state of the process to the individuals involved in making it happen.

ProblemTracker provides a framework to implement your defect tracking process, and in many ways can be thought of as a programmable general workflow engine. All the states, rules, and individuals that as a whole define your process can be entered into ProblemTracker. ProblemTracker makes it easy for all your users to follow the correct process and access real-time information about the state of any record in the system.

The following sections discuss in some detail the sample templates provided with ProblemTracker and the issue tracking process supported by each:

Software Development

Web Site Development

Knowledge Base

Help Desk

Support

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# The Software Development Template



## Overview

The Software Development template supports a typical software development process. Typical of this process is the bundling of numerous bug fixes into a particular software release. This model assumes the follow organizations are involved in the defect tracking process:

**Development**
Responsible for performing development tasks necessary to handle the request.

**QA**
Verifies that the request has been successfully implemented by the Development organization.

**Build**
Places the updated files into the final product package.

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## Data Record

The data record contains the following fields. Note that you can customize the database by adding to or removing fields, or changing any pulldown menu values. Field names with an asterisk are required by the system and cannot be removed from the data record.

| | |
|---|---|
| **PRN*** | Numeric record identifier. Assigned at the time the record is created. |
| **Title** | A one line text summary of the issue being reported. Set at the time the record is created. |
| **Product*** | Identifies the product for which the record has been reported. Set at the time the record is created. |
| **Platform** | Describes the hardware or software platform where the issue occurs. Examples are the operating system (e.g. Windows 95), or the CPU (e.g. Intel Compatible). Set at the time the record is created. |
| **Reported In Version** | Version number of the product where the issue occurs. Set at the time the record is created. |
| **Request Type** | Classifies the record. Possible values are: Bug, Contract Requirement, Customer Feedback, Customer Problem, Enhancement. Set at the time the record is created. |
| **Severity** | Describes how serious the problem is. Set at the time the record is created. |
| **Description** | Full description of the problem. Ideally describes the nature of the problem and how to reproduce the behavior. Set at the time the record is created. |

| | |
|---|---|
| **Reported By*** | Name of the user that reported the problem. Initially set to the name of the current user logged in. Set at the time the record is created. |
| **Date Reported** | The date the record was created. Automatically initialized, and set at the time the record is created. |
| **Workaround** | Describes how to work around the reported problem. Set at the time the record is created. |
| **Status*** | Current state of the record. Changes as the record is processed through the workflow. |
| **Substatus** | Describes the condition of the record in the current state. Possible values are: None, In Progress. Optionally set by each user while processing the record. |
| **Assigned To*** | User the record is currently assigned to for processing. Set either manually or automatically during processing of the workflow. |
| **Estimated Size** | Used to enter an estimated amount of time it will take for a developer to fix the problem. |
| **Planned for Version** | Identifies the release number of the product in which the fix for the issue is planned to be included. |
| **Released in Version** | Identifies the release number of the product that the fix for the issue will be included in. |
| **Fix Date** | Date when the issue was fixed. Set by Development when the problem is fixed. Automatically initialized to the current date/time. |
| **Fix Detail** | A Description of the action taken by a developer to fix the problem. Set by Development when the problem is fixed. |
| **Test Date** | Date when the fix was tested. Set by QA when the fix for the problem is tested. Automatically initialized to the current date/time. |
| **Test Description** | A Description of the action taken by a QA Engineer to test the fix. Set by QA when the fix for the problem is tested. |
| **Priority** | Describes the relative importance of handling this record compared to other records entered in the system. |
| **Close Date** | Date when the record was closed. Set by Process Manager when no development work will be done for the record. Automatically initialized to the current date/time. |
| **Close Detail** | A Description of the reason a record will be closed. Set by Process Manager when no development work will be done for the record. |
| **Defer Reason** | Describes the reason a record will not be worked on until a later date. |
| **Duplicate Record #** | Lists the record number of another previously-entered record in the database which describes the same problem. |
| **Deleted*** | Denotes whether the record has been deleted. |

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## Workflow

It is assumed that records will be processed and moved through the workflow process by using the Task operation. The workflow implemented by the Software Development template is as follows:

1. **State 1 - Reported**
   When a record is created, it is set to the state Reported and assigned to the Process Manager (process_mgr). It is assumed that the Process Manager is responsible for looking at all incoming records and deciding how to process each record from a list of possible workflow paths. The Process

Manager can choose one of the following:

- Start the process for the record by selecting the transition called **Schedule**. This transition will assign the record to the Development Manager (dev_mgr) and place the record in the Scheduled state. The Process Manager can also enter a Planned for Version and Priority for the record when choosing this transition.

- Defer the processing of the record by selecting the transition called **Defer**. This transition will place the record in the Deferred state and assign it to the state manager of that state (process_mgr). The Process Manager can review deferred records at a later time and decide whether processing will resume. The Process Manager must enter a Defer Reason and has the option of entering a Planned for Version when choosing this transition.

- Close the record by selecting the transition called **Close**. This transition will place the record in the Closed state and assign it to TBD (no one - since this record will not be processed any further). The Process Manager will be required to enter a date in the Close Date field and enter a reason the record was closed in the Close Detail field.

- Mark the record as a duplicate of another record by selecting the transition called **Mark Duplicate**. This transition will place the record in the Duplicate State and assign it to TBD (no one - since this record will not be processed any further). The Process Manager will be required to enter the record number of the original record that describes the same problem.

This is implemented by:

**Workflow Properties**

- Defining Reported as the Default Add State when a record is added
- Assigning the process_mgr user as the manager for the Reported and Deferred states
- Assigning dev_mgr as the manager for the Scheduled state

**Transitions**

- Defining transitions to move a record to the Scheduled and Deferred states where the assignee is the State Manager for each respective state.
- Defining transitions to move a record to the Closed and Mark Duplicate states where the assignee is TBD for each transition.

**Task Fields**

- Configuring Planned for Version and Priority to be presented as optional during the task operation for the transition to the Scheduled state.
- Configuring Defer Reason (required) and Planned for Version (optional) to be presented during the task operation for the transition to the Deferred state.
- Configuring Close Detail (required) and Close Date (read only and initialized) to be presented during the task operation for the transition to the Closed state.
- Configuring Duplicate Record # (required) to be presented during the task operation for the transition to the Mark Duplicate state.

2. **State 2 - Scheduled**
   The Development Manager (dev_mgr) is assumed to be a manager responsible for assigning tasks to the developers for resolution. The Development Manager uses the transition **Assign to Developer** to assign the record to a member of the Developers user group. This places the record in the In Development state. The Development Manager can also decide to defer a record by choosing the **Defer** transition, which will place the record in the Deferred state and assign it to the Process Manager (process_mgr).

   This is implemented by:

   **Transitions**

   - Defining a transition to move a record to the In Development state with the assignee to be chosen from a list of developers (User Group called "Developers")
   - Defining a transition to move a record to the Deferred state with the state manager as the assignee

   **Task Fields**

   - Configuring Defer Reason (required) and Planned for Version (optional) to be presented during the task operation for the transition to the Deferred state

3. **State 3 - In Development**
   The Developer (dev_one) assigned to the record makes the changes necessary to address the problem and marks the task complete by selecting the transition **Mark Fixed**. This transition allows the Developer to enter a description and date of the fix, advances the state of the record to Fixed, and assigns the record to the QA Manager (qa_mgr).

   This is implemented by:

   **Workflow Properties**

   - Defining the qa_mgr as the manager for the Fixed state

   **Transitions**

   - Defining a transition to move a record to the Fixed state where the assignee is the State Manager

   **Task Fields**

   - Configuring the Fix Date (read only and initialized) and Fix Detail (required) to be presented during the Task operation for the transition to the Fixed state. The Description field has been configured as a read only task field for the user to reference when selecting this transition.

4. **State 4 - Fixed**
   Once the record has entered the Fixed state, the QA Manager (qa_mgr) assigns the record to the QA Engineer (qa_one), a member of the QA user group, and advances the state to In Test by selecting the transition **Assign to QA Engineer**.

   This is implemented by:

   **Transitions**

   - Defining a transition to move a record to the In Test state with the assignee to be chosen from a list of QA Engineers (User Group called "QA")

5. **State 5 - In Test**
   The QA Engineer (qa_one) verifies that the issue has been resolved, and then uses the transition called **Mark Tested** to advance the record to Tested and assigns the record to the Build Manager (bld_mgr). If an issue has not been resolved and needs to be returned to Development, the QA Engineer can move the record back to the In Development state using the transition **Reject**, which will assign the record to the developer who worked on the record. For each of these possible paths, the QA Engineer enters information in the Test Date and Test Description fields.

   This is implemented by:

   **Workflow Properties**

   - Configuring bld_mgr to be the manager of the Tested state

   **Transitions**

   - Defining a transition to move a record to the Tested state where the assignee is the state manager
   - Creating a transition to move a record to the In Development state or <Previous State> where the assignee is the Last Assignee for the new state.

   **Task Fields**

   - Configuring Test Date (read only and initialized) and Test Description (required) to be presented during the Task operation for the transitions to the In Development and Tested states. The Fix Detail field is presented as a read only task field for the QA Engineer to reference when selecting this transition.

6. **State 6 - Tested**
   The Build Manager (bld_mgr) user is assumed to be the user in charge of packaging the product for release, and responsible for ensuring that all the desired fixes are included in the release. The Build Manager does what is necessary to make sure that the fix for the record is included in the release, enters the released in version for the record, then advances the state of the record to "Released" using the transition called **Release**.

This is implemented by:

**Transitions**

- Defining a transition to move the record to the Released state where the assignee is TBD. TBD ("no one") is selected since the release is the last step in the processing of the record.

**Task Fields**

- Configuring Released in Version (required) as a field to be presented during the task operation for the transition to the Released state. The Planned for Version field is presented as a read only task field for the Build Manager to reference when choosing this transition.

7. **State 7 - Released**
This state indicates that processing of the record is complete.

8. **State 8 - Closed**
This state indicates that the record will not be processed.

9. **State 9 - Deferred**
This state indicates the decision on whether or not to process the record has been deferred until a future date. The Process Manager can update a record in this state by using the transition called **Update**. The Update transition will keep the record in the Deferred state and assigned to the state manager (process_mgr). The fields Defer Reason and Priority are presented as optional fields during the task operation. The Process Manager is required to enter a history comment to describe what was changed within the record when using the Update transition.

The Process Manager can decide to begin processing a record by choosing the **Schedule** transition, which will place the record in the Scheduled state and assign it to the State Manager (dev_mgr). The Process Manager can set the Planned for Version and Priority fields when choosing this transition.

This is implemented by:

**Transitions**

- Defining a transition called Update with Deferred set as the New State, "Same Assignee" selected as the New Assignee, and history comment required
- Creating a transition to move the record to the Scheduled state and assign it to the state manager

**Task Fields**

- Configuring Defer Reason and Priority to be presented during the task operation for the transition to update a deferred record
- Configuring Planned for Version and Priority to be presented during the task operation for the

transition to the Scheduled state.

---

## Sample Saved Charts

A set of sample saved charts are included in this template. Click here to see details of these sample metrics.

---

## Email Notification

The Software Development template is set up to notify users as follows:

**On Add or Delete of a Record**
The current assignee, the manager for the current state, and the reporter of the record are notified

**On Change of State to Released, Deferred, Duplicate or Closed**
The user who reported the record is notified when a record is moved to a state where processing is stopped

**On Change of Assignment**
Both the current assignee and the manager for the current state of the record are notified

---

## Security

The Software Development template assumes a very simple security model reflecting a workgroup situation where all users are able to see any record. This is implemented by setting Enable Record Visibility option under General Preferences in the Administration Task page to No.

In addition, the privileges related to editing fields within the records have been removed from users that are not managers or Admin. With this configuration, users can rely on the Task operation to move records through the workflow. This can be changed within the User Administration section of the Admin page.

**NetResults ProblemTracker**

# The Web Site Development Template

Help Topics | << | >>

## Overview

The Web Site Development template supports a traditional web site development process. Typical of this process is the immediate posting of bug fixes to the web site being developed and maintained. This model assumes the follow organizations are involved in the defect tracking process:

**Development**
Responsible for performing development tasks necessary to handle the request.

**QA**
Verifies that the request has been successfully implemented by the Development organization.

**Build**
Places the updated files onto the live server.

---

## Data Record

The data record contains the following fields. Note that you can customize the database by adding to or removing fields, or changing any pulldown menu values. Field names with an asterisk are required by the system and cannot be removed from the data record.

| | |
|---|---|
| **PRN*** | Numeric record identifier. Assigned at the time the record is created. |
| **Title** | A one line text summary of the problem. Set at the time the record is created. |
| **Product*** | Identifies the product for which the record has been reported. Set at the time the record is created. |
| **Browser** | Identifies the browser type for which the record has been reported. Set at the time the record is created. |
| **Platform** | Describes the hardware or software platform where the problem occurs. Examples are the operating system (e.g. Windows 95), or the CPU (e.g. Intel Compatible). Set at the time the record is created. |
| **Problem URL** | URL of the web page where the problem was found. Set at the time the record is created. |
| **Request Type** | Classifies the record. Possible values are: Bug, Contract Requirement, Customer Feedback, Customer Problem, Enhancement. Set at the time the record is created. |
| **Severity** | Describes how serious the problem is. Set at the time the record is created. |

| | |
|---|---|
| **Description** | Full description of the problem. Ideally describes the nature of the problem and how to reproduce the behavior. Set at the time the record is created. |
| **Reported By*** | Name of the user that reported the record. Initially set to the name of the current user logged in. Set at the time the record is created. |
| **Date Reported** | The date the record was created. Automatically initialized, and set at the time the record is created. |
| **Workaround** | Describes how to work around the reported problem. Set at the time the record is created. |
| **Status*** | Current state of the record. Changes as the record is processed through the workflow. |
| **Substatus** | Describes the condition of the record in the current state. Possible values are: None, In Progress. Optionally set by each user while processing the record. |
| **Assigned To*** | User the record is currently assigned to for processing. Set either manually or automatically during processing of the workflow. |
| **Estimated Size** | Used to enter an estimated amount of time it will take for a developer to fix the problem. |
| **Fix Date** | Date when the record was fixed. Set by Development when the problem is fixed. Automatically initialized to the current date/time. |
| **Fix Detail** | A Description of the action taken by a developer to fix the problem. Set by Development when the problem is fixed. |
| **Date Tested** | Date when the fix was tested. Set by QA when the fix for the problem is tested. Automatically initialized to the current date/time. |
| **Test Description** | A Description of the action taken by a QA Engineer to test the fix. Set by QA when the fix for the fix is tested. |
| **Test URL** | A URL where the fix can be tested. Set by Developer when the problem is fixed. |
| **Priority** | Describes the relative importance of handling this record compared to other records entered in the system. |
| **Close Date** | Date when the record was closed. Set by Process Manager when no development work will be done on a record. Automatically initialized to the current date/time. |
| **Close Detail** | A Description of the reason for closing a record. Set by the Process Manager when no development work will be done on a record. |
| **Defer Reason** | Describes the reason a record will not be worked on until a later date. |
| **Duplicate Record #** | Lists the record number of another previously-entered record in the database which describes the same problem. |
| **Date Released** | Date when the fix for the record was released. Set by the Build Manager when the fix for the problem is released. Automatically initialized to the current date/time. |
| **Deleted*** | Denotes whether the record has been deleted. |

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## Workflow

It is assumed that records will be processed and moved through the workflow process by using the Task operation. The workflow implemented by the Web Site Development template is as follows:

1. **State 1 - Reported**
   When a record is created, it is set to the state Reported, and assigned to the Process Manager

(process_mgr). It is assumed that the Process Manager is responsible for looking at all incoming records and deciding how to process each one from a list of possible workflow paths. The Process Manager can choose one of the following:

- Start the process for the record by selecting the transition called **Schedule**. This transition will assign the record to the Development Manager (dev_mgr) and place the record in the Scheduled state. The Process Manager can also enter a Priority for the record when choosing this transition.
- Defer the processing of the record by selecting the transition called **Defer**. This transition will place the record in the Deferred state and assign it to the state manager of that state (process_mgr). The Process Manager can review deferred records at a later time and decide whether processing will resume.
- Close the record by selecting the transition called **Close**. This transition will place the record in the Closed state and assign it to TBD (no one - since this record will not be processed any further). The Process Manager will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.
- Mark the record as a duplicate of another record by selecting the transition called **Mark Duplicate**. This transition will place the record in the Duplicate State and assign it to TBD (no one - since this record will not be processed any further). The Process Manager will be required to enter the record number of the original record that describes the same problem.

This is implemented by:

**Workflow Properties**

- Defining Reported as the Default Add State when a record is added
- Assigning the process_mgr user as the manager for the Reported and Deferred states
- Assigning dev_mgr as the manager for the Scheduled state

**Transitions**

- Defining transitions to move a record to the Scheduled and Deferred states where the assignee is the State Manager for each respective state.
- Defining transitions to move a record to the Closed and Mark Duplicate states where the assignee is TBD for each transition.

**Task Fields**

- Configuring Priority (optional) to be presented during the task operation for the transition to the Scheduled state.
- Configuring Defer Reason (required) to be presented during the task operation for the transition to the Deferred state.
- Configuring Close Detail (required) and Close Date (read only and initialized) to be presented during the task operation for the transition to the Closed state.
- Configuring Duplicate Record # (required) to be presented during the task operation for the transition to the Mark Duplicate state.

2. **State 2 - Scheduled**

The Development Manager (dev_mgr) is assumed to be a manager responsible for assigning tasks to the developers for resolution. The Development Manager uses the transition **Assign to Developer** to assign the record to a developer (dev_one), a member of the "Developers" user group. This places the record in the In Development state. The Development Manager can also decide to defer a record by choosing the **Defer** transition, which will place the record in the Deferred state and assign it to the Process Manager (process_mgr).

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Development state with the assignee to be chosen from a list of developers (User Group called "Developers")
- Defining a transition to move a record to the Deferred state with the state manager as the assignee

**Task Fields**

- Configuring Defer Reason (required) to be presented during the task operation for the transition to the Deferred state

3. **State 3 - In Development**
The Developer (dev_one) assigned to the record makes the changes necessary to address the problem and marks the task complete using the transition called **Mark Fixed**. This transition allows the Developer to enter a description and date of the fix as well as a URL to be used by QA to test the fix, advances the state of the record to Fixed, and assigns the record to the QA Manager (qa_mgr).

This is implemented by:

**Workflow Properties**

- Defining the qa_mgr as the manager for the Fixed state

**Transitions**

- Defining a transition to move a record to the Fixed state where the assignee is the State Manager

**Task Fields**

- Configuring the Fix Date (read only and initialized), Fix Detail (required), and Test URL (optional) to be presented during the Task operation for the transition to the Fixed state. The Description field is presented as a read only task field for the Developer's reference when choosing this transition.

4. **State 4 - Fixed**

Once the record has entered the Fixed state, the QA Manager (qa_mgr) assigns the record to the QA Engineer (qa_one), a member of the QA user group, and advances the state to In Test by using the transition called **Assign to QA Engineer**.

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Test state with the assignee to be chosen from a list of QA Engineers (User Group called "QA")

5. **State 5 - In Test**
The QA Engineer (qa_one) verifies that the problem has been resolved, and then uses the transition **Mark Tested** to advance the record to the Tested state and assigns the record to the Build Manager (bld_mgr). If a problem has not been resolved and needs to be returned to Development, the QA Engineer can move the record back to the In Development state and assign it to the developer who worked on the record by using the **Reject** transition. For each of these possible paths, the QA Engineer enters information in the Test Description and Test URL fields. The Test Date is automatically updated.

This is implemented by:

**Workflow Properties**

- Configuring bld_mgr to be the manager of the Tested state

**Transitions**

- Defining a transition to move a record to the Tested state where the assignee is the state manager
- Creating a transition to move a record to the In Development state or <Previous State> where the assignee is the Last Assignee for the New State.

**Task Fields**

- Configuring Test Date (read only and initialized), Test Description (required), and Test URL (optional) to be presented during the Task operation for the transitions to the In Development and Tested states. The Fix Detail field is presented as a read only task field for the QA Engineer to reference when selecting this transition.

6. **State 6 - Tested**
The Build Manager (bld_mgr) user is assumed to be the user in charge of packaging the product for release, and responsible for ensuring that all the desired fixes are included in the release. The Build Manager does what is necessary to make sure that the fix for the record is included in the release, then advances the state of the record to Released using the transition **Release**. The Date Released field is automatically updated.

This is implemented by:

**Transitions**

- Defining a transition to move the record to the Released state where the assignee is TBD ("no one" as the processing for this record has been completed).

**Task Fields**

- Configuring Date Released (read only and initialized) as a field to be presented during the task operation for the transition to the Released state

7. **State 7 - Released**
This state indicates that processing of the record is complete.

8. **State 8 - Closed**
This state indicates that the record will not be processed.

9. **State 9 - Deferred**
This state indicates the decision on whether or not to process the record has been deferred until a future date. The Process Manager can update a record in this state by using the **Update** transition. The Update transition will keep the record in the Deferred state and assigned to the same user (process_mgr). The fields Defer Reason and Priority are presented as optional fields during the task operation. The Process Manager is required to enter a history comment to describe what was changed within the record when using the Update transition.

The Process Manager can decide to begin processing a record by choosing the Schedule transition, which will place the record in the Scheduled state and assign it to the State Manager (dev_mgr). The Process Manager can set the Priority field when choosing this transition.

This is implemented by:

**Transitions**

- Defining a transition called Update with Deferred selected as the New State (same state), <Same Assignee> set as the New Assignee and history comment required
- Creating a transition to move the record to the Scheduled state and assign it to the state manager

**Task Fields**

- Configuring Defer Reason and Priority to be presented during the task operation for the transition to update a deferred record
- Configuring Priority to be presented during the task operation for the Schedule transition

## Sample Saved Charts

A set of sample saved charts are included in this template. Click here to see details of these sample metrics.

---

## Email Notification

The Web Site Development template is set up to notify users as follows:

**On Add or Delete of a Record**
The current assignee, the manager for the current state, and the reporter of the record are notified

**On Change of State to Released, Deferred, Duplicate or Closed**
The user who reported the record is notified when a record is moved to a state where processing is stopped

**On Change of Assignment**
Both the current assignee and the manager for the current state of the record are notified

---

## Security

The Web Site Development template assumes a very simple security model reflecting a workgroup situation where all users are able to see any record. This is implemented by setting Enable Record Visibility option under General Preferences in the Administration Task page to No.

In addition, the privileges related to editing the field of the records have been removed from users that are not managers or Admin. With this configuration, users can rely on the Task operation to move records through the workflow. This can be changed within the User Administration section of the Admin page.

# The Knowledge Base Template



## Overview

The Knowledge Base template supports a process to compose, review and publish Knowledge Base articles that are searchable by end users. Typical of this process is the immediate posting of articles so end users can access the most up to date information. This model assumes the follow organizations are involved in the process:

**Support**
Responsible for composing, publishing, and maintaining the Knowledge Base articles

**Development**
Responsible for reviewing the articles for technical accuracy

**Publications**
Responsible for reviewing articles for consistency with other documentation

---

## Data Record

The data record contains the following fields. Note that you can customize the database by adding to or removing fields, or changing any pulldown menu values. Field names with an asterisk are required by the system and cannot be removed from the data record.

| | |
|---|---|
| **Article ID*** | Numeric record identifier. Assigned at the time the article is created. |
| **Title** | A one line text summary of the article. Set at the time the article is created. |
| **Article Type** | Classifies the article. Possible values are: Defect, Hot Fix, Tech Note, and Unknown. Set at the time the article is created. |
| **Product*** | Identifies the product for which the article has been composed. Set at the time the article is created. |
| **Version** | Identifies the version of the product to which the article pertains. Set at the time the article is created. |
| **Oldest Version** | Identifies the oldest article in a range of versions to which the article is applicable. Values displayed in this field depend on the value selected in the Version field. Set at the time the article is created. |
| **Newest Version** | Identifies the newest article in a range of versions to which the article is applicable. Values displayed in this field depend on the value selected in the Version field. Set at the time the article is created. |
| **Severity** | Indicates the level of severity of the article's subject. Set at the time the article is created. |

| | |
|---|---|
| **Description** | Full details of the article. Ideally describes the nature of an issue or a procedure and how to resolve it or perform a set of steps. Set at the time the article is created. |
| **Workaround** | Describes how to work around the problem described in the article. Set at the time the article is created. |
| **Publication Date** | The date the article was published. Automatically initialized, and set at the time the record is published as part of the workflow. |
| **Status*** | Current state of the article. Changes as the record is processed through the workflow. |
| **Assigned To*** | User the article is currently assigned to for processing. Set either manually or automatically during processing of the workflow. |
| **Author*** | Name of the user that composed the article. Initially set to the name of the current user logged in. Set at the time the article is created. |
| **First Draft Date** | The date the article was created. Automatically initialized, and set at the time the article is created. |
| **Dev Comments** | Describes the comments made by the Developer reviewing the article. Set after review by a member of the Developers group. |
| **Pubs Comments** | Describes the comments made by the Publications user reviewing the article. Set after review by a member of the Publications group. |
| **Support Notes** | Describes the response from the Author (usually a member of the Support group) about the comments resulting from the reviews made by the Development and Publications groups. Set after review by the Author. |
| **Archive Date** | Date when the record was removed from the Knowledge Base. Set by Support when the article has become obsolete or was replaced by a newer article. Automatically initialized to the current date/time. |
| **Deleted*** | Denotes whether the article has been deleted. |

## Dependent Pulldowns

The pulldown fields Oldest Version and Newest Version are dependent on the pulldown field called Version to create a range that describes which versions are affected by the content of an article.

The Version field has the option menu values:

Unknown
Version 1
Version 2
Multiple Versions

Oldest Version has the option menu values:

Unknown
1.0.0
1.0.1
1.5.0
2.0.0
2.0.1

2.0.2

Newest Version has the option menu values:

Unknown
1.0.0
1.0.1
1.5.0
2.0.0
2.0.1
2.0.2
Latest Release

The examples below illustrate the dependencies between Version and the Oldest Version and Newest Version:

**Article content applies to Versions 1.x only**
Version field set to "Version 1". Selecting this value for the Version field will result in the Oldest Version and Newest Version fields only displaying those option menu values that start with "1".
Oldest Version set to "1.0.0"
Newest Version set to "1.5.0"

**Article content applies to Versions 1.5.0 through latest version**
Version field set to "Multiple Versions". Selecting this value for the Version field will result in the Oldest and Newest Version fields displaying all possible values.
Oldest Version set to "1.5.0"
Newest Version set to "Latest Release"

Details on setting up dependencies between pulldown fields can be found in the Customizing Pulldown Dependencies section of the Admin Guide.

---

## Workflow

It is assumed that records will be processed and moved through the workflow process by using the Task operation. The workflow implemented by the Knowledge Base template is as follows:

1. **State 1 - Pending Dev Review**
   When an article is created, it is set to the state Pending Dev Review, and assigned to the Development Manager (dev_mgr). It is assumed that the Development Manager is responsible for assigning the article to a Developer (a member of the "Developers" user group) to review and comment on the article's technical accuracy. The Development Manager uses the transition called **Assign to Developer For Review**, which sets the article's state to In Dev Review and prompts the Development Manager to select a user from the list of members of the Developers user group.

   This is implemented by:

**Workflow Properties**

- Defining Pending Dev Review as the Default Add State when an article is added
- Assigning the dev_mgr user as the manager for the Pending Dev Review state

**Transitions**

- Defining a transition to move an article to the In Dev Review state where the assignee is the Developer selected by dev_mgr during the Task operation

2. **State 2 - In Dev Review**
The Developer (dev_one) reviews the article for technical accuracy, then decides whether to approve or reject the article by choosing the corresponding transition. To approve the article, dev_one selects the transition **Approve Article** and provides any desired comments in the Dev Comments field. This results in the article being placed in the Pending Pubs Review state and is assigned to the Publications Manager. To reject the article, dev_one selects the transition **Reject Article** and must provide comments to describe why the article was rejected in the Dev Comments field. This results in the article being placed in the Rejected By Dev state and assigned to the Author (Reporter).

This is implemented by:

**Workflow Properties**

- Selecting Pubs Manager as the state manager for the Pending Pubs Review state

**Transitions**

- Defining a transition to move a record to the Pending Pubs review state with the assignee set to be the state manager
- Defining a transition to move a record to the Rejected By Dev state with the <Reporter> set as the new assignee

**Task Fields**

- Configuring Dev Comments (optional) to be presented during the task operation for the transition to the Pending Pubs Review state
- Configuring Dev Comments (required) to be presented during the task operation for the transition to the Rejected By Dev state

3. **State 3 - Pending Pubs Review**
The Publications Manager (pubs_mgr) is responsible for assigning the article to a Publications Reviewer (a member of the Publications user group) to review and comment on the article so that it is consistent with all other documentation. The Publications Manager uses the transition called **Assign to Pubs Reviewer**, which sets the article's state to In Pubs Review and prompts the Publications Manager to select a user from the list of members of the Publications user group.

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Pubs Review state where the assignee is the Publications Reviewer selected by pubs_mgr during the task operation

4. **State 4 - In Pubs Review**
The Publications Reviewer (pubs_one) reviews the article for its consistency with respect to other documentation, then decides whether to approve or reject the article by choosing the corresponding transition. To approve the article, pubs_one selects the transition **Approve Article** and provides any desired comments in the Pubs Comments field. This results in the article being placed in the In Final Author Review state and is assigned to the Author (Reporter). To reject the article, pubs_one selects the transition **Reject Article** and must provide comments to describe why the article was rejected in the Pubs Comments field. This results in the article being placed in the Rejected By Pubs state and assigned to the Author (Reporter).

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Final Author Review state with the assignee set to be the <Reporter>
- Defining a transition to move a record to the Rejected By Pubs state with the <Reporter> set as the new assignee

**Task Fields**

- Configuring Pubs Comments (optional) to be presented during the task operation for the transition to the In Final Author Review state
- Configuring Pubs Comments (required) to be presented during the task operation for the transition to the Rejected By Pubs state

5. **State 5 - In Final Author Review**
The Author (Reporter) reviews the article one last time before publishing it to the Knowledge Base. To do this, the Author selects the transition **Publish to Knowledge Base** and enters any desired information into the Support Comments field. The Publication Date is automatically initialized with the date and time. This will place the article in the Published in KB state and assign it to TBD.

This is implemented by:

**Transitions**

- Defining a transition to move a record to the Published in KB state where the assignee is TBD ("no one" since it is now published)

**Task Fields**

- Configuring Support Comments (optional) and Publications Date (read only and initialized) to be presented during the Task operation for the transition to the Published in KB state.

6. **State 6 - Published in KB**
Articles in this state are searchable via the Knowledge Base Search Page and are assigned to TBD. An article may become obsolete and thus will need to be updated or removed from the Knowledge Base by the Support Engineer (sup_one). To update an article, Support can use the transition **Update Active (in KB) Article**. This transition allows sup_one the option to update any of the following fields: Title, Article Type, Product, Version, Oldest Version, Newest Version, Severity, Description, and Workaround. sup_one is then required to enter a history comment. After making any changes, the article will remain in the Published in KB state, assigned to TBD. To remove an article from being searchable in the Knowledge Base, sup_one can select the transition **Archive (Remove From Knowledge Base)** and must enter a history comment. This transition will place the article in the Archived (obsolete) state, assigned to TBD. The Archive Date will be automatically initialized with the date and time.

   This is implemented by:

   **Transitions**

   - Defining a transition to update fields in the article with New State set to the same state (Published in KB) and New Assignee set to <Same Assignee> with history comment set to be required
   - Defining a transition to move the article to the Archived (obsolete) state and assigned to TBD ("no one" since the article is obsolete) with history comment set to be required

   **Task Fields**

   - Configuring all of the following fields to be optional fields presented during the task operation for the transition to update the article: Title, Article Type, Product, Version, Oldest Version, Newest Version, Severity, Description, and Workaround
   - Configuring Archive Date (read only and initialized) as a field to be presented during the task operation for the transition to the Archived (obsolete) state

7. **State 10 - Archived (obsolete)**
This state indicates that the article contains obsolete information and is no longer searchable in the Knowledge Base

8. **State 20 - Rejected By Dev**
Articles in this state were rejected during the review made by a Developer. sup_one must make changes recommended by the Developer, then use the transition **Resubmit For Development Review** to send the article back to the Developer for another review. This transition will require sup_one to enter a history comment, then will move the article to the In Dev Review state and assign it to the Developer who last reviewed the article when it was previously in the In Dev Review state.

   This is implemented by:

**Transitions**

- Defining a transition to move the article to the In Dev Review state with New Assignee set to <Last Assignee for New State> with history comment set to be required

9. **State 21 - Rejected By Pubs**
Articles in this state were rejected during the review made by a Publications Reviewer. sup_one must make changes recommended by the Publications Reviewer, then use the transition **Resubmit For Pubs Review** to send the article back to the Publications Reviewer for another review. This transition will require sup_one to enter a history comment, then will move the article to the In Pubs Review state and assign it to the Publications Reviewer who last reviewed the article when it was previously in the In Pubs Review state.

This is implemented by:

**Transitions**

- Defining a transition to move the article to the In Pubs Review state with New Assignee set to <Last Assignee for New State> with history comment set to be required

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## Sample Saved Charts

A set of sample saved charts are included in this template. Click here to see details of these sample metrics.

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## Email Notification

The Knowledge Base template is set up to notify users as follows:

**On Add of an Article**
The current assignee and the reporter of the article as well as the members of the Support Managers user group are notified

**On Delete of an Article**
The current assignee, the manager for the current state, and the reporter of the article are notified

**On Edit of an Article**
Both the current assignee, and the manager for the current state of the article are notified

**On Task of an Article**
The current assignee of the article is notified

**On Change of State to Archived (obsolete) or Published in KB**
The members of the Support Managers user group are notified

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## Security

The Knowledge Base template assumes a very simple security model reflecting a workgroup situation where all users are able to see any record. This is implemented by setting Enable Record Visibility option under General Preferences in the Administration Task page to No.

In addition, the privileges related to editing the field of the records have been removed from all users that are not Admin. With this configuration, users can rely on the Task operation to move records through the workflow. This can be changed within the User Administration section of the Admin page.

**NetResults ProblemTracker**

# The Help Desk Template

Help Topics | << | >>

## Overview

The Help Desk template supports a typical Help Desk environment in which issues or requests are reported by end users and the Help Desk team resolves the issues or processes requests.

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## Data Record

The data record contains the following fields. Note that you can customize the database by adding to or removing fields, or changing any pulldown menu values. Field names with an asterisk are required by the system and cannot be removed from the data record.

| | |
|---|---|
| **PRN*** | Numeric record identifier. Assigned at the time the record is created. |
| **Title** | A one line text summary of the problem or request. Set at the time the record is created. |
| **Product*** | Identifies the product for which the record has been reported. Set at the time the record is created. |
| **Component** | Identifies the component for which the record has been reported. Values displayed in this field depend on the value selected for the Product field. Set at the time the record is created. |
| **Platform** | Describes the hardware or software platform where the problem occurs. Examples are the operating system (e.g. Windows 2000). Set at the time the record is created. |
| **Request Type** | Classifies the record. Some of the possible values are: Bug / Issue, Enhancement, Equipment Request, Feedback. Set at the time the record is created. |
| **Severity** | Describes how serious the problem is. Set at the time the record is created. |
| **Description** | Full description of the problem. Ideally describes the nature of the problem and how to reproduce the behavior. Set at the time the record is created. |
| **Reported By*** | Name of the user that reported the record. Initially set to the name of the current user logged in. Set at the time the record is created. |
| **Date Reported** | The date the record was created. Automatically initialized, and set at the time the record is created. |
| **Workaround** | Describes how to work around the reported problem. Set at the time the record is created. |
| **Pending Issues** | Describes what information or tasks are needed before a record can continue to be processed. Set by the Help Desk Engineer if issues arise that keep the record from being processed. |
| **Status*** | Current state of the record. Changes as the record is processed through the workflow. |
| **Assigned To*** | User the record is currently assigned to for processing. Set either manually or automatically during processing of the workflow. |

| | |
|---|---|
| **Est. Close Date** | Date when the issue or request is expected to be resolved. Set by the Help Desk Engineer when deciding how to process the record. |
| **Priority** | Describes the relative importance of handling this record compared to other records entered in the system. |
| **Close Date** | Date when the record was closed. Set by Help Desk when issue or request has been resolved. Automatically initialized to the current date/time. |
| **Close Detail** | Describes the details about how the issue or request was resolved. Set by the Help Desk when the issue or request has been resolved. |
| **Deleted*** | Denotes whether the record has been deleted. |

## Dependent Pulldowns

The pulldown field Component is dependent on the pulldown field called Product, allowing the Component field to only display those values that correspond to the Product selected. The examples below illustrate the purpose of Dependent Pulldowns.

**Example 1**
When "Hardware" is selected in the Product field, the Component field displays the following option menu items:

Computer
Modem
Monitor
Other
Printer

**Example 2**
When "Software" is selected for the Product field, the Component field displays the following option menu items:

Our Browser
Our Database
Our Email
Other

Details on setting up dependencies between pulldown fields can be found in the Customizing Pulldown Dependencies section of the Admin Guide.

---

## Workflow

It is assumed that records will be processed and moved through the workflow process by using the Task operation. The workflow implemented by the Help Desk template is as follows:

1. **State 1 - Reported**
   It is assumed that each Help Desk Engineer is assigned to a particular product or area of expertise. When a record is created, it is set to the state Reported, and assigned to a particular Help Desk Engineer based on the Product selected in the record. Each Help Desk Engineer reviews the incoming records and decides how to process each using a list of possible workflow paths. The Help Desk Engineer can choose one of the following:
   - Begin processing a record by selecting the transition called **Start Processing Request**. The Description field is presented for the Help Desk Engineer's reference. The Help Desk Engineer must enter an Estimated Close Date and can optionally set the Priority of the request. This transition will keep the record assigned to the Help Desk Engineer and place the record in the In Process state.
   - Close the record by selecting the transition called **Close**. The Description field is presented for the Help Desk Engineer's reference. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). The Help Desk Engineer will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.
   - Delay processing of the request by selecting the **Hold Request** transition. The Description field is presented for the Help Desk Engineer's reference. The Help Desk Engineer is required to enter a reason for the delay in the Pending Issues field and an Estimated Close Date. It is optional to set the Priority for the record. This transition will place the record in the On Hold state, but will still be assigned to the Help Desk Engineer.

   This is implemented by:

   **Workflow Properties**

   - Defining Reported as the Default Add State when a record is added
   - Assigning a Help Desk Engineer as the manager for the Reported and On Hold states for each Product e.g. Help Desk Engineer One (help_one) is the manager for the Reported and On Hold states for the Hardware Product

   **Transitions**

   - Defining a transition to move a record to the In Process and On Hold states where the assignee is <Same Assignee>.
   - Defining transitions to move a record to the Closed state where the assignee is TBD.

   **Task Fields**

   - Configuring Description (read only), Est. Close Date (required) and Priority (optional) to be presented during the task operation for the transition to the In Process state.
   - Configuring Description (read only), Close Detail (required) and Close Date (read only and initialized) to be presented during the task operation for the transition to the Closed state.
   - Configuring Description (read only), Pending Issues (required), Est. Close Date (required) and Priority (optional) to be presented during the task operation for the transition to the On Hold state.

2. **State 2 - In Process**

The Help Desk Engineer assigned to the record attempts to resolve the issue or request, then chooses one of the following transitions:

- If the issue is resolved, the Help Desk Engineer can close the issue by selecting the transition **Close**. The Description field is presented for the Help Desk Engineer's reference. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). The Help Desk Engineer will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.

- If the issue has not been resolved and the Help Desk Engineer needs to escalate the issue to a manager for troubleshooting assistance, the **Escalate** transition will be selected. The Description field is presented for the Help Desk Engineer's reference. The Help Desk Engineer is required to enter the reason for the escalation in the Pending Comments field. This will place the record in the Escalated state and will assign it to the Help Desk Manager.

- If the issue cannot be processed until a later (e.g. because more information is needed or there is a delay to receive equipment needed to resolve the issue), the Help Desk Engineer can select the **Hold Request** transition. The Description field is presented for the Help Desk Engineer's reference. The Help Desk Engineer is required to enter a reason for the delay in the Pending Issues field and an Estimated Close Date. It is optional to set the Priority for the record. This transition will place the record in the On Hold state, but will still be assigned to the Help Desk Engineer.

This is implemented by:

**Workflow Properties**

- Defining Help Desk Manager (help_mgr) as the manager for the Escalated state

**Transitions**

- Defining a transition to move a record to the Closed state where the assignee is TBD.
- Defining a transition to move a record to the On Hold state where the assignee is <Same Assignee>.
- Defining a transition to move a record to the Escalated state where the assignee is the manager of that state

**Task Fields**

- Configuring Description (read only), Close Detail (required) and Close Date (read only and initialized) to be presented during the task operation for the transition to the Closed state.
- Configuring Description (read only), Pending Issues (required), Est. Close Date (required) and Priority (optional) to be presented during the task operation for the transition to the On Hold state.
- Configuring Description (read only) and Pending Issues (required) to be presented during the task operation for the transition to the Escalated state.

3. **State 3 - Escalated**

The Help Desk Manager (help_mgr) decides how to proceed with the issue:

- The issue can be sent back to the Help Desk Engineer by using the **De-escalate** transition. The Description field will be provided for help_mgr's reference. Comments to aid the Help Desk Engineer to resolve the issue must be entered into the Pending Issues field. Optionally, the Priority of the record can be updated. This will place the record back into the In Process state and assign it to the Help Desk Engineer who worked on the record when it was previously in that state.
- The issue can be closed by using the **Close** transition. The Description field is presented for reference purposes. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). help_mgr will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Process state where the assignee is <Last Assignee for New State>
- Defining a transition to move a record to the Closed state where the assignee is TBD

**Task Fields**

- Configuring the Description (read only), Pending Issues (required), Priority (optional) to be presented during the Task operation for the transition to the In Process state.
- Configuring the Description (read only), Close Date (read only, initialized), and Close Detail (required) fields to be presented for the transition to the Closed state.

4. **State 5 - On Hold**
Processing was stopped for the records in this state. The Help Desk Engineer can resume processing of a record using the **Resume Processing** transition. The Description field will be provided for reference purposes and the Help Desk Engineer will have the option to update the Estimated Close Date and Priority fields. This will place the record in the In Process state and will remain assigned to the Help Desk Engineer. The Help Desk Engineer can close the issue by using the **Close** transition. The Description field is presented for reference purposes. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). The Help Desk Engineer will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Process state with New Assignee set to <Same Assignee>
- Defining a transition to move a record to the Closed state and assigned to TBD

**Task Fields**

- Configuring the Description (read only), Est. Close Date (optional), Priority (optional) to be presented during the Task operation for the transition to the In Process state.
- Configuring the Description (read only), Close Date (read only, initialized), and Close Detail (required) fields to be presented for the transition to the Closed state.

5. **State 6 - Closed**
   Processing on these records has been completed.

---

## Sample Saved Charts

A set of sample saved charts are included in this template. Click here to see details of these sample metrics.

---

## Email Notification

The Help Desk template is set up to notify users as follows:

**On Add or Delete of a Record**
The current assignee, the manager for the current state, and the reporter of the record are notified

**On Change of State to Inactive**
The user who reported the record is notified when a record is moved to a state where processing has stopped (any state included in the **Inactive** state group: Closed or On Hold)

**On Change of Assignment**
Both the current assignee and the manager of the current state of the record are notified

---

## Security

The Help Desk template assumes a very simple security model reflecting a workgroup situation where all users are able to see any record. This is implemented by setting Enable Record Visibility option under General Preferences in the Administration Task page to No.

In addition, the privileges related to editing the field of the records have been removed from users that are not managers or Admin. With this configuration, users can rely on the Task operation to move records through the workflow. This can be changed within the User Administration section of the Admin page.

**NetResults ProblemTracker**

# The Support Template



## Overview

The Support template supports a typical Support environment in which issues or requests are reported by customers or end users and the Support team resolves the issues or processes requests. This template incorporates 2 levels of Support:

**1st Line Support** attempts to process all incoming records

**2nd Line Support** processes any escalated records that could not be processed by 1st Line Support

**Support Manager** processes any escalated records that could not be processed by 1st or 2nd Line Support

---

## Data Record

The data record contains the following fields. Note that you can customize the database by adding to or removing fields, or changing any pulldown menu values. Field names with an asterisk are required by the system and cannot be removed from the data record.

| | |
|---|---|
| **PRN*** | Numeric record identifier. Assigned at the time the record is created. |
| **Title** | A one line text summary of the problem or request. Set at the time the record is created. |
| **Product*** | Identifies the product for which the record has been reported. Set at the time the record is created. |
| **Platform** | Describes the hardware or software platform where the problem occurs. Examples are the operating system (e.g. Windows 2000). Set at the time the record is created. |
| **Request Type** | Classifies the record. Possible values are: Bug, Contract Requirement, Customer Feedback, Customer Problem, Enhancement. Set at the time the record is created. |
| **Severity** | Describes how serious the problem is. Set at the time the record is created. |
| **Description** | Full description of the problem. Ideally describes the nature of the problem and how to reproduce the behavior. Set at the time the record is created. |
| **Reported By*** | Name of the user that reported the record. Initially set to the name of the current user logged in. Set at the time the record is created. |
| **Date Reported** | The date the record was created. Automatically initialized, and set at the time the record is created. |
| **Workaround** | Describes how to work around the reported problem. Set at the time the record is created. |

| | |
|---|---|
| **Pending Issues** | Describes what information or tasks are needed before a record can continue to be processed. Set by the Support Engineer if issues arise that keep the record from being processed. |
| **Status*** | Current state of the record. Changes as the record is processed through the workflow. |
| **Assigned To*** | User the record is currently assigned to for processing. Set either manually or automatically during processing of the workflow. |
| **Est. Close Date** | Date when the issue or request is expected to be resolved. Set by the Support Engineer when deciding how to process the record. |
| **Priority** | Describes the relative importance of handling this record compared to other records entered in the system. |
| **Close Date** | Date when the record was closed. Set by Support when issue or request has been resolved. Automatically initialized to the current date/time. |
| **Close Detail** | Describes the details about how the issue or request was resolved. Set by the Support when the issue or request has been resolved. |
| **Deleted*** | Denotes whether the record has been deleted. |

## Support Queues

The Home Page reports can be set up as a queue for Support Engineers to use in prioritizing and processing incoming records. TBD will be the user to which incoming records are assigned while they are in a queue. To represent a queue for the 1st Line Support team on the Home Page, the saved query **1st Line Support Queue [Support]** was created to display all records assigned to TBD in the Reported state. To repesent the queue for 2nd Line Support on the Home Page, the saved query **2nd Line Support Queue [Support]** was created to display all records assigned to TBD in the Escalated state.

Information on how records are processed within and outside of the queue are discussed in the Workflow section below.

---

## Workflow

It is assumed that records will be processed and moved through the workflow process by using the Task operation. The workflow implemented by the Support template is as follows:

1. **State 1 - Reported**
   It is assumed that 1st Line Support Engineers check a queue to pick up incoming records. When a record is created, it is set to the state Reported, and assigned to TBD (a placeholder user to represent records that are in the queue and have not yet been assigned) A 1st Line Support Engineer (sup_one) selects incoming records from the queue and decides how to process each using a list of possible workflow paths. sup_one can choose one of the following:
   - Begin processing a record by selecting the transition called **Start Processing Request**. The Description field is presented for reference. sup_one must enter an Estimated Close Date and can optionally set the Priority of the request. This transition will assign the record to sup_one and place the record in the In Process state.

- Close the record by selecting the transition called **Close**. The Description field is presented for reference. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). sup_one will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.
- Delay processing of the request by selecting the **Hold Request** transition. The Description field is presented for reference. sup_one is required to enter a reason for the delay in the Pending Issues field and an Estimated Close Date. It is optional to set the Priority for the record. This transition will place the record in the On Hold state and will assign it to sup_one.

This is implemented by:

**Workflow Properties**

- Defining Reported as the Default Add State when a record is added
- Assigning TBD as the manager for the Reported state

**Transitions**

- Defining a transition to move a record to the In Process and On Hold states where the assignee is <LoginUser> (the user performing the task operation).
- Defining a transition to move a record to the Closed state where the assignee is TBD.

**Task Fields**

- Configuring Description (read only), Est. Close Date (required) and Priority (optional) to be presented during the task operation for the transition to the In Process state.
- Configuring Description (read only), Close Detail (required) and Close Date (read only and initialized) to be presented during the task operation for the transition to the Closed state.
- Configuring Description (read only), Pending Issues (required), Est. Close Date (required) and Priority (optional) to be presented during the task operation for the transition to the On Hold state.

2. **State 2 - In Process**
The Support Engineer (sup_one) assigned to the record attempts to resolve the issue or request, then chooses one of the following transitions:
   - If the issue is resolved, sup_one can close the issue by selecting the transition **Close**. The Description field is presented for reference. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). sup_one will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.

   - If the issue has not been resolved and sup_one needs to escalate the issue to 2nd Line Support for troubleshooting assistance, the **Escalate to 2nd Line** transition will be selected. The Description field is presented for reference. sup_one is required to enter the reason for the escalation in the Pending Comments field. This will place the record in the Escalated state, will assign it to TBD, and place the record in the 2nd Line Support queue.

- If the issue has not been resolved and sup_one needs to escalate the issue to a manager for troubleshooting assistance, the **Escalate to Manager** transition will be selected. The Description field is presented for reference. sup_one is required to enter the reason for the escalation in the Pending Comments field. This will place the record in the Escalated state, will assign it to the Support Manager (sup_mgr).

- If the issue cannot be processed until a later (e.g. because more information is needed or there is some delay before a task can be performed), sup_one can select the **Hold Request** transition. The Description field is presented for reference. sup_one is required to enter a reason for the delay in the Pending Issues field and an Estimated Close Date. It is optional to set the Priority for the record. This transition will place the record in the On Hold state, but will still be assigned to the sup_one.

This is implemented by:

**Workflow Properties**

- Defining Support Manager (sup_mgr) as the manager for the Escalated state

**Transitions**

- Defining a transition to move a record to the Closed state where the assignee is TBD.
- Defining a transition to move a record to the Escalated state where the assignee is the manager of that state
- Defining a transition to move a record to the Escalated state where the assignee is TBD (placeholder for the 2nd Line Support queue)
- Defining a transition to move a record to the On Hold state where the assignee is <Same Assignee>.

**Task Fields**

- Configuring Description (read only), Close Detail (required) and Close Date (read only and initialized) to be presented during the task operation for the transition to the Closed state.
- Configuring Description (read only) and Pending Issues (required) to be presented during the task operation for the transitions to the Escalated state.
- Configuring Description (read only), Pending Issues (required), Est. Close Date (required) and Priority (optional) to be presented during the task operation for the transition to the On Hold state.

3. **State 3 - On Hold**
Processing was stopped for the records in this state. sup_one can resume processing of a record using the **Resume Processing** transition. The Description field will be provided for reference and sup_one will have the option to update the Estimated Close Date and Priority fields. This will place the record in the In Process state and will remain assigned to sup_one. sup_one can close the issue by using the **Close** transition. The Description field is presented for reference purposes. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). sup_one will be required to enter a reason the record was closed in the Close Detail field. The

Close Date will be updated automatically.

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Process state with New Assignee set to <Same Assignee>
- Defining a transition to move a record to the Closed state and assigned to TBD

**Task Fields**

- Configuring the Description (read only), Est. Close Date (optional), Priority (optional) to be presented during the Task operation for the transition to the In Process state.
- Configuring the Description (read only), Close Date (read only, initialized), and Close Detail (required) fields to be presented for the transition to the Closed state.

4. **State 4 - Escalated**
2nd Line Support or the Support Manager decides how to proceed with the issues that have been placed in the Escalated state:

- The issue can be sent back to the sup_one by using the **De-escalate** transition. The Description field will be provided for reference. Comments to aid sup_one to resolve the issue must be entered into the Pending Issues field. Optionally, the Priority of the record can be updated. This will place the record back into the In Process state and assign it to sup_one, who worked on the record when it was previously in that state.
- The issue can be closed by using the **Close** transition. The Description field is presented for reference. This transition will place the record in the Closed state and assign it to TBD ("no one" since this record will not be processed any further). The user (2nd Line Support or the Support Manager) will be required to enter a reason the record was closed in the Close Detail field. The Close Date will be updated automatically.

This is implemented by:

**Transitions**

- Defining a transition to move a record to the In Process state where the assignee is <Last Assignee for New State>
- Defining a transition to move a record to the Closed state where the assignee is TBD

**Task Fields**

- Configuring the Description (read only), Pending Issues (required), Priority (optional) to be presented during the Task operation for the transition to the In Process state.
- Configuring the Description (read only), Close Date (read only, initialized), and Close Detail (required) fields to be presented for the transition to the Closed state.

5. **State 5 - Closed**
   Processing on these records has been completed.

---

## Sample Saved Charts

A set of sample saved charts are included in this template. Click here to see details of these sample metrics.

---

## Email Notification

The Support template is set up to notify users as follows:

**On Add or Delete of a Record**
The current assignee, the manager for the current state, and the reporter of the record are notified

**On Change of State to Inactive**
The user who reported the record is notified when a record is moved to a state where processing has stopped (any state included in the **Inactive** state group: Closed or On Hold)

**On Change of Assignment**
Both the current assignee and the manager of the current state of the record are notified

---

## Security

The Support template assumes a very simple security model reflecting a workgroup situation where all users are able to see any record. This is implemented by setting Enable Record Visibility option under General Preferences in the Administration Task page to No.

In addition, the privileges related to editing the field of the records have been removed from users that are not managers or Admin. With this configuration, users can rely on the Task operation to move records through the workflow. This can be changed within the User Administration section of the Admin page.

**NetResults ProblemTracker**

# Sample Saved Charts



Metrics

The Metrics operation is a way to generate charts and graphs based on your ProblemTracker data. Sample charts are provided by default in the ProblemTracker templates to provide examples of the charts that can be generated. This section explains the sample charts provided in each template. For information about the operations available in the Metrics page, such as generating a chart, saving a chart or chart layout, please review the Metrics section.

The explanations of each saved chart below assume that the fields and states in the templates have not been removed or renamed. Removing or renaming record fields or workflow states may change the configuration of the saved chart or may change the results displayed by the sample saved charts. The explanations below also assume that the sample saved charts and sample chart layouts have not been modified. To generate one of the sample charts, simply select it and click the Show Chart button. To change the chart layout (for instance, from a bar chart to a line chart), simply change the Chart Layout setting after selecting the Saved Chart, then click the Show Chart button. More information on these settings can be found in the Metrics section.

---

## Saved Charts in the Software and Web Site Development Templates

The following saved charts are included with the Software Development and Web Site Development templates:

**Project Status (default) [Users]**
This metric will generate a pie chart, which displays the relative number of records in each possible state.
It is designed to give you a quick breakdown of the overall status of a project. To limit the chart to a particular project or release, select a Saved Query that only displays (matches) the records for the project or release as the value for Input Records and click Show Chart.

**Add Rate [Users]**
This metric will generate two dimensional line chart with the number of records added during each week for the previous 26 weeks broken down by product (one line per product that has at least one record added in the last 26 weeks).
It is designed to give you display trend information about the number of new reports (records added) for each product over the last six months.

**Average Fix Time [Users]**
This metric will generate a two dimensional bar chart with the average number number of days it takes to fix a problem, with one bar for each Severity. The time is calculated by using the difference between the Date Reported field and the Fix Date field of each input record.
It is designed to easily see differences in how fast particular issues are fixed based on their Severity.

**Fix Rate [Users]**
This metric will generate a line chart, which shows the number of records that were fixed in each of the last 12 months. There is one line for each Request Type. And, the most recent month is a partial month (unless today

is the last day of the month). A record is considered fixed if it moved into the Fixed state during the month.
It can be used to view the number of fixes completed each month for the previous year. It allows you to distinguish by Request Type (e.g. Bug, Enhancement).

**Fix Totals [Users]**
This metric will generate a stacked line chart, which shows the cumulative number of records that have been fixed as of the end of each month for the last twelve months. As with Fix Rate, there is one (filled) line for each Request Type and the most recent month is a partial month (unless today is the last day of the month). A record is considered Fixed if it has moved into the Fixed state at some point prior to the end of the month.
It can be used to see running totals of issues that were fixed in the previous year, broken down by Request Type (e.g. Bug, Enhancement).

**Severity Trend [Users]**
This metric will generate a three dimensional bar chart that displays the number of records added during each of the last twelve weeks, broken down by Severity.
It can be used to see if the severity of records being added is changing over time.

**Test Fail Rate [Users]**
This metric will generate a line chart, which displays the number of times QA rejected a fix (a record moved from "In Test" to "In Development") during each of the last twelve months. There is one line per product. The most recent month may be a partial month.
It is used to see how many items that were marked as Fixed, subsequently failed quality assurance testing. Note: a single issue (record) may have failed multiple times.

**Test Pass Rate [Users]**
This metric will generate a line chart, which displays the number of times QA accepted (passed) a fix (a record moved from "In Test" to "Tested") during each of the last twelve months. There is one line per product. The most recent month may be a partial month.
It is used to see how many items that were marked as Fixed, subsequently passed quality assurance testing.

**Workload [Users]**
This metric will generate bar chart, which displays the number of records assigned to each user.
This can give you a rough idea of the current workload. If you have a field that represents the actual work required for a particular item (e.g. Estimated Size), you can create your own chart to total the value(s) of that field for each user and display it in a similar fashion.

---

## Saved Charts in the Knowledge Base Template

The following saved charts are available in the Metrics section of the Knowledge Base template.

**Project Status (default) [Users]**
This metric will generate a pie chart, which displays the relative number of articles in each possible state.
It is designed to give you a quick breakdown of the overall status of a project. To limit the chart to a particular type of article or release, select a Saved Query that only displays (matches) the records for the type or release as the value for Input Records and click Show Chart.

**Add Rate [Users]**
This metric will generate two dimensional line chart with the number of articles added during each week for the previous 26 weeks broken down by product (one line per product that has at least one record added in the last 26 weeks).
It is designed to give you display trend information about the number of new articles (records added) for each product over the last six months.

**Article Review Status [Users]**
This metric will generate a pie chart with the relative number of records in each state in the state group "In Review Process".
It is designed to give a quick breakdown of the overall status of the articles in the review steps of the workflow process.

**Average Review Time [Users]**
A bar chart which displays the average time in days for an article of each type to go from First Draft to Publication.
This metric is calculated based on the First Draft Date and Publication Date set in each article during the workflow process.

**Publication Rate [Users]**
A line chart which displays the number of records moved to the Published in KB state during each month for the last 12 months. A separate line will be graphed for each article type. The most recent month is a partial month (unless today is the last day of the month). A record is considered Published if it moved into the Published in KB state during the month.
This metric is designed to show a trend of the number of articles of each type published each month for the last year.

**Publication Totals [Users]**
A line chart which displays the number of records moved to the Published in KB state as of the end of each month for the last 12 months. A separate line will be graphed for each product. As in the Publication Rate chart above, the most recent month is a partial month (unless today is the last day of the month). A record is considered Published if it moved into the Published in KB state during the month.
This metric is designed to show a trend of the number of articles for each product published at the end of the month for the last year.

**Workload [Users]**
This metric will generate bar chart, which displays the number of articles assigned to each user.
This can give you a rough idea of the current workload. If you have a field that represents the actual work required for a particular item (e.g. a float type field that notes the estimated number of hours required to process an article), you can create your own chart to total the value(s) of that field for each user and display it in a similar fashion.

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## Saved Charts in the Help Desk Template

The following saved charts are available in the Metrics section of the Help Desk template.

**Project Status (default) [Users]**

This metric will generate a pie chart, which displays the relative number of records in each possible state.
It is designed to give you a quick breakdown of the overall status of a project. To limit the chart to a particular project or release, select a Saved Query that only displays (matches) the records for the project or release as the value for Input Records and click Show Chart.

**Add Rate [Users]**
This metric will generate two dimensional line chart with the number of records added during each week for the previous 26 weeks broken down by product (one line per product that has at least one record added in the last 26 weeks).
It is designed to give you display trend information about the number of new reports (records added) for each product over the last six months.

**Average Close Time [Users]**
This metric will generate a two dimensional bar chart with the average number number of days it takes to close an issue, with one bar for each Severity. The time is calculated by using the difference between the Date Reported field and the Close Date field of each input record.
It is designed to easily see differences in how fast particular issues are closed based on their Severity.

**Close Rate [Users]**
This metric will generate a line chart, which shows the number of records that were closed during each of the last 12 months. There is one line for each Request Type. And, the most recent month is a partial month (unless today is the last day of the month). A record is considered closed if it moved into the Closed state during the month.
It can be used to view the number of records closed each month for the previous year. It allows you to distinguish by Request Type (e.g. Bug, Enhancement).

**Close Totals [Users]**
This metric will generate a stacked line chart, which shows the cumulative number of records that have been closed as of the end of each month for the last twelve months. As with Close Rate, there is one (filled) line for each Request Type and the most recent month is a partial month (unless today is the last day of the month). A record is considered Closed if it has moved into the Closed state at some point prior to the end of the month.
It can be used to see running totals of issues that were closed in the previous year, broken down by Request Type (e.g. Bug, Enhancement).

**Deadline Performance [Users]**
This metric will generate a bar chart, which shows the average difference in days between the Est. Close Date and the actual Close Date of a record broken down for each product.
It can be used to detect how effective the Est. Close Date is at predicting the actual Close Date of an issue. A negative value for any product indicates that the average issue is resolved before the Est. Close Date.

**Hardware Component Performance [Users]**
A bar chart which displays the number of current records for every component broken down by request type.
This metric is designed to show a snapshot of the hardware components that have the most issues logged and to categorize the types of issues logged for each. This is useful to identify components that have chronic problems.

**Help Desk Workload [Users]**
A bar chart which displays the number of records assigned to each member of the Help Desk user group.

This can give you a rough idea of the current workload. If you have a field which represents the actual work required for a particular item (e.g. a float type field which notes the estimated number of hours required to process an issue), you can create your own chart to total the value(s) of that field for each user and display it in a similar fashion.

**Requests On Hold [Users]**
A bar chart which displays the number of current records in the On Hold state for every component.
This metric is designed to provide a snapshot of the current records where the processing has been delayed.
The data is broken down by component to allow you to easily identify problem components.

**Severity 1 Issue Status [Users]**
A bar chart which displays the relative number of records with a Severity rating of 1 in each state broken down by Product.
This metric provides an overall status of the most severe issues reported for each Product.

**Severity Trend [Users]**
This metric will generate a three dimensional bar chart that displays the number of records added during each of the last twelve weeks, broken down by Severity.
It can be used to see if the severity of records being added is changing over time.

**Workload [Users]**
This metric will generate bar chart, which displays the number of articles assigned to each user.
This can give you a rough idea of the current workload. If you have a field which represents the actual work required for a particular item (e.g. a float type field which notes the estimated number of hours required to process an article), you can create your own chart to total the value(s) of that field for each user and display it in a similar fashion.

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## Saved Charts in the Support Template

The following saved charts are available in the Metrics section of the Support template.

**Project Status (default) [Users]**
This metric will generate a pie chart, which displays the relative number of records in each possible state.
It is designed to give you a quick breakdown of the overall status of a project. To limit the chart to a particular project or release, select a Saved Query that only displays (matches) the records for the project or release as the value for Input Records and click Show Chart.

**Add Rate [Users]**
This metric will generate two dimensional line chart with the number of records added during each week for the previous 26 weeks broken down by product (one line per product that has at least one record added in the last 26 weeks).
It is designed to give you display trend information about the number of new reports (records added) for each product over the last six months.

**Average Close Time [Users]**
This metric will generate a two dimensional bar chart with the average number number of days it takes to close

an issue, with one bar for each Severity. The time is calculated by using the difference between the Date Reported field and the Close Date field of each input record.
It is designed to easily see differences in how fast particular issues are closed based on their Severity.

**Close Rate [Users]**
This metric will generate a line chart, which shows the number of records that were closed during each of the last 12 months. There is one line for each Request Type. And, the most recent month is a partial month (unless today is the last day of the month). A record is considered closed if it moved into the Closed state during the month.
It can be used to view the number of records closed each month for the previous year. It allows you to distinguish by Request Type (e.g. Bug, Enhancement).

**Close Totals [Users]**
This metric will generate a stacked line chart, which shows the cumulative number of records that have been closed as of the end of each month for the last twelve months. As with Close Rate, there is one (filled) line for each Request Type and the most recent month is a partial month (unless today is the last day of the month). A record is considered Closed if it has moved into the Closed state at some point prior to the end of the month.
It can be used to see running totals of issues that were closed in the previous year, broken down by Request Type (e.g. Bug, Enhancement).

**Company A Service [Users]**
This metric will generate a bar chart, which shows the status of each record reported by the Company A user group broken down by request type.
It can be used to see an overall picture of the type and status of the issues in process reported by Company A. This can be changed to show the status for records reported by other user groups (other companies, customers, vendors, partners, etc.)

**Deadline Performance [Users]**
This metric will generate a bar chart, which shows the average difference in days between the Est. Close Date and the actual Close Date of a record broken down for each product.
It can be used to detect how effective the Est. Close Date is at predicting the actual Close Date of an issue. A negative value for any product indicates that the average issue is resolved before the Est. Close Date.

**High Severity Issue Status [Users]**
A line chart which displays the relative number of records with a Severity rating of 1, 2, or 3 in each state with a line for each Product.
This metric provides an overall status of the most severe issues reported for each Product.

**Requests On Hold [Users]**
A bar chart which displays the number of current records in the On Hold state for every component.
This metric is designed to provide a snapshot of the current records where the processing has been delayed. The data is broken down by component to allow you to easily identify problem components.

**Severity Trend [Users]**
This metric will generate a three dimensional bar chart that displays the number of records added during each of the last twelve weeks, broken down by Severity.
It can be used to see if the severity of records being added is changing over time.

**Support Workload [Users]**
A bar chart which displays the number of records assigned to each member of the Support user group.
This can give you a rough idea of the current workload. If you have a field which represents the actual work required for a particular item (e.g. a float type field which notes the estimated number of hours required to process an issue), you can create your own chart to total the value(s) of that field for each user and display it in a similar fashion.

**Workload [Users]**
This metric will generate bar chart, which displays the number of articles assigned to each user.
This can give you a rough idea of the current workload. If you have a field which represents the actual work required for a particular item (e.g. a float type field which notes the estimated number of hours required to process an article), you can create your own chart to total the value(s) of that field for each user and display it in a similar fashion.

**NetResults ProblemTracker**

# Admin Overview

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The ProblemTracker Administration section is the interface for performing customization and maintenance. In order to access the Administration section for a workgroup, you must be logged in as a user with the **Admin** privilege. The Admin group always has this privilege, and the **Admin** user is always a member of this group.

The initial **Admin** user password is "Admin". When you first log in to the system after installation, you can do so using this User ID and password. It is recommended that you change this password before adding other users to the system.

The Admin icon linked directly to the ProblemTracker Administration section is included in the ProblemTracker Button Bar for all members of user groups that have the Admin privilege enabled.

When clicking on the Admin icon for the first time, ProblemTracker will check to see if there is a newer version available. If a newer version is available, you will see a note at the top of the Administration section.

The following options are available in the Administration section:

**Define Record**
Adding, editing, and removing fields from the data record can be done in this section. The settings in this area also contain options such as, on which pages and to which user groups should a field be made visible, the order of the fields on each page, and whether a field is required as well as settings for the features dependent pulldowns, auto fill, and field help.

**Option Menus**
The option menu items for each pulldown field are defined in this section. You can also select a default value for the Add page and set up dependencies between pulldowns.

**Define Workflow**
Add, edit, remove, and setup the workflow process, including configuring the list of states, transitions, fields that are presented during the Task operation, alerts, state managers, and other workflow properties.

**Email Configuration**
Allows you to set up the email server, define the default notification preferences, per-product notification preferences, and incoming mail server configuration.

**User Administration**
In this section you can add, edit, and remove user accounts. You can also setup user groups and their respective privileges as well as define the fields on each page a user group can access.

**User Sessions**
You can use this section to see how many active sessions there are for the workgroup. You have the option to

end any of the sessions (e.g. to perform maintenance on the workgroup).

**General Preferences**
Set options for general parameters for this workgroup

**User Preferences**
Set default personal preferences applied to any new user accounts added to this workgroup

**Send Email**
Allows you to send an email to a user or user group in this workgroup. Also used for troubleshooting email issues.

**Maintenance**
This section contains an option to delete test records from this workgroup. It also contains other utilities used to diagnose and repair ProblemTracker.

**Inet Page Options**
This section contains settings used to customize the Inet page for users to submit records anonymously to this workgroup. Use of this option requires a license key.

**Knowledge Base**
Settings for creating and customizing a searchable Knowledge Base are contained in this section. Use of this option requires a license key.

Note that many administrative functions can make large changes to the ProblemTracker database. While not necessary, it is generally a good policy to back up the database before performing an administrative task. Also, to prevent confusion to users (things may change suddenly as a result of an administrative task), it is recommended that you do so when no one is using the system.

## Overview

In addition to the security provided by the web server to limit access to web pages, ProblemTracker also incorporates a built-in security model that allows the administrator to control access to both function (Add, Delete, Edit, etc.) and data.

By using these features the administrator can create different classes of users (via user groups) with different available operations and access to data. For example, a user group could be defined that allows users access to query and view only those records created by other users in their group.

Note that this section is meant to serve as an introduction to basic ProblemTracker security concepts. Detailed information on how to perform specific tasks are covered in the various help subjects where the options are actually set.

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## User Groups and Logins

The ProblemTracker security model is based on the concept of individual users and user groups. Each individual user must log into the system, and each user is a member of one or more user groups. User groups are a convenient way to group similar users together, and define security for those users.

For example, rather than defining specific access privileges for all 50 users at a company, the administrator can split the users in to functional groups (Development, QA, Customers, etc.), define security for the functional groups, and then assign the users to those groups.

All users are members of one of the following system-defined user groups by default:

- **Users:** All users with Static or Floating selected as the License Type are a member of the "Users" group.
- **Restricted Users:** All users with Restricted selected as the License Type are a member of the "Restricted Users" group.

The Admin user is always a member of the system-defined user group "Admin".

Users and user groups are covered in detailed in these help topics:

- User Administration - Users
- User Administration - Groups

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## Restricting Access To Functions

Each user group can be assigned privileges, and each user that is a member of the group inherits that set of privileges. All of the basic ProblemTracker functions like Add, Edit, etc. are defined to be individual privileges that can be assigned to a user group.

For example, to allow a user to Add and View records, create a user group that has both Add and View privileges, and then assign the user to that group.

One special case is the Admin group, which always has Admin function privilege. Other user groups can also be defined to have this privilege, however it cannot be removed from the Admin group. Privileges are covered in detail in the following section:

- User Administration - Privileges

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## Restricting Access To Data

ProblemTracker supports an optional record visibility model. This means that each data record is defined to be visible to a set of user groups. The record can be seen by any user who is a member of a group in this set, it is invisible to all other users. This feature can be enabled or disabled via the setting under General Preferences.

By default, when a record is created, it is set such that it is visible to all groups in which the reporter is a member. You can assign a user group the ability to modify record visibility. All users with this privilege are given the ability to explicitly pick the user groups to which the record is visible when it is created, and also the ability to later edit the visibility. There are two options that control this behavior (see General Preferences for details...):

- **Limit Record Visibility Selection To A User's Own Groups**
  When enabled, a user may only choose from the groups in which he or she is a member when setting record visibility.
- **By Default Include Group "Users" For Record Visibility On Add Operations**
  Since all non-Restricted users are members of the Users group, it is impossible to restrict access to a record if it is made visible to the Users group. This setting allows you to specify that the record should not be made visible to the Users group when it is first created. If you have enabled the Record Visibility feature, this option should be set to "No".

If you have a set of users who should be able to access all records, irrespective of which user groups they belong to, you should give those users the **Override Record Visibility** privilege. This can be useful for situations where internal users should be able to see all records, but external users should be limited to viewing only records they have added or records which have been explicitly made visible to them. You can configure the system to do this by giving Override Record Visibility to internal user groups (and excluding it from the Users user group) and by removing **Edit Record Visibility** privilege from all external user groups (and the Users user group). When this is done in a system where Record Visibility is enabled, **Limit Record Visibility Selection to A User's Own Groups** is set to "Yes", and **By Default Include Group "Users" for Record Visibility On Add Operations** is set to "No", external users will only be able to see records they (or others in their group(s)) have added and internal users will be able to see all records. See User Administration - Privileges and General Preferences for details on how to modify these settings.

NetResults ProblemTracker

# General Preferences



To modify the ProblemTracker general preferences, press the "General Preferences" button located on the ProblemTracker Administrator home page. You can modify the following preferences:

## General Options

- **Display Order Button on Button Bar**
  The order button displays the order form in a separate browser window. If you wish to remove this button from the button bar, select "No".

- **Remove Records from Database on "Delete" Operation**
  This option determines whether a delete operation merely marks a record and associated records as deleted or executes a true delete and removes these records from the database. The default setting for this option is "No".

- **Enable Session Locking with Administrator Level Override**
  A record edit locking feature is activated when the "Yes" radio button is selected. Users who begin editing, deleting or task operations on a record will lock access to that record until moving to another operation. Record locks can be overridden by users with Administrator level privileges. When an override occurs, the Administrator is notified and asked to confirm the override. The user who's lock has been released, will receive a notification message that their operation was overridden and could not be completed. The default setting for this is "No" (i.e. Session Record Locking is disabled).

- **Include "State Manager" in the Assignee List on Add Operation**
  Selecting "Yes" for this preference will allow the value "State Manager" to be displayed in the "Assigned To" field when this field is visible on the Add page. Selecting "State Manager" in the "Assigned To" field on the Add page will assign the newly created record to the user listed as the State Manager in the Workflow Properties based on the values of the Product and Status fields within the new record. Please review the Workflow Properties section for an explanation of how State Managers are used as a means of automatic assignment based on the Status and Product fields.

- **First Record Number**
  Enter any integer equal to or greater than "0" to be the number of the first record created in this workgroup. Each new record will be automatically assigned a number sequentially starting from the value listed for this preference. For example, if "100" is entered for this preference, the number of the first record created will be "100" and the number of the second record will be "101". The default value for this preference is "0".

  The value of this preference can only be changed when there are no records present in the workgroup. If you wish to change the value of this preference after records have already been created, you must first delete all records in the workgroup, then change the value of the "First Record Number" preference. To delete all records in the workgroup, refer to the instructions in section called Permanently Deleting

Multiple Records.

- **Banner Background Color**
  You can choose from several colors for the ProblemTracker Title Area.

- **User Name Format for Reports and Email Messages**
  This option determines what will be displayed to identify a user in the Reported By and Assigned To fields in the Home, View, Query, History, and Email Notification Messages. The selection in this option will also affect the sorting of reports that use the Reported By or Assigned To fields in the layout.
  - When **User ID** is selected, the information entered in the User ID field of the user's profile will be displayed and used for sorting in the reports.
  - When **Full Name** is selected, the information entered in the First and Last Name of the user's profile will be displayed. The name will be sorted alphabetically by first name in the reports.
  - When **First Name** is selected, the information entered in the First Name field of the user's profile is displayed and used for sorting in the reports.
  - When **Last Name** is selected, the information entered in the Last Name field of the user's profile is displayed and used for sorting in the reports.

- **Database Type**
  This value must be selected when the workgroup is created through the Workgroup Management System. For information on selecting a database type, please review the section Adding a Workgroup.

- **Enable Alerts**
  Selecting Yes for this option allows you to use the Alerts feature. The Alerts feature allows you to configure ProblemTracker to send an alert message at a specific date and time or when a record's state has not changed within a certain period of time. Please review the Alerts section for more details about using this feature. This option will not be displayed unless you are using ProblemTracker Enterprise Edition and you have entered a valid Alerts license key in the License Manager (or you are using a trial version).

- **Enable Discussion**
  Selecting Yes for this option allows you to use the Discussion feature. Discussion allows various threads to be initiated within each record for users and groups to view and post messages. Please review the Discussion section for more details about using this feature. This option will not be displayed unless you are using ProblemTracker Enterprise Edition and you have entered a valid Discussion license key in the License Manager (or you are using a trial version).

- **Enable API**
  Selecting Yes for this option allows you to use the Add API feature. This option will not be displayed unless you have entered a valid API license key in the License Manager. This feature must be installed using its own installation setup program separate from the ProblemTracker installation.

- **API User**
  The user selected will determine the settings used when a record is created via the Add API. These settings include the privileges and field visibility granted to this user based on group membership. This option will not be displayed unless you have entered a valid API license key in the License Manager.

- **Enable Add Record via Email**
  Selecting Yes for this option allows you to use the Add Record via Email feature. Please review the Adding Records via Email Overview for more details about using this feature. This option will not be displayed unless you have entered a valid Email license key in the License Manager.

- **Enable Self-Registration**
  Selecting Yes for this option allows you to use the Self-Registration feature. Self registration allows end users to create their own ProblemTracker user account without assistance from an Admin user. Information about use of this feature can be found in the Self Registration section.

- **Enable Inet Page**
  Selecting Yes for this option allows you to use the Anonymous Add form. The Anonymous Add form allows end users to add records to this workgroup without a user account. Please review the Anonymous Add section for more details about using this feature. This option will not be displayed unless you have entered a valid Anonymous license key in the License Manager (or you are using a trial version).

- **Enable Knowledge Base**
  Selecting Yes for this option allows you to use the Knowledge Base feature. A Knowledge Base is a type of ProblemTracker workgroup that allows you to publish articles that can be searched by your end users to find answers to common issues or questions. Please review the Knowledge Base Overview section for more details about using this feature. You must have selected Knowledge Base as the template type when the workgroup was created in the Workgroup Management System. Information on adding a new workgroup can be found in the Adding a Workgroup section of the WMS Help Guide. You must enter a valid Knowledge Base license key in the License Manager (or you are using a trial version).

## Record Visibility Options

Record Visibility allows a ProblemTracker administrator to set up an environment where access to records is restricted on a user group basis. Disabling record visibility can have the benefit of faster performance since enforcing record visibility restrictions requires more complex database queries. Please review the user group privileges in the User Administration section for internal user groups. If there are already records entered into the workgroup, you may wish to edit the record visibility of those records using the Edit Results operation in the Query page.

- **Enable Record Visibility**
  Enables record visibility control (record-level security). Set this to "Yes" to enable this feature.

- **Limit Record Visibility Selection To A User's Own Groups**
  For those users with the ability to edit the visibility of a record, this option selects whether they should only be able to select from user groups that they are a member of (Yes), or whether they should be able to pick any user group (No). For maximum security, it is recommended that this preference be set to "Yes".

- **By Default Include Group 'Users' For Record Visibility On Add Operation**

When a record is added, it is automatically made visible to the user groups that the user reporting the record is a member of. This option selects whether the "Users" group should be included in this list of user groups (Yes) or not (No). If you intend to use the record visibility feature to limit access to records, you should select the value No (since all non-Restricted users are a member of the "Users" group, including this group means that all non-Restricted users can view any record). Non-Restricted users are users that have "Static" or "Floating" selected as the license type. Restricted users are users that have "Restricted" selected as the license type. For more information about distinguishing between users of different license types, please review the Users section.

**Record Visibility and the Inet Page**

Since there is no logged in user associated with issues reported via the Inet Page, there is a setting available in the Inet Page Options to configure the Record Visibility for issues submitted via the Inet Page. If the Inet Page feature is enabled and Record Visibility is enabled, please verify that the "Make Visible To These User Groups" setting in the Inet Page Options is set such that issues added via the Inet Page are visible to the appropriate user groups.

**Record Visibility and Add via Email**

When processing emails, ProblemTracker may not be able to map an incoming email to a user account (there is no user account with the same email address). In that case, it uses the Record Visibility settings in the Incoming Mail Configuration for the record which it creates from the unmapped email. If the Add Records via Email feature is enabled and Record Visibility is enabled, please verify that the "Record Visibility for Unmapped Emails" setting in "Set Global Mail Options" for Incoming Mail is set such that issues added via email which can not be mapped to a user account are visible to the appropriate user groups.

## Source Code Control Options

- **Enable Source Code Control Integration**
  Setting this option to Yes allows your database to interact with the Source Code Control system specified in the next 3 options.

- **Source Code Control Product**
  Microsoft Visual Source Safe is the only product that can be used for Source Code Control Integration at this time.

- **Path to srcsafe.ini**
  Specify the path to the srcsafe.ini file that is present on the server machine where ProblemTracker is installed.

- **Path to ss.exe**
  Specify the path to the ss.exe file that is present on the server machine where ProblemTracker is installed.

## Multinationalization Options

- **Character Set**
  The character set and the corresponding available languages for the database will be displayed. This list is based on the workgroup settings in the Workgroup Management System.

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## Configuring Record Visibility

Record Visibility is a feature that restricts the records a user is able to access based on user group membership. This is useful in environments where you need to limit the records that are accessible to customers or external users while still allowing these users to access records that are pertinent to their company or account. To configure Record Visibility, please use the steps below:

1. Enable the feature and set the Record Visibility options in the General Preferences section described above
2. Set the Record Visibility privileges in the Privileges section
3. For any user that is not a member of a user group with the privilege "Override Record Visibility" (most likely all external users or customers), add the user to at least one user group other than the "Users" group so that this user can see the records he/she reported. For example, you may choose to create a user group for each company, vendor, or external user. This is required because by setting the option **By Default Include Group 'Users' for Record Visibility on Add Operation** to "No" in the General Preferences, any records added to the system will not be accessible to members of the Users group. If the user is a member of only "Users" group, then he/she cannot even view the records they submitted. Refer to the User Groups section for details on creating user groups and adding users as members

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# User Preferences

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## Default Personal Preferences for New Users

A set of personal preferences can be applied by default to a user account that is added to the workgroup. Each user can modify his or her own preferences in the Personal Preferences section. There are different personal preferences available depending on the user's license type (Static / Floating or Restricted).

To **modify** the default personal preferences for new users:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Preferences** button
4. Select the **User License Type**, then click on the **Continue** button
5. Set the preferences (each option is described in detail below)
6. Click **OK** to save your selections

## Report Settings

**Maximum Records per Page**
This option restricts the maximum number of records to be displayed in the results of Home and Query reports. The default is 20 records per page. The maximum value for this setting is 100 records per page.

**First, Second, and Third Home Page Reports**
These options specify the saved queries or charts which will be displayed on the Home Page by default. By default, the saved query **Assigned To Me [Users]** is selected for the **First Home Page Report**, which will display all records assigned to the login user. The saved query **Reported By Me [Users]** is selected for the **Second Home Page Report**, which will display all records created by the login user. **<No Report>** is selected for the **Third Home Page Report** by default.

When setting the preferences for **Static / Floating users**, all saved queries and charts within your database will appear in the pulldowns for the Home Page reports. When setting the preferences for **Restricted users**, saved charts cannot be selected for the Home Page reports. To modify saved queries, please see the section Using Saved Queries & Reports. To modify saved charts, please review the section Metrics section.

**Chart Width x Height**
Enter the width and height that should be used to display a saved chart on the Home Page. 700 x 300 is entered by default. This option is available for Static / Floating users only.

## Help Settings

**Display Field Help**
Checking the box for this option will display the field help icon to the left of the fields on the Add, Edit, and Task pages in ProblemTracker. When information is entered into the Field Help section of a field's attributes in the Define Record section and this preference is enabled, the user can move the cursor over the Field Help icon to see a description of the field.

## Date Settings

The following settings govern the way date and time fields are displayed for users by default.

**Date Format**
The date format supports arrangements between month, day and year fields which are common in most countries of the world. This date format will be used in all date values generated by ProblemTracker to support international date conventions. Legal formats are "mm dd yyyy"(default), "dd mm yyyy" and "yyyy mm dd". ***Important! -- the date format choice must conform to a date field format recognized by your database based on localization settings on your platform***.

**Time Format**
The time format determines the format of any time values generated by ProblemTracker. The option "12 hour" will display the time using the numbers 1-12 to represent each hour. The option "24 hour" will display the time using the numbers 0-24 to represent each hour.

**Time Zone**
The time zone selected will be used for all data in the workgroup. The time zone you select for this option will also be used as the default for new users. To see a complete list of time zones available in your operating system, please refer to one of the following sections:
Windows 2003 / XP / 2000 Time Zones
Windows NT 4.0 Time Zones

**Adjust to Daylight Saving Time (DST)**
Checking the box here will enable the system to adjust the workgroup data to account for daylight saving time. If you selected a time zone for the workgroup where daylight saving time is observed, it is recommended that you enable this option.

## Export Settings

The following preferences are used when report data is exported from the ProblemTracker Home, Query, and Metrics pages. Data is exported as a CSV (comma separated values) file. However, because there is no firm definition of a CSV standard, you or your individual users may need to modify some parameters to allow use of the exported data by other applications (spreadsheet, database, etc.). When you create a workgroup, ProblemTracker will automatically set these values to defaults that work most often for the character set (UTF-8, ISO-8859-1, or Windows-1252) of the workgroup. So in most cases, you will not need to modify these settings from their default values.

**Field Separator**
Choose one of the options to be used as the separator between the fields (values) of a report that is being exported. The available options are **Comma**, **Semicolon**, and **Tab**. If you are using a UTF-8 character set for

the workgroup, it will default to **Tab**. This generally works best for UTF-8 (Unicode) data; however, since there is no standard for exporting Unicode CSV data you may need to change this to Comma or Semicolon. If you are using a Windows-1252 or ISO-8859-1 character set, it will default to **Comma** as the original use of CSV for ASCII data used a Comma. However, if you are in a country that uses a comma as the separator between the whole number and fractional part of a floating point number (e.g. 45,125 for 45 and one eighth), you may need to change this to Semicolon. If you are unsure whether a particular user will need to use Comma or Semicolon, have them look at the list separator setting in Regional Settings on their machine. To check the list separator in the Regional Options, go to **Start -> Settings -> Control Panel**, then double click on **Regional Options**, click on the **Numbers** tab, then check what is listed as the **List Separator**. To find which character set your workgroup is using, check the Multinationalization Options in the ProblemTracker General Preferences admin section.

**Row Separator**
Choose one of the options to be used as the separator between the rows (lines) of a report that is being exported. The options are **Carriage Return & Line Feed (Windows)**, **Carriage Return (Mac OS)**, and **Line Feed (Unix)**. By default, it will be set to **Carriage Return & Line Feed (Windows)**. The separator selected should be compatible with the user's operating system. Because your users may not all have the same operating system, it is best to select the row separator that matches most of your users' operating systems.

**File Extension**
Choose one of the options to be used as the file extension when saving the file containing the exported data. The options are **csv**, **txt**, and **No Extension**. By default, it will be set to **csv** if the character set for your workgroup is Windows-1252 or ISO-8859-1 or **txt** if the character set for your workgroup is UTF-8. Because there is no CSV standard for Unicode data, it is generally best not to use the **csv** file extension for UTF-8 workgroups. Unix users may prefer the **No Extension** option. The Multinationalization Options in the General Preferences section displays which character set your workgroup is using.

## Dependent Pulldowns

**Enforce Pulldown Dependency in Query Page**
This option determines whether the dependent relationships between pulldown fields configured in this workgroup will be enforced when using the Query operations. This preference can only be set for Static / Floating users.

## Multi-Line Field Settings

**Display Window**
Select the maximum number of lines that should be displayed when viewing the text within a BigText (TextArea) field. By default, this will be set to 5 lines. If the contents of a BigText field extend beyond the number of lines set in this preference, the user will have the ability to scroll to see the complete contents of the field. If the user is using Internet Explorer as the browser, the option to expand the window to see the complete contents by clicking on the "+" will be available.

## Discussion Settings (Enterprise Edition Only)

These preferences apply to the Discussion feature, which is only available in ProblemTracker Enterprise Edition. These preferences are only available for Static / Floating users.

**New Post Notification**
This option determines when a user will be notified about discussions via email. Selecting **No Email** indicates that a user should not receive any email notification messages related to discussions. Selecting **Receive Email for each New Post** indicates that a user will receive one email message for each new post in a discussion to which he / she is subscribed. Selecting **Receive Email for the first New Post to each Thread** indicates that the user will receive one email for the first new post made to a discussion thread to which he / she is subscribed. Once the user browses to the message list of the thread, the next new post made to the thread will trigger another email to be sent to the user.

**Invitation Notification by Email**
This option determines whether a user should receive an email message when he / she has been invited to participate in a discussion initiated for a particular record. Selecting **Yes** indicates that the user should receive an email invitation for each new discussion.

**Message Display Window**
Enter the number of lines of text you wish to see when displaying a message within a discussion. If the contents of a Discussion message extend beyond the number of lines set in this preference, the user will have the ability to scroll to see the complete contents of the message. If the user is using Internet Explorer as the browser, the option to expand the window to see the complete contents by clicking on the "+" will be available. The default setting is 5 lines of text.

**NetResults ProblemTracker**

User Administration - Users



## Overview

In order to use ProblemTracker, every user must log in as a registered user. ProblemTracker allows you to enter users and distinguish between internal users and external users like customers or partners. Before a user can begin using ProblemTracker, a user must be created and given access to a workgroup(s) in the License Administration section of the Workgroup Management System. After this is done, you can add a user to the User Administration section of your ProblemTracker workgroup. Within a workgroup, a user's access rights and privileges is determined by the user groups to which a user belongs.

## Definition of Users by License Type

There are three types of licenses available for use with ProblemTracker: Static, Floating, and Restricted.

For all licenses only one user may be logged in to ProblemTracker per license. A **static** license is defined as one user account (user ID) for each license purchased. Only one user can login to the system with this particular user ID. A **floating** license is defined as up to 10 user accounts for each license purchased. Only one user per floating license can login to the system at a particular time. Others who try will be denied access until a floating license user logs off (clicks the Logoff icon). A **restricted** license is defined as one user account (user ID) for each license purchased.

**Static** licenses are typically used for users who regularly use ProblemTracker and therefore must be guaranteed access at any time (can never be denied access because too many users are already logged in). **Floating** licenses are typically used for infrequent users if it is acceptable that they may not be able to login to the system some of the time (as all floating licenses may be in use). **Restricted** licenses are typically used for external users (e.g. customers, vendors, partners) that should have limited access to ProblemTracker operations and data.

Users of static and floating licenses are often referred to as "non-Restricted" users (users that do not use a Restricted license) in the various Help Guides.

For more details on licensing including your License Agreement and the number and type of license(s) you have, please run the License Manager.

## System Defined Users

ProblemTracker has 3 pre-defined users. These users all serve a special purpose and are not counted towards the number of users you have licensed. You cannot remove or modify these users:

- **Admin**
  The ProblemTracker administrator user. Admin is always a member of the Admin group. The initial

Admin password is "Admin". It is recommended that you change this password.

- **TBD**
  TBD is used to allow users to specify no choice. This user can be used as a placeholder for records where the assignee has not yet been decided or in cases where a record has been processed and an assignee is no longer needed. You cannot log in as TBD.
- **Inet**
  Inet is the user used by the Internet Bug Reporting page, Adding Records via Email, and Add API features to denote a record was added (reported) by a user external to ProblemTracker. You cannot log in as Inet.

## Adding a User

To add a user:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Add User** button
5. A list of available users will be displayed. Click on the username of the user you wish to add, then click on the **Add** button. You can select multiple users to be added by holding down the **CTRL** button on your keyboard while clicking on the usernames you wish to select.
6. Click **OK** after the operation is complete.

A user will only appear on the list of available users if the user account has been created and given access to the workgroup via the License Administration section of the Workgroup Management System.

Users that appear on the list of Available Users preceded by "*" are users that were previously deleted from the User Administration section. These users can be restored by clicking on the user, then clicking on the **Add** button. Click here for more information about restoring a user.

## Removing a User

To remove a user from a workgroup:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Delete** button to the left of the user account you wish to remove.

Deleting a user will not affect your existing records. However, before deleting a user we would recommend that you reassign any records currently assigned to that user to TBD or some other user in the system. You can search for all records assigned to the user by using the Query function. And, you can use the Edit Results operation from the query results page to reassign all records at once, rather than individually editing each record.

If you attempt to delete a user who is still the assignee for problem records within your database, you will be prompted to select a new assignee for the problem records from a list of internal non-Restricted users in the system. Similarly, if you attempt to delete a user who is a state manager, you will be prompted to select a new state manager from a list of internal non-Restricted users in the system. If you attempt to delete a user who is selected to receive alert email notifications, is specified as criteria in any saved queries or charts, or is specified in any transitions, you will be prompted to either select a replacement user from a list of internal non-Restricted users in the system or delete the relevant alert settings, queries, charts, and transitions.

## Restoring a User

If a user account is still listed in the "Available Users" list (indicating it is still active in the License Administration section of the Workgroup Management System), you can restore a previously deleted user with the steps below. If you choose to restore the user, the settings in the user's personal preferences will be preserved as they were at the time the user was deleted from the workgroup's User Administration section. A restored user which has Static or Floating selected as the license type will be only be added as a member of the Users group. A restored user which has Restricted selected as the license type will only be added as a member of the RestrictedUsers group. A user must manually be added to any other user groups after being restored.

To restore a user account:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Add User** button
5. Users who were previously deleted from the User Administration section will be denoted by a "*" in front of the username on the Available Users list. Click on the user account, then click on the **Add** button.
6. You will prompted that the user account you selected had been previously deleted. Click **OK** to restore the user account or click **Cancel** to abort the operation.

## Editing a User

By default, only the profile information of the Admin and users that do not have access to any other workgroups can be modified in the User Administration section using the steps below. Additional rights can be granted via the Workgroup Management System to allow the workgroup's Administrators to edit the profile information for all user accounts. Information on these additional rights can be found in the License Administration Options of the Workgroup Management System Help Guide.

To edit a user account:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Edit** button to the left of the user account to be modified
5. Click **OK** to save the changes to this account

Please note: It is not possible to edit a user account containing UTF-8 characters from the User Administration section of a workgroup that is not configured to support UTF-8 characters. Check the Multinational Settings section of the General Preferences section to see if your workgroup is configured to support UTF-8 characters.

## Assigning User Groups

To assign each user to user groups:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Groups** button
5. To add the user to a group, click on the desired group in the **Not Member Of** column, then click on the **Add** button. To remove the user from a group, click on the desired group in the **Member Of** column, then click on the **Remove** button.
6. Click **OK** to return to the User Administration section.

As an alternative, you can assign multiple users to a group using the instructions in the User Administration - Groups section.

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# User Administration - Groups



### Overview

A user group is a collection of zero or more users. Each group is assigned rights and privileges to the system, and all members of the group inherit those rights and privileges. For example, any user that is a member of the Admins group inherits the ability to access the Admin features of ProblemTracker.

You can assign each user to one or more user groups, and the privileges of each user is the sum of all the privileges for all of the groups in which he or she is a member. There are some restrictions:

- All non-Restricted users are a member of the Users group
- All Restricted users are a member of the RestrictedUsers group
- The Admin user is always a member of the Admins group

### Adding a User Group

To add a new user group,

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Edit Groups** button
5. Click on the **Add Group** button
6. Enter a name for the user group in the **Group ID** field
7. Enter some information to describe the purpose of the user group in the **Description** field
8. In the pulldown, select the **Type** of user group you are creating.
    - Select **Standard** if the members of this user group will be Static or Floating users. Restricted users cannot be members of a Standard user group
    - Select **Restricted** if the members of this user group will be Restricted users. Non-Restricted users can be members of either Standard or Restricted user groups
9. Click on the **Add Group** button
10. To enable a privilege for the user group you are creating, check the box next to the privilege. Details of the privileges available for each type of user group can be found in the following sections:
    - Privileges for Standard User Groups
    - Privileges for Restricted User Groups
11. After enabling all of the desired privileges, click on the **OK** button to save the user group
12. Click **OK** to return to the User Group section or click on the **Add Another Group** button to create another user group

### Editing a User Group

To edit a user group:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Edit Groups** button
5. Click on the **Edit** to the left of the user group you wish to modify
6. You can update the group name, description, or privileges. The "Type" property for each group cannot be edited. Click **OK** to save your changes.

### Assigning Users to a User Group

To assign users to a user group:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Edit Groups** button
5. Click on the **Users** button
6. To add a user as a member of the user group, click on the username in the **Not Members** column, then click on the **Add** button. To remove a user as a member of the user group, click on the username in the **Members** column, then click on the **Remove** button. To select multiple users, hold down the **CTRL** button on your keyboard while clicking on the desired users.

For a Standard user group, only non-Restricted users will be listed in the Not Members column as available users to be added to the user group. For a Restricted user group, Restricted and non-Restricted users will be listed in the Not Members column to be added to the user group.

---

### Field Level Visibility

Field Level Visibility provides the ability to limit the fields that are visible to a particular user group while performing operations such as Add, Edit, Query, and Email Notification. In some circumstances, it is necessary to restrict access to a field while performing certain operations to protect sensitive information or to prevent unauthorized changes to particular fields in a problem record.

A field's visibility can be configured by user group for the following areas in ProblemTracker:

- Add page
- Edit page (available only for Standard user groups)
- View page
- Query and Home Pages
- Email Notification Message

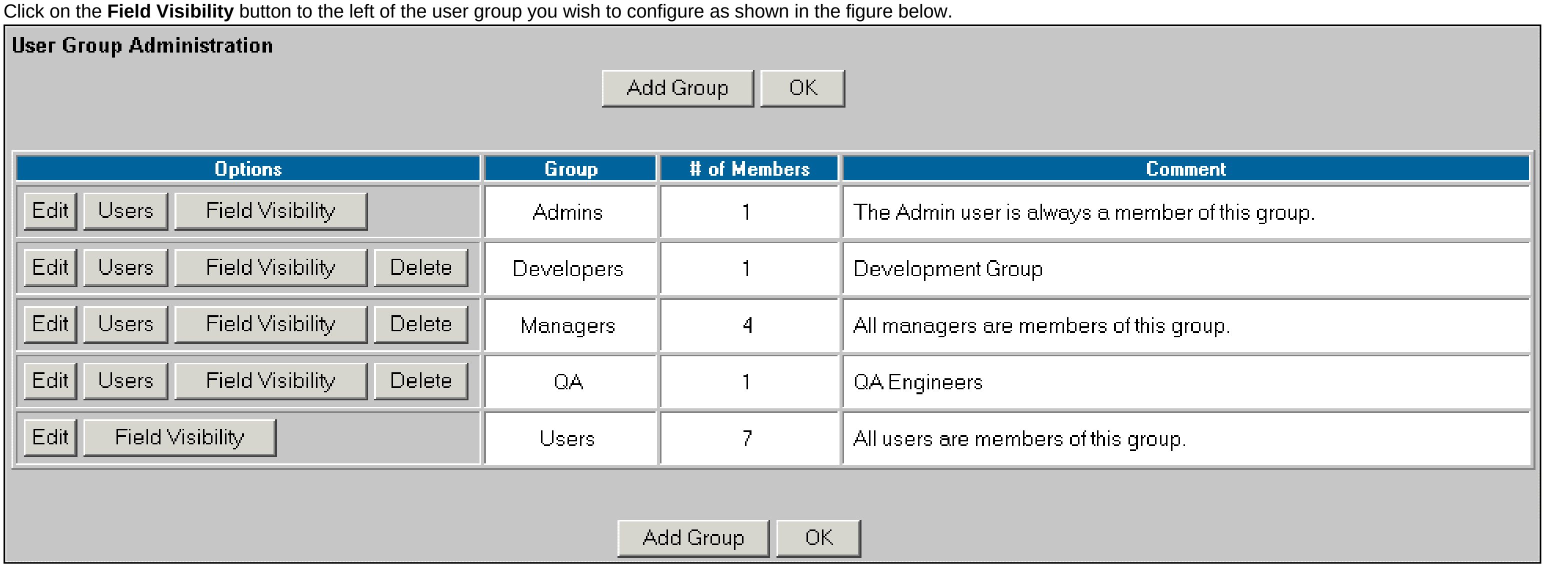
If you wish to restrict the fields which are made visible in the Task operation, this is done while configuring task fields for a transition. The Customizing Workflow Help section provides details on configuring task fields.

Field visibility options can be configured by modifying each user group or by modifying each field. The steps below allow you to configure the field visibility options by user group. If you prefer to configure the field visibility options by field, review the Field Visibility information in the Customizing the Data Record section.

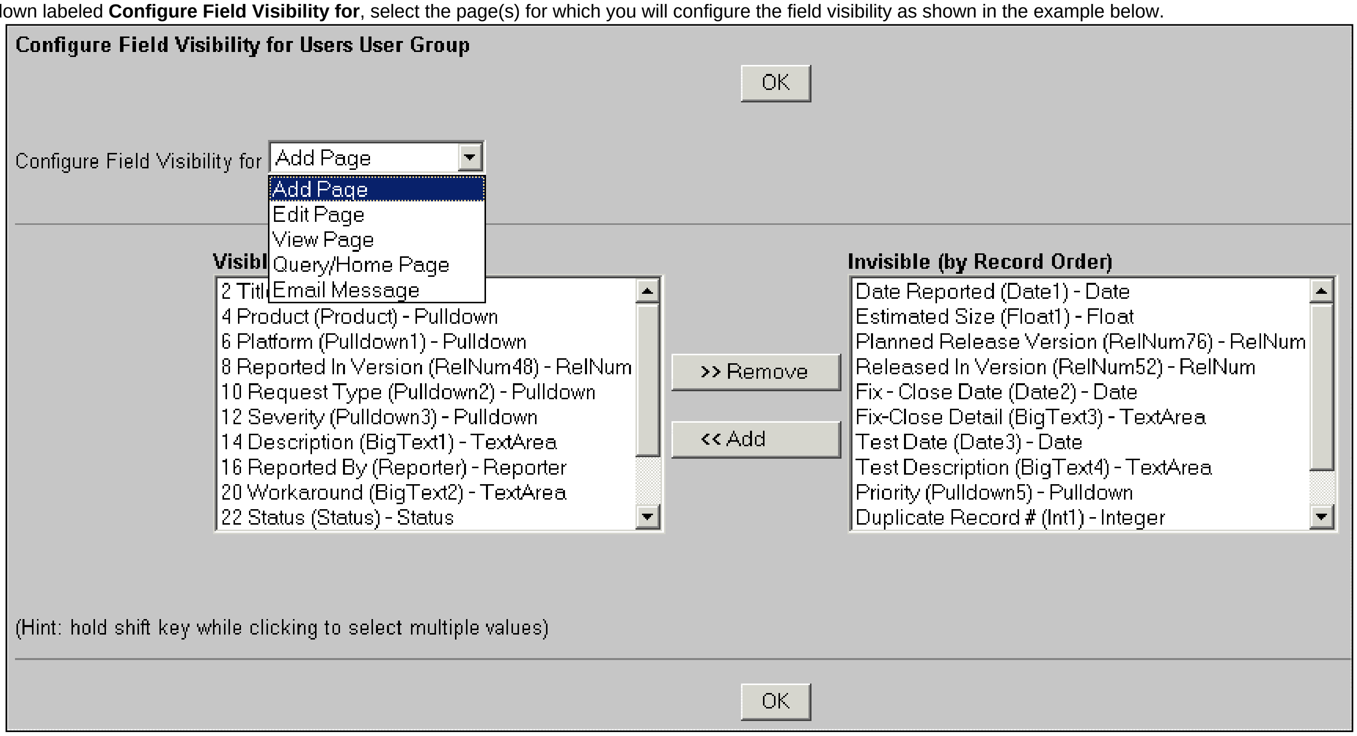
Please note that when records are created using the Add Records via Email feature, the field visibility settings for the Add page are not enforced on these records when they are created in ProblemTracker.

To configure field visibility for options for each user group:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **User Administration** button
4. Click on the **Edit Groups** button
5. Click on the **Field Visibility** button to the left of the user group you wish to configure as shown in the figure below.




6. In the pulldown labeled **Configure Field Visibility for**, select the page(s) for which you will configure the field visibility as shown in the example below.




7. The fields that are visible to the user group will appear in the left column. In the right column, the fields that are **Invisible** to the user group are displayed. To make a field visible to the user group on the page(s) selected in the pulldown menu, click on the field in the right column, then click on the **Add** button. To make a field so that it is not visible to the user group on the page(s) selected in the pulldown menu, click on the field in the left column, then click on the **Remove** button. Multiple values can be selected by holding down the **Shift** key on your keyboard while clicking on the values.

For Standard user groups (groups with only non-Restricted members), fields in the **Visible** column marked with an asterisk (*) are visible to the Users group (all non-Restricted users). These fields cannot be removed from the Visible column until the visibility for this field is changed in the Users group. After changing the visibility settings for the Users group, you can proceed with making changes for other Standard user groups.

Similarly for the Restricted user groups, fields in the Visible column marked with an asterisk (*) are visible to the RestrictedUsers group (all Restricted users). These fields cannot be removed from the Visible column until the visibility for this field is changed in the RestrictedUsers group. After changing the visibility settings for the RestrictedUsers group, you can proceed with making changes for other Standard user groups.

## Field Visibility Exceptions for Required fields

When a field has the attribute **Required on Add** set to "Yes", but the field is not visible on the Add page for certain user groups, the newly added record will be saved with the field's default value. The defaults for each field type are listed in the Data Types section at the top of this page.

Certain fields in the data record are required, meaning that they cannot be removed from the data record. Some field visibility settings cannot be applied to these required fields.

**PRN**
This field is the record number assigned when a record is added to the database. Field visibility restrictions cannot be set for this field as it is a field that is displayed on ProblemTracker pages to distinguish the identity of each record.

**Deleted**
This field denotes whether a record has been deleted. By design, it does not appear on the Add page, and thus, field visibility for this field on the Add page cannot be set.

## Effects of Field Visibility Restrictions on ProblemTracker operations

**Add page**
When a field is not visible to a user group on the Add page, the default value will be applied to each invisible field when a member of this user group adds a record. The default values for each field type are listed in the Data Types section in Customizing the Data Record .

**Query and Home pages**
When a field is not visible to a user group on the Query and Home pages, the field is also not visible in the personal or group Report Layouts for that user group. If a field is made Invisible for a user group and this field is already in use in a report layout for this user group, the field will be replaced with the value "Do Not Use This Column" in the report layout.

Similar actions will occur with respect to personal or group saved queries and advanced saved queries. In this case, the restricted field will not be displayed in the saved query or advanced saved query. Any fields that are not visible to the user group will have a default value applied when the query is run. In most cases, this default value is "*", which indicates that all possible values for the field will be included in the query results even though this field will not be displayed on the query page or its results. In the case of the "Deleted" field, the default is "No", thus, all records that have not been marked deleted will be included in the query results. If the restricted field was being used as a "Sort By" field, the field will be replaced with "*" for the Sort by value.

Additionally, with respect to personal or group saved advanced queries that were created before a field was made invisible to a user group, any clause in the **Query Phrase** section containing a restricted field will be automatically removed from the saved advanced query.

**NetResults ProblemTracker**

# User Administration - Privileges



The following describes the privileges that may be assigned to Standard and Restricted user groups. To set the privileges for a user group:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon in the button bar
3. Click on the **User Administration** button
4. Click on the **Edit Groups** button
5. Click on the **Edit** button to the left of the user group for which the privileges will be modified
6. To grant a privilege to a user group, check the box to the left of the privilege. To deny a privilege, uncheck the box. Details of the available privileges for each user group type can be found below.
7. Click **OK** to save your changes

When assigning user group privileges, please note:

1. All non-Restricted users are members of the **Users** group. Therefore, if a privilege is granted to the Users group, all non-Restricted users will have the privilege. When a new non-Restricted user is added to the workgroup, this user inherits the privileges granted to the Users group.
2. All Restricted users are members of the **RestrictedUsers** group. If a privilege is granted to the RestrictedUsers group, all Restricted users will have the privilege. When a new Restricted user is added to the workgroup, this user inherits the privileges granted to the RestrictedUsers group.
3. Users can be members of one or more user groups, so the operations a user can perform are based on the privileges assigned to all of the user groups in which the user is a member.

In light of the items mentioned above, it is best to limit the privileges assigned to the Users and RestrictedUsers groups to be a minimal set of privileges, then create new user groups that provide additional privileges.

## Privileges for Standard User Groups

Standard user groups (all members are non-Restricted users) can be granted or denied the following privileges.

## General Privileges

The following privileges are basic ProblemTracker operations. An icon will appear in the top button bar for members of the user groups which have been granted one or more of the following general privileges:

**Delete**
Members of groups with this privilege are allowed to delete records

**History**
Members of groups with this privilege are allowed to make queries into the record history database (audit

trail documenting changes made by whom and when)

**Admin**
Members of groups with this privilege allowed to perform Admin functions

**Help**
Members of groups with this privilege are allowed to access the help documentation by clicking on the Help icon in the button bar or by clicking on the context-sensitive links that appear in the upper right corner of each page in ProblemTracker

**Edit Own User Account**
Members of groups with this privilege are allowed to make changes to the contact information listed in their user account. Users with this privilege can click on the Account Info link in the upper right corner of the Home Page to edit the information in their user profile

---

## Add Privileges

The following privileges are related to the Add operation. The members of the user group(s) that are granted any of the privileges below will have the **Add** icon displayed in the button bar:

**Add**
Members of groups with this privilege are allowed to add records

**Add Attachments via Add Page**
All members of groups with this privilege are allowed to add an Attachment on the Add page (along with the original problem record). To subsequently modify attachments in a record (Edit, Delete, or Add additional attachments), a user must also be a member of a group with the Edit Attachments privilege.

**Can Be Assignee For Add**
All members of groups with this privilege appear in the Assignee list when a record is added. This allows you to limit which users can be assigned to a newly added record.

---

## View Privileges

The following privileges are related to the View operation. The members of the user group(s) that are granted any of the privileges below will have the **View** icon displayed in the button bar and in the reports displayed on the Home and Query pages:

**View Fields**
Members of groups with this privilege are allowed to view the fields within records. The fields which the members or groups are allowed to view are based on the Field Visibility settings on the View page for each user group.

**View Attachments**

Members of groups with this privilege are allowed to view attachments within records

**View Source Code List**
Members of groups with this privilege are allowed to view source code files associated with records when Source Code Control Integration is enabled

**View Record History**
Members of groups with this privilege are allowed to view record history (audit trail documenting changes made by whom and when)

**View User Information**
When the "Assigned To" or "Reported By" fields appear on the View Page or in reports on the Home or Query pages, all members of groups with this privilege will be able to click on the user's name to see the details in their user account (e.g. phone number, email address, company name).

---

## Edit Privileges

The following privileges are related to the Edit operation. The members of the user group(s) that are granted any of the privileges below will have the **Edit** icon displayed in the button bar and in the Action column of the reports displayed on the Home and Query pages:

**Edit Fields**
Members of groups with this privilege are allowed to edit the fields within records. The fields which the members or groups are allowed to edit are based on the Field Visibility settings on the Edit page for each user group.

**Edit Attachments**
Members of groups with this privilege are allowed to edit the attachments within records

**Edit Source Code List**
Members of groups with this privilege are allowed to edit the source code files associated with records when Source Code Control Integration is enabled.

---

## Task Privileges

The members of the user group(s) that are granted any of the privilege below will have the **Task** icon displayed in the button bar and in the Action column of the reports displayed on the Home and Query pages.

**Task Assigned Records**
Members of groups with this privilege are allowed to perform the Task operation on records in which he / she is the Assignee.

**Task All Records**

Members of groups with this privilege are allowed to perform the Task operation on all records irrespective of the Status or to whom the record is currently assigned.

**Task Records in States**
Members of groups with this privilege are allowed to perform the Task operation on records in which the Status field is set to one of the states highlighted in the list below the privilege. Click on a state to select it. Multiple states can be selected by holding down the **CTRL** button on your keyboard while clicking on the states you wish to select.

---

## Query Privileges

The following privileges are related to the Query operation. The members of the user group(s) that are granted any of the privileges below will have the **Query** icon displayed in the button bar:

**Query**
Members of groups with this privilege are allowed to access the query page to generate reports. The fields which the members or groups are allowed to query are based on the Field Visibility settings on the Query / Home pages for each user group.

**Save Group Queries**
Members of groups with this privilege are allowed to add, edit, and delete group saved queries for any group in which they are a member

**Save Group Report Formats**
Members of groups with this privilege are allowed to add, edit, and delete group saved report formats for any group in which they are a member

**Edit Query Result Set**
Members of groups with this privilege are allowed to perform a query and then perform an edit that affects all the records in the query result set. If a user is also a member of a group with Delete privilege, then they can perform a delete of all records matching a query.

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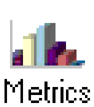
## Metrics Privileges




The following privileges are related to the Metrics operation. The members of the user group(s) that are granted any of the privileges below will have the **Metrics** icon displayed in the button bar:

**Metrics**
Members of groups with this privilege are allowed to generate Metrics reports and will have the Metrics icon displayed in the top button bar

**Save Group Charts**
Members of groups with this privilege are allowed to add, edit, and delete group saved charts for any group in which they are a member. In order to use this function, the "Metrics" privilege mentioned above should also be

enabled.

**Save Group Chart Layouts**
Members of groups with this privilege are allowed to add, edit, and delete group saved report formats for any groups in which they are a member. In order to use this function, the "Metrics" privilege mentioned above should also be enabled.

**Home Page Only**
Members of groups with this privilege are only allowed to run Metrics from their Home page. They will not have the Metrics icon in their toolbar. This can be used to limit users to running only those Metrics created for their User Group(s). This can not be selected if any of the other three options (above) are selected.

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## Record Visibility Privileges

The following privileges are related to Record Visibility, a feature which restricts a user's access to records based on the user groups in which he or she is a member:

**Edit Record Visibility**
When a record is added, it is made visible to all user groups in which the reporter is a member. Members with this privilege are allowed to explicitly select which other groups may view the record when it is added, and also change what groups may view the record at any later time. If a user does not have this privilege and Record Visibility is enabled, then when they add a new record the visibility of the record is based on the General Preferences settings related to Record Visibility. Typically you should grant this privilege to internal user groups (users who should be able to select which groups can see a record they are reporting) and exclude it from external user groups. This privilege is only meaningful if Record Visibility is enabled in the General Preferences section. User groups with this privilege will have the field **Make Visible to These User Groups** displayed on the Add, Edit and Edit Results pages if they also have privileges related to the Add, Edit and Edit Results operations.

**Override Record Visibility**
All members of groups with this privilege are allowed to view all records. This is typically used to allow members of internal user group(s) to view records added by all other external user group(s) without having to be a member of every user group. Member of user groups that have this privilege and the Edit Record Visibility privilege can set the visibility of any record to any set of user groups (not just the user groups to which they belong). This privilege is only meaningful if Record Visibility is enabled in the General Preferences section.

---

## Email Content

The following privileges are associated with the content included in the email notification messages sent by ProblemTracker. The privileges represent the components of an email notification message as configured in the Per-Product Email Notification Preferences section.

**Greeting**
Members of groups with this privilege receive email notification messages with the Greeting section included

**Introduction**
Members of groups with this privilege receive email notification messages with the Introduction section included

**Operation Description**
Members of groups with this privilege receive email notification messages that contain the Operation Description section

**Link**
Members of groups with this privilege receive email notification messages that contain a hyperlink to the View page of the record listed in the email message

**History Comment**
Members of groups with this privilege receive email notification messages that include the history comment entered during the operation that triggered the notification message

**Fields**
Members of groups with this privilege receive email notification messages that include the record's fields that are visible to this user group via email

**Signature**
Members of groups with this privilege receive email notification messages with the Signature section included

---

## Clone Privileges

The following privileges are associated with the cloning (copy record) feature.

**Clone Record**
Members of groups with this privilege can perform the Clone operation from the View page. This privilege is not needed to perform a Task operation that has been configured to clone a record. If you wish to control when a record can be cloned (based on the Status of the record) and what fields must (or may) be modified in the clone (child record) immediately after the clone operation, then we recommend that you do not enable this privilege. Instead, you should configure (or add) some Transitions to perform the clone operation.

**View Clone Information**
Members of groups with this privilege will have the Clone Info section visible on the View page. The Clone Info section of the View page includes information about and links to the "parent" (record that the record being viewed was cloned from) as well as the "children" (clones created from the record being viewed), if any.

---

## Alert Privileges (Enterprise Edition Only)

The following privileges are related to Alerts, a feature which allows alert notification messages to be sent when a record has not changed state during a certain period of time. These privileges will only be displayed if an Alerts License Key has been entered and the feature has been enabled in the General Preferences section:

**Edit Alert Settings**
Members of groups with this privilege are allowed to modify the alert settings for a record. In addition, members of groups with this privilege will have the **Edit** icon present in the button bar and in the reports displayed on the Home and Query pages.

**Edit Own Alert Settings**
Members of groups with this privilege are allowed to modify the alert settings for records in which they are the current assignee. In addition, members of groups with this privilege will have the **Edit** icon present in the button bar and in the reports displayed on the Home and Query pages.

**View Alert Settings**
Members of groups with this privilege are allowed to view the alert settings for a record. In addition, members of groups with this privilege will have the **View** icon present in the button bar and in the reports displayed on the Home and Query pages.

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## Discussion Privileges (Enterprise Edition Only)


The following privileges are related to Discussion, a feature which allows users to discuss various topics within a particular record. These privileges will only be displayed if a Discussion License Key has been entered and the feature has been enabled in the General Preferences section. The members of the user group(s) that are granted any of the privileges below will have the **Discuss** icon displayed in the button bar and other discussion icons in the reports displayed on the Home and Query pages:

**View Messages**
Members of groups with this privilege may view messages within discussion threads for any record the group can access.

**Post Messages**
Members of groups with this privilege may post a new message or reply to a message within the discussion threads for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" privilege as well.

**Initiate Discussion Threads**
Members of groups with this privilege may create a new discussion thread for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" and "Post Messages" privileges as well.

**Edit Messages**
Members of groups with this privilege may edit the messages within a discussion for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" privilege as well.

**Delete Messages and Threads**
Members of groups with this privilege may delete the messages and / or threads within a discussion for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" privilege as well.

The privileges above make reference to "any record the group can access". If record visibility is enabled with a workgroup, the user can only access a record or the discussion(s) within a record if the user is a member of a user group to which the record is visible.

---

## Privileges for Restricted User Groups

The following are the set of privileges available for Restricted User Groups:

## General Privileges

**Help**
Members of groups with this privilege are allowed to access the help documentation by clicking on the **Help** icon in the button bar or by clicking on the context-sensitive links that appear in the upper right corner of each page in ProblemTracker.

**Edit Own User Account**
Members of groups with this privilege are allowed to make changes to the contact information listed in their user account. Users with this privilege can click on the Account Info link in the upper right corner of the Home Page to edit the information in their user profile.

---

## Add Privileges

These privileges are associated with creating records in ProblemTracker. Members of user groups that are granted any of these Add privileges will have an **Add** icon displayed in the top button bar.

**Add**
Members of groups with this privilege are allowed to add records

**Add Attachments via Add Page**
Members of groups with this privilege are allowed to add an Attachment on the Add page (along with the original problem record)

---

## View Privileges

These privileges are associated with viewing records in ProblemTracker. Members of user groups that are granted any of these View privileges will have an **View** icon displayed in the top button bar and in the Action column of reports on the Home Page.

**View Fields**
Members of groups with this privilege are allowed to view the fields within records. The fields which the members of groups are allowed to view are based on the Field Visibility settings on the View page for each

user group.

**View Attachments**
Members of groups with this privilege are allowed to view attachments within records

**View Record History**
Members of groups with this privilege are allowed to view record history (audit trail documenting changes made by whom and when)

**View User Information**
When the "Assigned To" or "Reported By" fields appear on the View Page or in reports on the Home page, all members of groups with this privilege will be able to click on the user's name to see the details in their user account (e.g. phone number, email address, company name)

---

## Email Content

The following privileges are associated with the content included in the email notification messages sent by ProblemTracker. The privileges represent the components of an email notification message as configured in the Per-Product Email Notification Preferences section.

**Greeting**
Members of groups with this privilege receive email notification messages with the Greeting section included

**Introduction**
Members of groups with this privilege receive email notification messages with the Introduction section included

**Operation Description**
Members of groups with this privilege receive email notification messages that contain the Operation Description section

**Link**
Members of groups with this privilege receive email notification messages that contain a hyperlink to the View page of the record listed in the email message

**History Comment**
Members of groups with this privilege receive email notification messages that include the history comment entered during the operation that triggered the notification message

**Fields**
Members of groups with this privilege receive email notification messages that include the record's fields that are visible to this user group via email

**Signature**
Members of groups with this privilege receive email notification messages with the Signature section included

**NetResults ProblemTracker**

# Self Registration



Self Registration is a feature which allows your end users to create their own ProblemTracker user account. This is useful in environments where there is a large number of end users and it is not known which of those end users will need a user account.

When activating this feature, the ProblemTracker Administrator selects the default license type to be applied to all new user accounts created by this feature. Users can self-register provided that there are sufficient licenses available to create the new user accounts. When the license limit is reached, users will be prompted that they cannot self-register and should contact their ProblemTracker Administrator.

To self register, a user browses to the ProblemTracker Login Page and clicks on the Self-Register link. The user will be required to provide some information to create a user account. After the user account has been created, the user is directed back to the Login Page to enter the username and password of their new account. This new account is added to the User Administration section.

## Enabling Self Registration

The following steps are required to enable the Self Registration feature:

- **Enable the Self Registration feature in the General Preferences section**

  1. Login to the workgroup as Admin
  2. Click on the **Admin** icon
  3. Click on the **General Preferences** button
  4. Set the option **Enable Self Registration** to "Yes"
  5. Click **OK** to save the change

- **Set Options for Self Registered Accounts**
  You can make selections for the license type, user type, and user group of self-registered user accounts as well as provide instructions for end users, customize the background, and add custom HTML to be displayed at the top and bottom of the Self Registration form filled out by your end users.

  To set the options related to the Self Registration form:

  1. Login to the workgroup as Admin
  2. Click on the **Admin** icon
  3. Click on the **User Administration** button
  4. Click on the **Self Registration** button
  5. Make selections for the options available:

     - When selecting a **User License Type**, you must have the corresponding license key entered into the License Manager. In addition, you should ensure that you have not reached the maximum number of user accounts allowed for the license type selected as this will prevent users from being able to self-register. For a current snapshot of the total user accounts configured in your installation, please use the List Users operation in the Workgroup Management System. Definitions of the license types are available in User Administration section.

- "Internal" or "External" can be selected as the **User Type**. An External user cannot be assigned to any record (these users are not listed in the "Assigned To" pulldown for selection during the workflow process). If "Restricted" has been selected as the **License Type** above, you must select "External" as the User Type.
- Select a User Group to which the self registered user accounts will be added as members.

  If you selected Static or Floating as the User License Type:

  - You can select a Standard or Restricted user group for this field
  - If you select a user group other than "Users" for this field, the self registered accounts will also be added to the Users group by default

  If you selected Restricted as the User License Type:

  - You can only select a Restricted user group for this field
  - If you select a user group other than "RestrictedUsers" for this field, the self registered accounts will also be added to the RestrictedUsers group by default.

- To set the **Background Color**, enter the HTML color code for the desired background color. This field must be of the format #XXXXXX.
- Enter information into the **Page Instructions** field to guide the end users about how to use the Self Registration form. The following text is entered by default:

  "**Note:** Enter user details and click Register to access the workgroup.
  UserId, Password, Last Name or First Name and Email are required fields."

- To enter your own Custom HTML to **Top of Page** or the **Bottom of Page**, enter any HTML source you would like to appear in the corresponding section. Note that all file references must be fully qualified, relative paths will not work.

6. Click **OK** to save your selections

- **Self Registration by End Users**
  To self-register, an end user should use the steps listed in the Self Registration section of the User Help Guide.

- **Administer Self-Registered Accounts**
  After a user has self-registered, the new account will be displayed in the User Administration section.

**NetResults ProblemTracker**

# User Sessions

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## Overview

A current snapshot of all user sessions can be found in the User Sessions section in the Admin page. Each user session begins when a user logs in and ends when they click the Logoff icon (or when you close their session, see below). A tally of user sessions by license type as well as total sessions allowed by each license key appears at the top of the page. Please note that the Admin user session is not not counted against the license limit.

To see a list of current User Sessions:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon.
3. Click on the **User Sessions** button.
4. By default the list of sessions will be sorted by User ID (ascending). To change the sort order, click on the UserId, Last Login Time, or License Type column label. Clicking a column label a second time will change sort order (ascending to descending or vice versa). When you click on the License Type column, it will use User ID as a secondary sort criterion (sort by User ID ascending for those users with the same License Type).
5. To end a user session, click on the **Logoff** button, then click **OK** on the popup to confirm. More information about closing user sessions can be found below.

## Closing User Sessions

A listing of each individual user session follows, which includes the User ID and last login time. The license type is listed for each user session. A **Logoff** button appears for each user session except Admin. You can terminate a user session by clicking the Logoff button. This is useful in cases where the limit of active floating user sessions has been reached causing another user to be unable to login. Also, this Logoff functionality can be used to clear out all user sessions when Administrative tasks need to be performed on the database (database backup, making large changes, etc.)

**Note:** A user may only terminate their session by clicking the **Logoff** icon. **Simply exiting their browser will not terminate their session**. If a user does exit their browser (or shuts down their machine) without clicking the Logoff icon, they can end their previous session by attempting to login again. At that point they will be offered an opportunity to terminate their previous session. By answering YES to terminating their previous session (and then clicking the Logoff icon at some point after successfully logging in this time), they can remove any "stale" sessions they have created without your assistance. Similarly, if a user browses off to another site without clicking the Logoff icon to end their ProblemTracker session, they can click the Back button on their browser several times to return to the last ProblemTracker page they were on and then click the Logoff icon. Or, they can simply browse back to the login page, login again (in this case no message about a previous session will be displayed as cookie information in their browser lets us know which session they were previously using), then click the Logoff icon on the Home page when it is displayed. ProblemTracker does not allow more than one active session per user account (irrespective of license type), so if a user logs in and then logs off they can always be certain that they have not left any active sessions around. The information above is explained to your users in the Logging In section of the User's Guide, though you may wish to provide an explanation that is more specific to your ProblemTracker configuration.

## Session Timeout

A session timeout is configured by default in all ProblemTracker workgroups. This timeout will end a user's session after a certain length of inactivity time (time where the user has not performed any actions in ProblemTracker). The inactivity time is based on last transaction between the user's browser and the web server. A user typing information into the Add page could be counted as inactivity because the browser does not communicate with the web server until the user clicks on the "Add" button to save the information entered on the form.

The session timeout can be adjusted for each workgroup through your web server settings in Internet Information Server. Because the way a user's inactivity is determined does not account for some cases where the user is actively using ProblemTracker, **it is recommended that you do not set the session timeout to less than 120 minutes**.

To adjust the session timeout:

1. Launch Internet Services Manager for IIS .
2. Under the web site where you have installed ProblemTracker, locate the virtual directory of the workgroup you wish to modify.
3. Right click on the virtual directory and select **Properties**.
4. In the Virtual Directory tab, click on the **Configuration** button.
5. Click on the **App Options tab**. You will find the Session Timeout option under Enable Session State. Specify a value for Session Timeout in minutes. The default is 720 minutes. **It is recommended that you do not set this value to less than 120 minutes.**
6. Click **OK** to save your selection.
7. Restart IIS so this new setting will take effect.

**NetResults ProblemTracker**

# Customizing The Data Record

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## Overview

ProblemTracker allows you to customize the data record to your needs by adding and removing fields as necessary. In addition, you can specify the name displayed for all fields and other properties of each field such as whether a field is required or not and on which pages the field will appear.

---

## Data Types

ProblemTracker allows you to use the following data types:

**Integer**
An integer numeric value. The default value for this field is "0". However, if the field is set to be required on the Add page, the default value when it appears on the Add page is "(blank)".

**Float**
A floating point number. The default value for this field is "0.0". However, if the field is set to be required on the Add page, the default value when it appears on the Add page is "(blank)".

**Text**
A text string up to 80 characters. By default, this field is blank until information is added.

**BigText**
A very large text string. The maximum size determined by the amount of data supported by the textarea type on your web browser, and the particular database in use. By default, this field is blank until information is added.

**Url**
A 255 character string that is a valid formatted URL. By default, this field is blank until information is added.

**Date and Time**
A string of the format MM/DD/YYYY HH:MM:SS AM/PM (US Default). ProblemTracker may also be configured to use the '-' and '.' delimiters as well as the "DD MM YYYY" and "YYYY MM DD" format for the date representation portion of this string. The time format can be represented in 12 hour or 24 hour formats. The representation of date and time formats within ProblemTracker on the localized settings for the database in use. The default value for this field type is controlled by the "Init for Add" option explained in the Editing Field Attributes section below.

**Pulldown**
A pulldown menu. You can customize all values in the menu. The default value for this field is determined in the Customizing Menu Values section.

**Release Number**
A combination of four pulldown menus. You can customize all values in the menu. The default value for this field is determined in the Customizing Menu Values section.

**YesNo**
A pulldown with the values Yes and No. The default value for this field is "Yes".

---

## Adding and Removing Fields

It is often a good idea to create a backup of your database before making major changes such as modifying your fields as some modifications are irreversible other than by restoring backup copy of your database.

To **add** a new field to the data record:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Record** button
4. Click on the field you wish to remove in the **In Use**column, then click on the **Remove** button

---

### Effects on Existing Records when Adding and Removing Fields

When you add a field, existing records that do not have a value for this field (some may if the field was previously in use) will be given an initial value. For pulldown menus and release numbers, the current default value (see Option Menus) for the pulldown or release number is used as the initial value. For Date, Text, BigText, and URL fields, the initial value is blank (no value). For integer and float fields, it is zero. For YesNo fields, it is "Yes".

Fields that are removed from the data record are no longer displayed, but they actually remain in the database. Additionally, when a field is removed, any references to the field (in Saved Queries, Report Layouts, and Task Fields) are removed. Records which are added after you have removed a field do not get a value for the removed (inactive) field.

If you have configured Dependent Pulldowns, removing one of the pulldowns removes the relationship between the two pulldown fields. If a parent pulldown is removed, the child option menu values become independent, and thus, are no longer limited by the value entered in the parent pulldown.

The fact that the removed field does not get a value when new records are added is important to remember if you wish to re-add this field in the future. If you add a previously removed field, any existing problem records that do not have a value for this field (records which were added when this field was inactive) will be initialized with the default value for the field (see above). Any existing records that already had a value for this field (records which were added when this field was active) will not be initialized (the old value is preserved). Therefore, all records that didn't have a value for the field now have a valid (default) value and records that did have a value are not changed. However, if you add a pulldown menu or release number field, it is recommended that you run the Check DB Values utility in the Option Menus section, to verify that all values for this field in existing records are now valid to ensure consistency in your database. To reach the Check DB Values utility, follow the yellow triangles which will be displayed in the Admin section.

If you wish to have all records in the system start with the same value for this newly added field (for example, you have a special value to note that the value wasn't actually set when the record was first created), you can use the **Edit Results** function to update all records after you add the field. Click here for more information on the Edit Results function (scroll to the section called "Query Results").

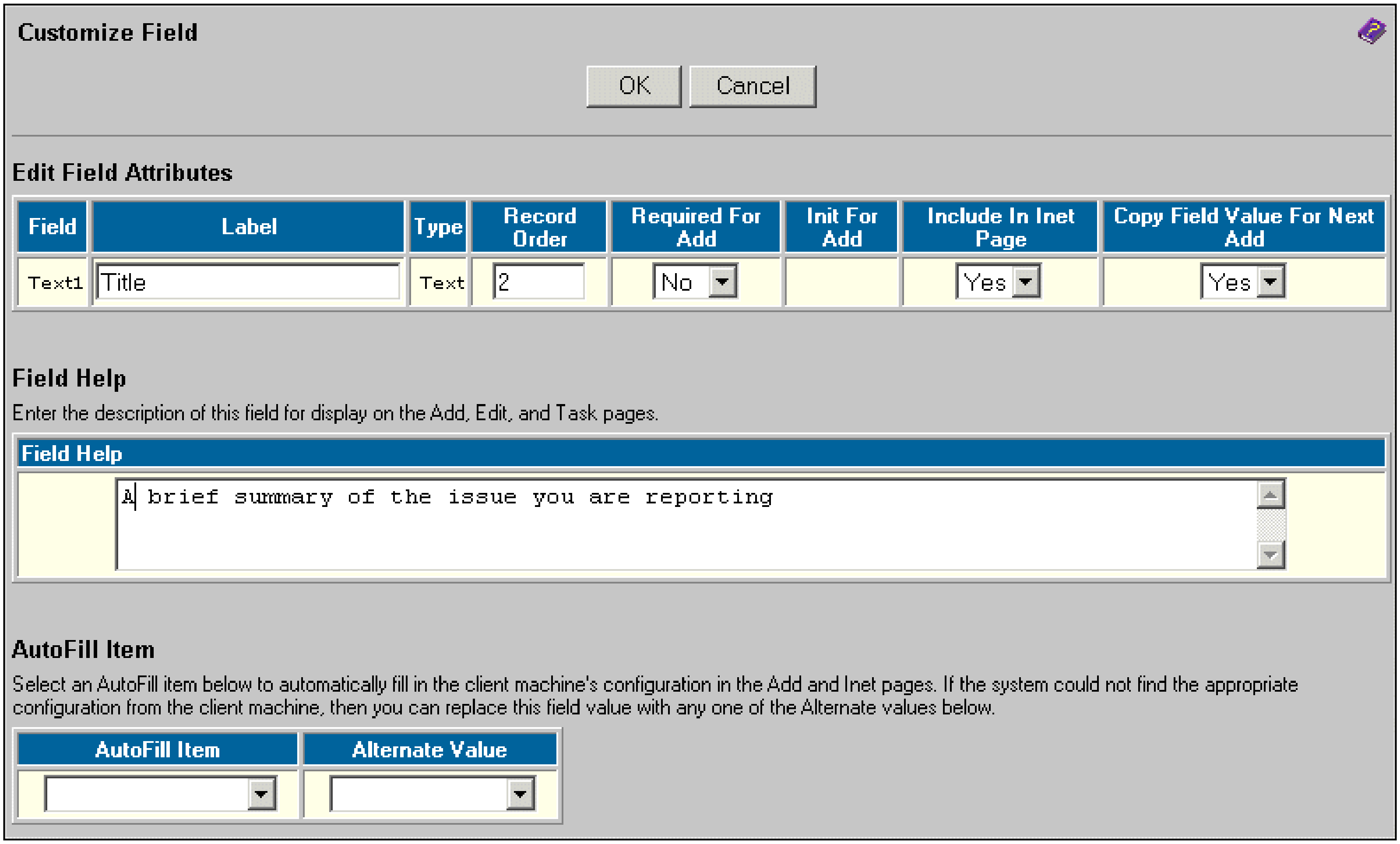
If a field is renamed (the **Label** property for the field is changed), there is no impact to existing data. The labels on the various pages (Add, Edit, Task, View, Query, etc.) will change to use the new "Label".

---

### Editing Field Attributes

To **edit** the attributes for a field:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Record** button
4. Click on the field you wish to modify in the **In Use** column, then click on the **Edit** button
5. Make changes to the attributes (details of the available options are explained below)
6. Click on the **OK** button to save your changes




The following attributes may be specified:

**Label**
The name displayed for this field.

**Record Order**
Integer specifying the order that the record should be presented relative to the other fields on the pages on which the field is displayed. For example, a field displayed on the Add page with a value of 5 will be listed before a field with a value of 100.

**Required for Add**
Specifies whether the field is required to be modified by the user when it appears on the Add page. For Integer, Float, Text, TextArea, or Date types this means that a blank value will not be allowed. For pulldown fields, this means that the user must select a value other than the default value displayed on the form. You may wish to define the first element of a required pulldown with a value like "Please Select A Value" to indicate to the user that a non-default value must be selected before saving the new record. When this attribute is set to "Yes", the field visibility set for this field must be set such that the field is visible on the Add page to at least one user group.

**Init for Add**
Only valid for Date types. Specifies that the if the date field appears on the Add page, it should be automatically initialized to the current date/time when the Add button is clicked to save the new record. Fields with this attribute set to Yes will also be initialized if Add Similar operation is used to create a new record.

**Include on Inet Page**
Specifies whether the field should be presented on the form used to submit records anonymously (also known as the Anonymous Add page).

**Copy Field Value For Next Add**
When adding a new record using the Add page, a user has the option to click **Add** or **Add & Copy** to save the new record. Clicking on the Add button will save the new record, then return to the Add page with a "blank" form (all fields returned to default or blank values). Clicking on the Add & Copy button will save the new record, then return to the Add page with the values of the fields "copied" from the last record added. This allows the user to add another record with similar information as the last record added without having to re-type information into the fields. In order to have a field's value copied into the Add form after clicking on the Add & Copy button, the attribute **Copy Field Value For Next Add** must be set to Yes.
**Note**: If all the fields that are active (present in the "In Use" column) have the "Copy Field Value For Next Add" attribute set to No, then the "Add &

Copy button" button will not be displayed on the Add page.

**Field Help**
Enter a description of the field to be displayed on the Add, Edit, Task, and Inet pages of ProblemTracker (in the cases where the field is set to be visible on these pages). The field help icon will be displayed when a user has the option **Display Field Help** enabled in their personal preferences settings. The user can move the cursor over the field help icon to see more detail about the field (the information entered here in the Field Help section). This option can also be enabled in the default preferences set in the User Preferences section.

When a user has the **Display Field Help** option enabled, the field help icon will be displayed next to the fields on the Add, Edit, and Task pages. The user can move the cursor over the field icon to the left of the to see a description of the field.

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## AutoFill Item

The AutoFill feature is a method of automatically collecting information about a user's system (operating system, browser type and version, IP Address, etc.) and saving it within a newly added record. The information collected about the user's environment could be useful in resolving or processing the issue reported in the record. Text and URL type fields can be used to collect the information from a user's machine when the user submits a record using the Add or Inet pages.

By default, AutoFill is disabled for Text and URL type fields (the AutoFill fields are set to "blank" when disabled).

To enable the **AutoFill** feature for a Text or URL field:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Record** button
4. In the **In Use** column, click on a Text or URL type field. Or, click on a Text or URL type field in the **Not In Use**, then click on the **Add** button to move the field to the **In Use** column.
5. Click on the**Edit** button
6. Select a parameter to be collected in the **AutoFill Item** field. The parameters available for Text and URL type fields are described below.
7. Select an **Alternate Value** to be used in cases where the value of the AutoFill item cannot be retrieved from the user's machine. Alternate Value can be one of the following:

   - **1 - <No Value>**
     If the value of the AutoFill Item cannot be found, no value should be saved in this field as a replacement. The field will be blank in the newly saved record.

   - **2 - "Unknown"**
     If the value of the AutoFill Item cannot be found, the string "Unknown" should be saved in this field for the newly added record.

   - **3 - <Raw Value>**
     If the value of the AutoFill Item cannot be found, the raw data found in the location checked to retrieve the AutoFill Item.

8. Click **OK** to save the changes

When a field with AutoFill enabled is visible on the Add or Inet pages, the user creating the new record has the ability to overwrite the values automatically filled in these fields. Information on setting a field's visibility on the Add page can be found in the Field Visibility section below.

## Available AutoFill Items

The following parameters can be collected to automatically fill a **Text** type field.

**Host Name**
The TCP / IP host name of the machine the user is logged into when accessing ProblemTracker. **Note**: By default, the IIS web server will return the IP Address instead of the Host Name to increase performance for web hosting. If you wish to get the Host Name, please follow the steps in this Microsoft article, which would configure IIS to do a reverse DNS lookup. For more information, please review your IIS documentation.

**IP Address**
The IP Address of the machine the user is logged into when accessing ProblemTracker.

**Operating System**
The Operating System installed on the machine the user is logged into when accessing ProblemTracker.

**Screen Size**
The value of **Screen Area** in the user's Monitor Display settings.

**Web Browser**
The type and version of the browser(s) installed on the machine the user is logged into when accessing ProblemTracker.

A **URL** type field can be filled with the **Last Browsed URL**. The Last Browsed URL is the last URL the user visited before browsing to the ProblemTracker Login Page. The Last Browsed URL will only be set if the user clicks on a link to reach the ProblemTracker Login Page. If the user reaches the Login Page by using a bookmark or manually typing in the URL of the Login Page, the value of the Last Browsed URL field will be blank.

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### Editing Pulldown Attributes

When a field of pulldown format is edited, the **Edit Pulldown Attributes** section will be displayed below the Edit Field Attributes section. If you wish to configure a pulldown field to be dependent on another pulldown field, select the pulldown field which will act as the parent in the relationship between the fields in the **Parent Pulldown** field in this section. If the pulldown field for which you are editing the field attributes is to be the parent pulldown in the relationship, select <No Pulldown> in the Parent Pulldown field in the Edit Pulldown Attributes section.

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### Field Visibility

For a more detailed overview of Field Visibility, please review the Field Visibility portion of the User Groups Help section.

A field's visibility can be configured by user group for the following areas in ProblemTracker:

- Add page
- Edit page (available only for Standard user groups)
- View page
- Query and Home Pages
- Email Notification Message

If you prefer to configure the field visibility options for each user group instead of modifying each field, review the information in the User Groups Help section.

If you wish to restrict the fields which are made visible in the Task operation, this is done while configuring task fields for a transition. The Customizing Workflow Help section provides details on configuring task fields.

Please note that when records are created using the Add Records via Email feature, the field visibility settings for the Add page are not enforced on these records when they are created in ProblemTracker.

To configure **field visibility** options for each field on the data record:

1. Click on the field in the **In Use** column for which you wish to modify the visibility settings
2. Click on the **Edit** button
3. In the **Group Visibility** section, there are 4 areas listed. Within each area, select the groups to whom the field should be visible when performing the operation(s) listed. To make a field visible to all groups, click on the **All** button. A field can be made visible to all non-Restricted users by selecting the user group "Users" (since all non-Restricted users are members of this group). Similarly, a field can be made visible to all Restricted users by selecting the user group "RestrictedUsers". To remove the field such that it will not be visible to any groups, click on the **None** button or select the option <No Group>.

   Restricted user groups are not listed in the **Edit Page** list of the Field Visibility section because Restricted user groups do not have access to the Edit page.
4. Click **OK** to save the changes

## Field Visibility Exceptions for Required fields

When a field has the attribute **Required on Add** set to "Yes", but the field is not visible on the Add page for certain user groups, the newly added record will be saved with the field's default value. The defaults for each field type are listed in the Data Types section at the top of this page.

Certain fields in the data record are required, meaning that they cannot be removed from the data record. Some field visibility settings cannot be applied to these required fields.

**PRN**
This field is the record number assigned when a record is added to the database. Field visibility restrictions cannot be set for this field as it is a field that is displayed on ProblemTracker pages to distinguish the identity of each record.

**Deleted**
This field denotes whether a record has been deleted. By design, it does not appear on the Add page, and thus, field visibility for this field on the Add page cannot be set.

**NetResults ProblemTracker**

# Customizing Menu Values

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## Overview

ProblemTracker allows you to define the option menu items of any Pulldown field in the data record.

## Defining Pulldown Field Values

It is often a good idea to create a backup of your database before making major changes such as modifying your pulldown menus as some modifications are irreversible other than by restoring a backup copy of your database.

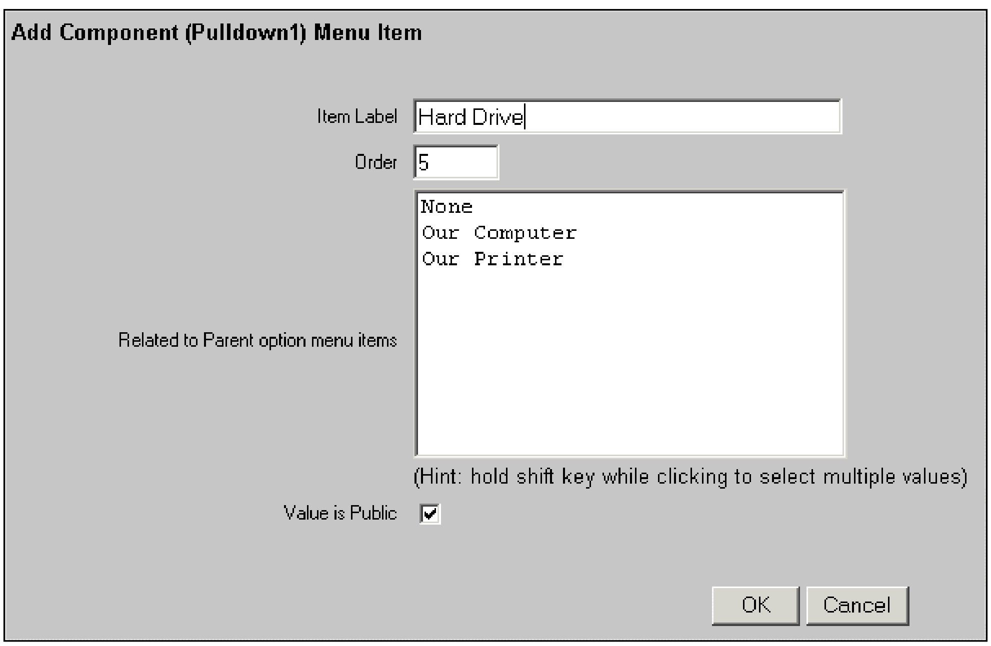
To **define** the option menu items:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button
4. You will be presented with a table containing all the Pulldown fields in the data record. Locate the row for the desired pulldown field, then click on the **Edit Items** button
5. You will be presented with a page listing all of the current values. To add a value, click on the **Add Item** button.

   When adding an item you can specify:

   - Name for the menu item in the **Item Label** field
   - Relative order in which the item should appear in the **Order** field (all entries with the same relative order are listed alphabetically)
   - Which option menu items in the parent field will be associated with this value can be selected in the **Associated with Parent Option Menu Items** field. This field will only be displayed if the pulldown field to which this option menu item belongs has a parent pulldown defined in the Define Record section.
   - Whether the value should be displayed if the field appears on the Inet Page. Checking the box marked **Value is Public** indicates the choice should appear on the Inet page.

The figure below displays the attributes that can configured when an option menu item is added. The field **Associated with Parent Option Menu Items** will only appear if the pulldown field is configured as a dependent pulldown.




To **edit** an option menu item:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button
4. You will be presented with a table containing all the Pulldown fields in the data record. Locate the row for the desired pulldown field, then click on the **Edit Items** button
5. You will be presented with a page listing all of the current values. Locate row for the option menu item you wish to modify, then click on the **Edit** button. If you change the **Item Label** field for an option menu item, any records with this value selected will display the updated Item Label.

To **delete** an option menu item:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button

4. You will be presented with a table containing all the Pulldown fields in the data record. Locate the row for the desired pulldown field, then click on the **Edit Items** button
5. You will be presented with a page listing all of the current values. Locate row for the option menu item you wish to modify, then click on the **Delete** button. If any records contain the option menu item you are deleting, you will be prompted to make a selection from one of the following choices:
   - **Choose a Replacement**
     You can choose another option menu item configured for the pulldown field to replace the obsolete value (the item you are deleting)
   - **Delete Records**
     Selecting this option will delete all records which have the obsolete value selected
   - **Leave Records unchanged**
     Selecting this option will leave the obsolete value selected in the records, however, you may receive unexpected results when using certain operations (e.g. Edit, Task, Query and Metrics) because the obsolete value is present in a record(s). If you choose this option, then later want to eliminate the obsolete values, run the Check DB Values utility.

   If any saved queries contain the obsolete value, you will be prompted to select a replacement from the list of option menu items configured for the pulldown field.
6. Click **OK** to complete the operation

### Selecting the Default Value for the Add Operation

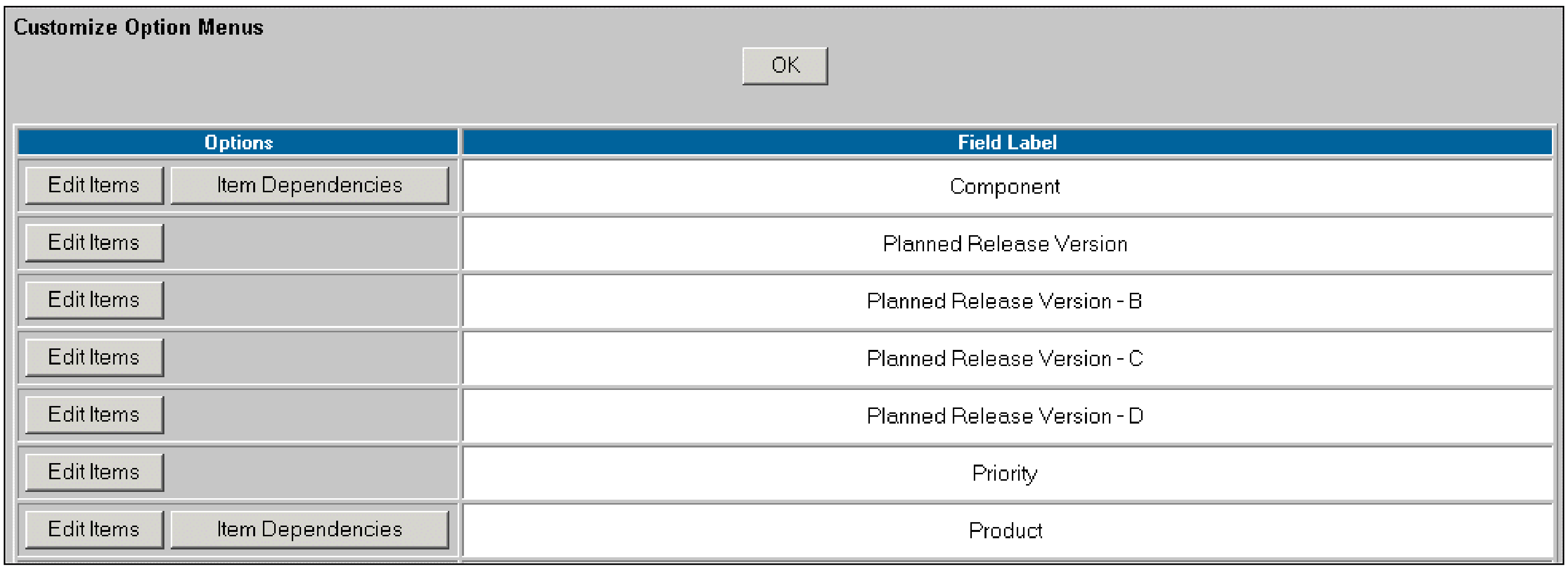
You can set which value is used as the default when a new record is added. You cannot delete a value if it is currently the default value. You must first set another value as the default, and then delete the value.

To change which option menu item is set as the **default**:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button
4. You will be presented with a table containing all the Pulldown fields in the data record. Locate the row for the desired pulldown field, then click on the **Edit Items** button
5. You will be presented with a page listing all of the current values. Locate row for the option menu item you wish to set as the default value, then click on the **Set Default** button

### Item Dependencies

If a pulldown field is configured to be either the child pulldown or the parent pulldown in a Dependent Pulldowns Relationship, the **Item Dependencies** button will be displayed to the left of the pulldown menu as shown in the figure below.




In the Item Dependencies page for a pulldown menu, you can map parent pulldown option menu items to each option menu item in the child pulldown and vice versa. Instructions on mapping pulldown option menu items can be found in the Dependent Pulldowns Help section.

### Default Items

If a pulldown is configured to be a child pulldown in a dependent pulldowns relationship, the **Default Items** button will be displayed to the left of the pulldown menu.

In the Default Items page, you can select which option menu item in the child pulldown should appear as the default value for each possible option menu item in the parent pulldown. A default child option menu item must be specified for each parent option menu item. The defaults should only be selected after mapping the relationships between the menu items in the **Item Dependencies** page. Instructions on mapping pulldown menu values can be found in the Dependent Pulldowns Help section.

To set the defaults, click on the **Default Items** button to the left of the child pulldown menu on the Option Menus page. A tree structure will be displayed. Each parent option menu item will be preceded by "[-]". Under each parent option menu item, the related child option menu items will be displayed. If a parent option menu item does not appear on this page, this indicates that the parent item does not have any child items related (or mapped) to it.

Select one child option menu item to be the default value for each parent. To set the child option menu item as the default, click on the child option menu item, then click on the **Toggle Default** button. Once the child option menu item has been set as the default, "[Default]" will be noted after the name of the child option menu item. Click **OK** to return to the Option Menus page.

### Checking Existing Database Values

If you enable a pulldown menu field and there are already existing records in the database, there may be invalid values (values that don't match one of the current pulldown menu entries) for the newly added field in the existing records. Old records may have a value from a previous time when the field was in use, perhaps for another purpose. When there are obsolete values present in your database, yellow triangles will appear in the Admin section and the Option Menus page to indicate which pulldown fields contain obsolete values.

To run the **Check DB Values** utility:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button
4. You will be presented with a table containing all the Pulldown fields in the data record. Click on the **Edit Items** button which has a yellow triangle displayed to the left of the button
5. You will be presented with a page listing all of the current values. Click on the **Check DB Values** button. If there are any invalid values in the database for the field, they will be listed.
6. You will be prompted to make a selection from one of the following choices to remove the obsolete values:
    - **Choose a Replacement**
      You can choose another option menu item configured for the pulldown field to replace the obsolete value (the item you are deleting)
    - **Delete Records**
      Selecting this option will delete all records which have the obsolete value selected
    - **Leave Records unchanged**
      Selecting this option will leave the obsolete value selected in the records, however, you may receive unexpected results when using certain operations (e.g. Edit, Task, Query and Metrics) because the obsolete value is present in a record(s). If you choose this option, you can run the Check DB Values operation at a later time.

Since many ProblemTracker operations can not be performed with such invalid values, we strongly recommend that you run Check DB Values after creating (or modifying) any pulldown menu fields.

# Customizing Pulldown Menu Dependencies

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## Overview

Dependencies can be configured between pulldown menu fields in ProblemTracker such that the option menu values displayed in one pulldown menu can be dependent on the option menu value selected in another pulldown menu. Pulldown B is dependent on Pulldown A. When a user selects a value in Pulldown A, the values displayed in Pulldown B are changed. Pulldown A is the parent pulldown and Pulldown B is the child pulldown. A simple example to illustrate this functionality:

A system has the pulldown fields called Product and Component with the option menu values listed below.

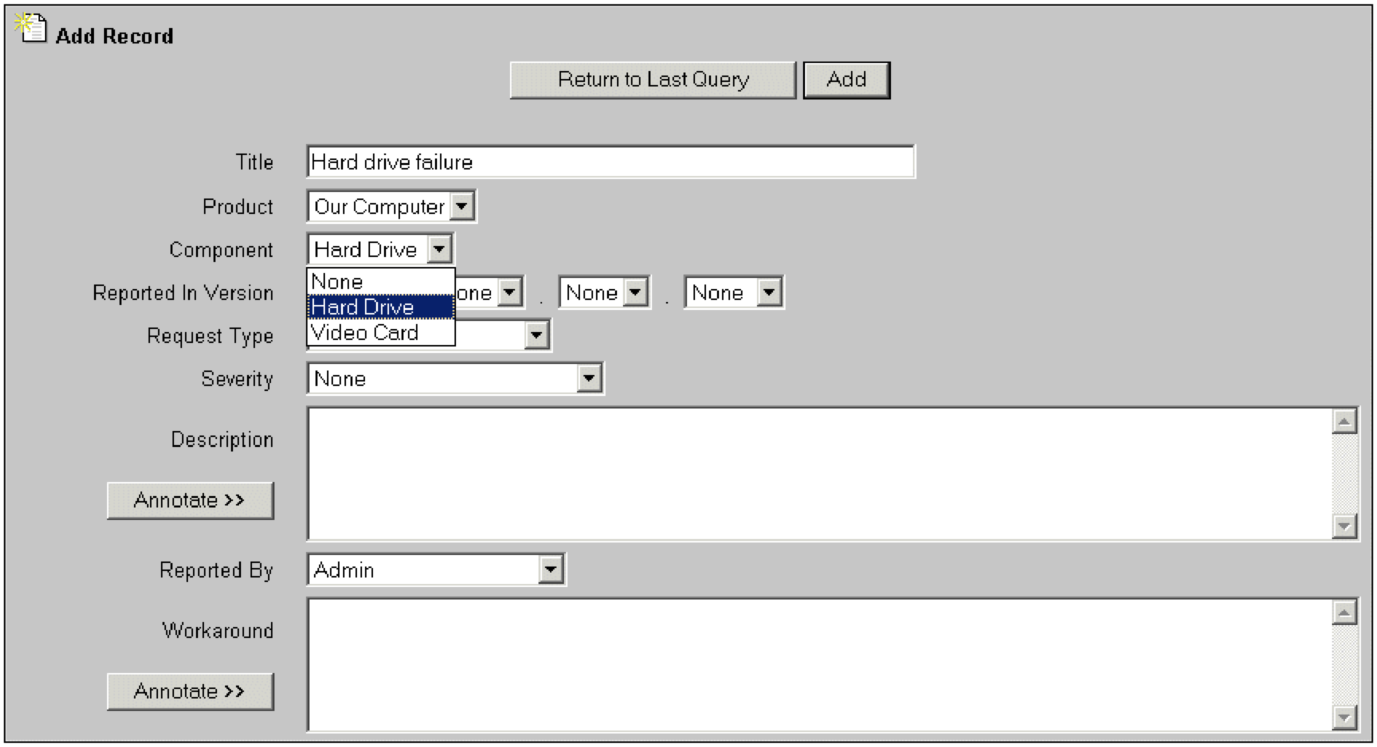
**Product**
Our Computer, Our Printer

**Component**
None (default), Hard Drive, Video Card, Toner, Paper Tray

The Component field is dependent on the Product field, which results in the following behavior:

- When Our Computer is selected as the Product, the values available to be selected in the Component field are None (the default value), Hard Drive, and Video Card. This relationship is illustrated in the figure below.
- When Our Printer is selected as the Product, the values available to be selected in the Component fields are None (the default value), Toner, and Paper Tray

This behavior is achieved by configuring dependencies between the Product and Component pulldown fields.




## Configuring a Pulldown to be Dependent on Another

### Selecting fields

Select a pulldown field to be the parent pulldown, then select a pulldown field to be the child pulldown menu. Multiple dependencies on a single parent pulldown can be configured. For example, Pulldowns B, C, and D are all dependent on Pulldown A, that is to say, Pulldowns B, C, and D are all children of Pulldown A. Dependencies can be configured to span multiple levels as well. For instance, Pulldown C is dependent on Pulldown B and Pulldown B is dependent on Pulldown A.

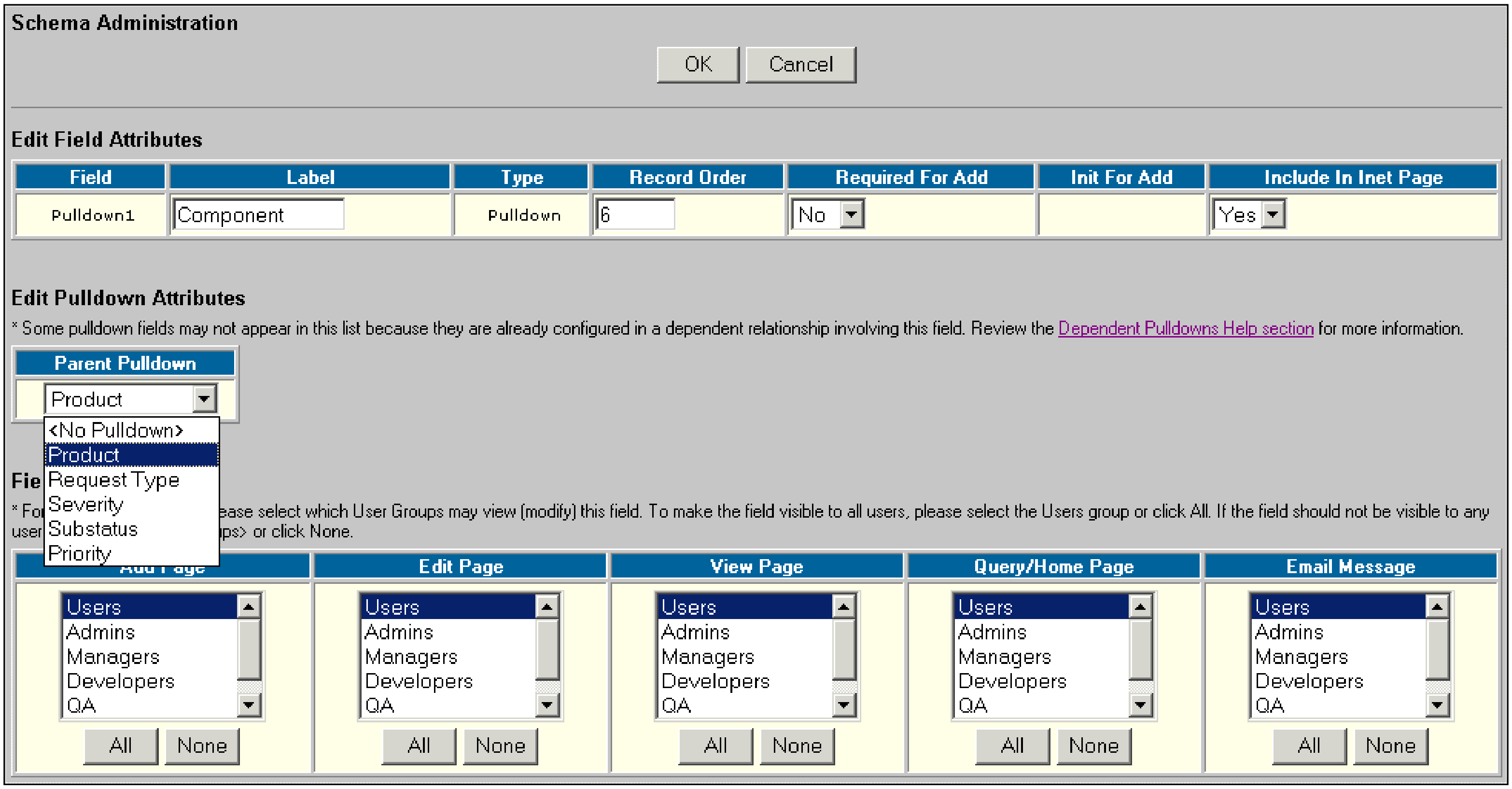
### Set up the Child Pulldown Menu to select a Parent Pulldown

To configure the child pulldown menu so that a particular pulldown is selected to be the parent pulldown,

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Record** button
4. Click on the pulldown field that will act as the child pulldown menu in the **In Use** column, then click on the **Edit** button
5. In the **Edit Pulldown Attributes** section, select the field that will act as the parent pulldown in the **Parent Pulldown** field (as shown in the figure below).
6. Click on the **OK** button to save this change.

**Special Cases**

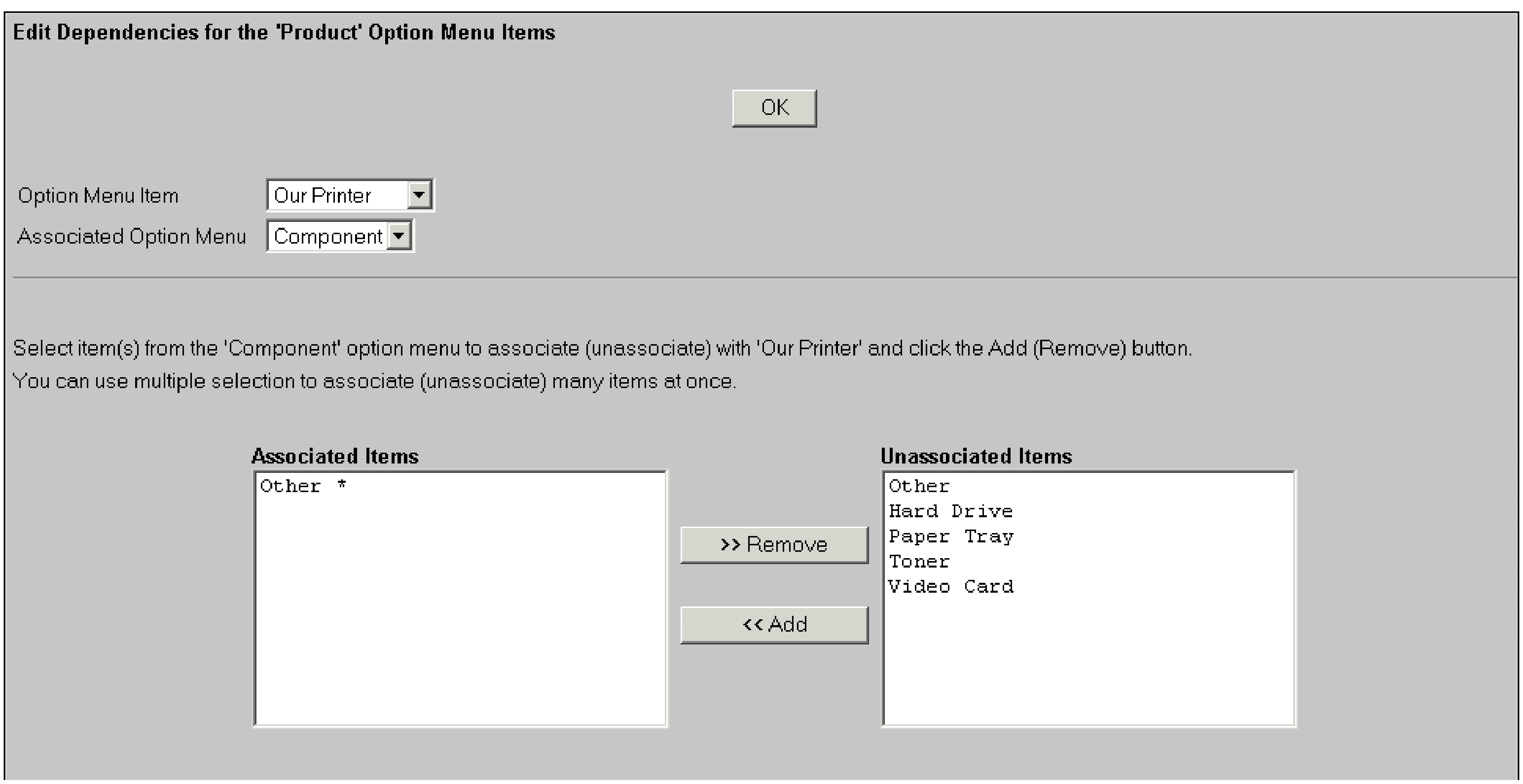
Please note that the fields Status, Assigned To, or Reported By cannot be involved in a dependent relationship. The only dependencies that can be created based on these fields is via the Workflow Properties section.




**Configure relationships between option menu values in the parent pulldown and the child pulldown**

ProblemTracker must be configured to show which option menu values in the child pulldown correspond to each option menu value in the parent pulldown. This configuration will determine which values should be displayed in the child pulldown when a particular value is selected in the parent pulldown field.

When specifying a parent pulldown field for the child pulldown field, ProblemTracker will automatically create implicit relationships to relate the option menu items in the parent pulldown menu with the option menu items in the child pulldown menu. This is done to ensure that each parent option menu item is related to at least one option menu item from the child pulldown menu. The following example shows a temporary (implicit) relationship created automatically for a parent pulldown menu. The item "Other * " listed in the "Associated" column is an implicit relationship.



**Note:** No option menu item in 'Component' is associated to the selected option menu item in the parent option menu 'Product'. Temporarily, the default option menu item for 'Component' is associated to the selected option menu item in the 'Product' and is displayed in the 'Associated Items' list (marked with * at the end). You can explicitly create an association by selecting an option menu item from the 'Unassociated Items' list and clicking '<<Add'. This will remove the temporary (implicit) association. For more information, please review the following section in the Administrative Help Guide.

These temporary (implicit) relationship(s) are just a starting point after configuring a dependent relationship. In this section, you will have the opportunity to change the implicit relationships created by ProblemTracker. Once you create an explicit relationship as mentioned in the steps below, the implicit relationship(s) will be removed.

There are 2 ways to configure the relationships between the option menu items in the parent and child pulldown fields:

- By mapping child option menu values to corresponding parent option menu values
  **OR**
- By mapping parent option menu values to corresponding child option menu values

**To map the values with respect to the parent pulldown menu,**

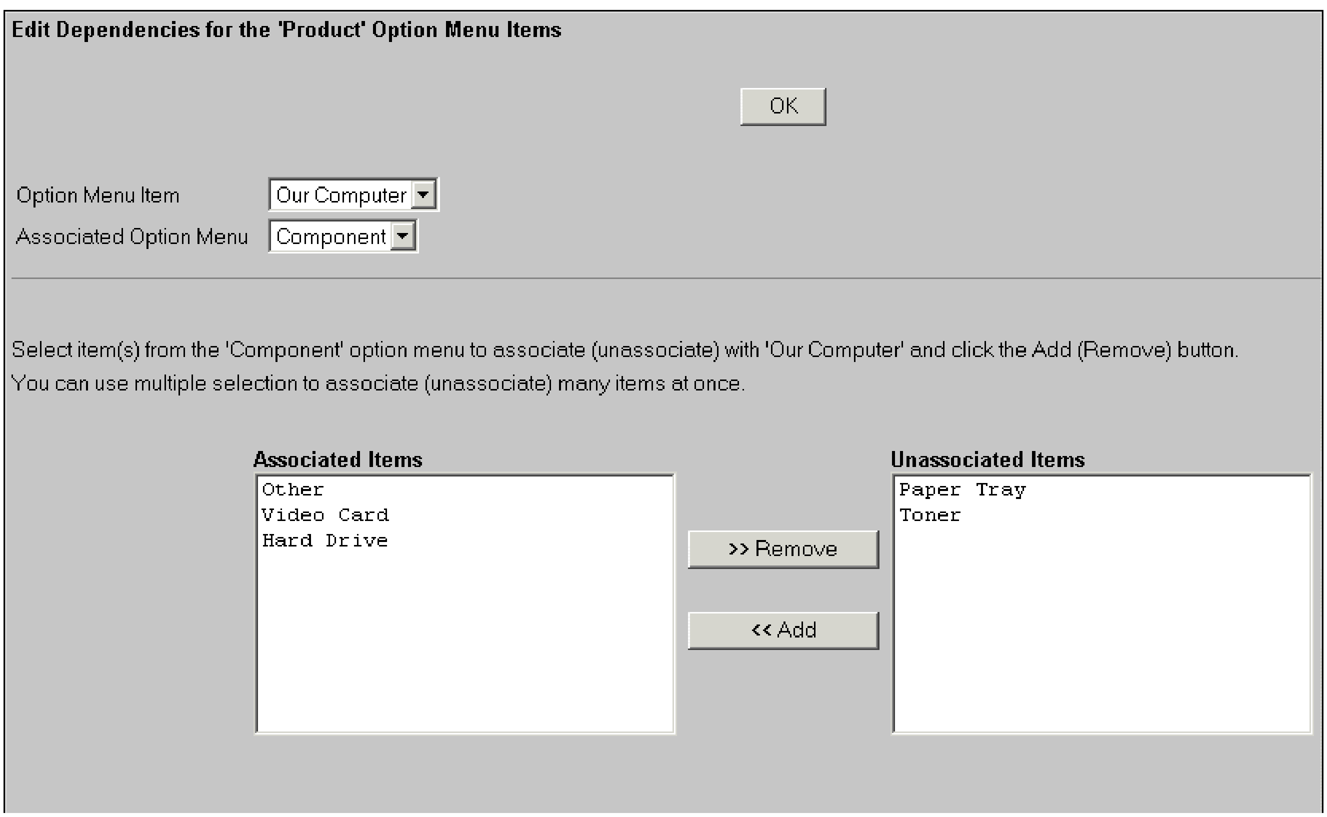
1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button
4. Click on the **Item Dependencies** button to the left of the parent pulldown menu
5. The **Option Menu Item** field will contain the option menu items configured for the parent pulldown menu. Make a selection in this field so that you can configure option menu items from the child pulldown to be associated to this option menu item from the parent pulldown.
6. The **Associated Option Menu** field will contain all option menus that are associated with the parent pulldown. The option menu items of the pulldown that you select in this field will be displayed in the columns below to be associated or unassociated to the parent option menu item selected in the Option Menu Item field.
7. Any child option menu items already associated with the parent option menu item will be displayed in the left column called **Associated**. Any child option menu items in the Associated column proceeded by "*" are implicit relationships (these relationships were made when the parent pulldown was selected for the child pulldown field in the Edit Attributes section of the Define Record page).

   Any child option menu items not associated with the parent option menu item will be displayed in the right column called **Not Associated**. A child option menu item temporarily associated to the parent (proceeded by "*") will also be listed in the Not Associated column without "*".

   To select a pulldown menu value to be associated to the parent pulldown menu value, click on the child option menu item in the **Not Associated** column, then click on the **Add** button. The child option menu item will be moved to the Associated column. To select multiple child option menu items, hold the **Shift** key on your keyboard while clicking on multiple values.

   As soon as ANY child option menu item from the Not Associated column is added to the Associated column, any implicitly associated child option menu item (proceeded by "*") will be removed from the Associated column. When you choose to associate a child option menu item to a parent option menu item manually, you are creating an explicit relationship. Any explicit relationship removes the implicit (temporary) relationship created automatically by ProblemTracker.
8. Select another parent option menu item in the **Option Menu Item** field, then choose the corresponding child option menu items to be associated.
9. After assigning child option menu items to each parent option menu item listed in the Option Menu Item field, click on the **OK** button to return to the Option Menus section.

The following figure shows the result of associating option menu items from one pulldown to another. "Our Computer" is an option menu item of the "Product" field. The "Product" field is a parent to the "Component" field. The "Component" field has the option menu items "Other", "Video Card", and "Hard Drive", which have been associated to the "Our Computer" option menu item. "Component" also has the option menu items "Paper Tray" and "Toner", which are unassociated with the "Our Computer" option menu item.




**To map the values with respect to the child pulldown menu,**

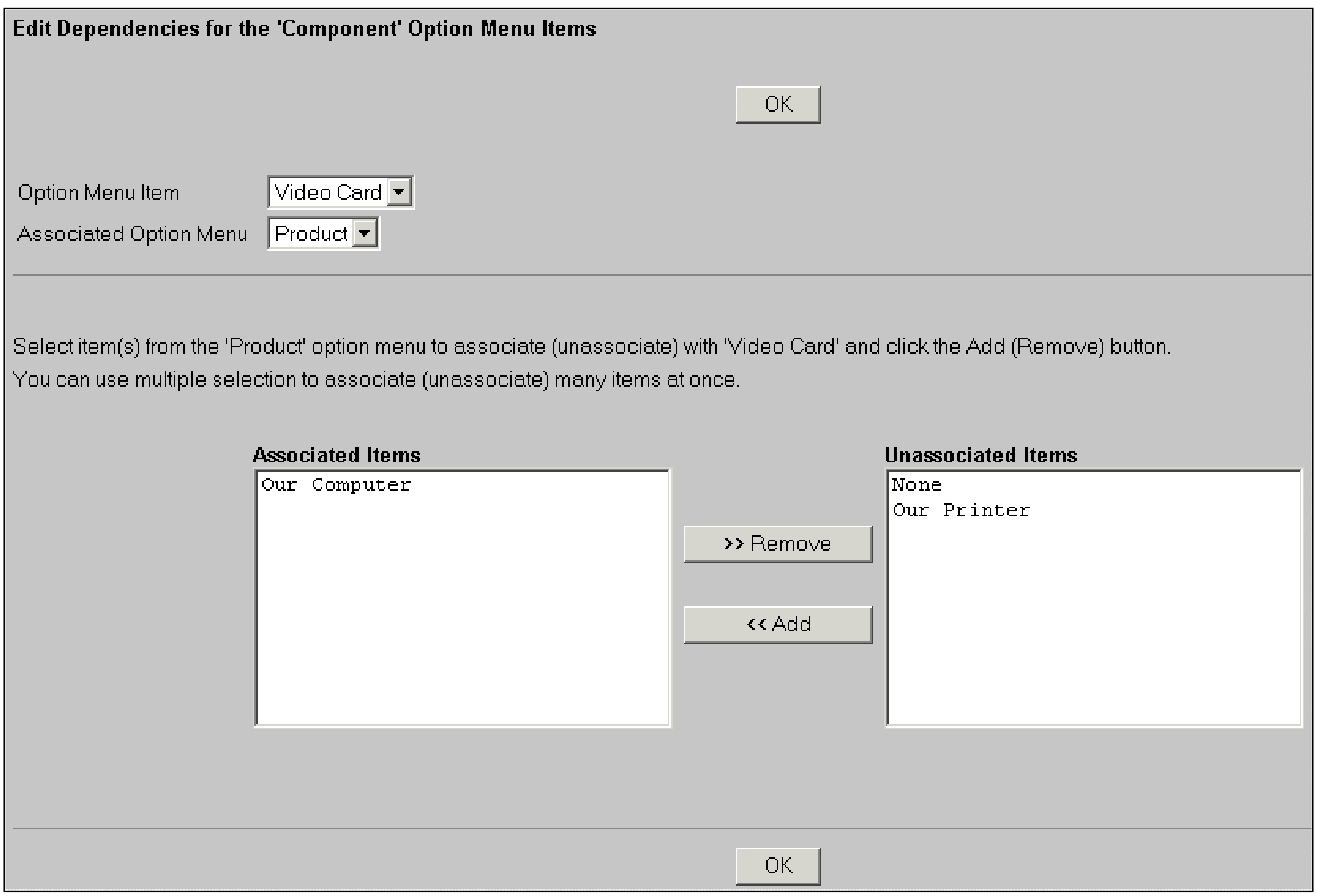
1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button
4. Click on the **Item Dependencies** button to the left of the child pulldown menu
5. The **Option Menu Item** field will contain the option menu items configured for the child pulldown. Make a selection in this field so that you can configure option menu items from the parent pulldown to be associated to this option menu item from the child pulldown.
6. The **Associated Option Menu** field will contain all option menus that are associated with the child pulldown. The option menu items of the pulldown that you select in this field will be displayed in the columns below to be associated or unassociated to the child option menu item selected in the Option Menu Item field.
7. Any parent option menu items already associated with the child option menu item will be displayed in the left column called **Associated**. Any parent option menu items in the Associated column proceeded by "*" are implicit relationships (these relationships were made when the parent pulldown was selected for the child pulldown field in the Edit Attributes section of the Define Record page).

   Any parent option menu items not associated with the child option menu item will be displayed in the right column called **Not Associated**. A parent option menu item temporarily associated to the child (proceeded by "*") will also be listed in the Not Associated column without "*".

   To select a option menu value to be associated to the child option menu value, click on the parent option menu item, then click on the **Add** button. The parent option menu item will be moved to the Associated column. To select multiple parent option menu items, hold the **Shift** key on your keyboard while clicking on multiple values.

   As soon as ANY parent option menu item from the Not Associated column is added to the Associated column, any implicitly associated parent option menu item (proceeded by "*") will be removed from the Associated column. When you choose to associate a parent option menu item to a child option menu item manually, you are creating an explicit relationship. Any explicit relationship removes the temporary (implicit) relationship created automatically by ProblemTracker.
8. Select another child pulldown menu item in the **Option Menu Item** field, then choose the corresponding parent pulldown menu items to be associated.
9. After assigning parent menu items to each child menu item listed in Option Menu Item field, click on the **OK** button to return to the Option Menus section.

The following figure shows the result of associating option menu items from one pulldown to another. "Video Card" is an option menu item of the "Component" field. The "Component" field is a child of the "Product" field. The "Product" field has the option menu item "Our Computer", which has been associated to the "Video Card" option menu item. "Product" also has the option menu items "None" and "Our Printer", which are unassociated with the "Video Card" option menu item.

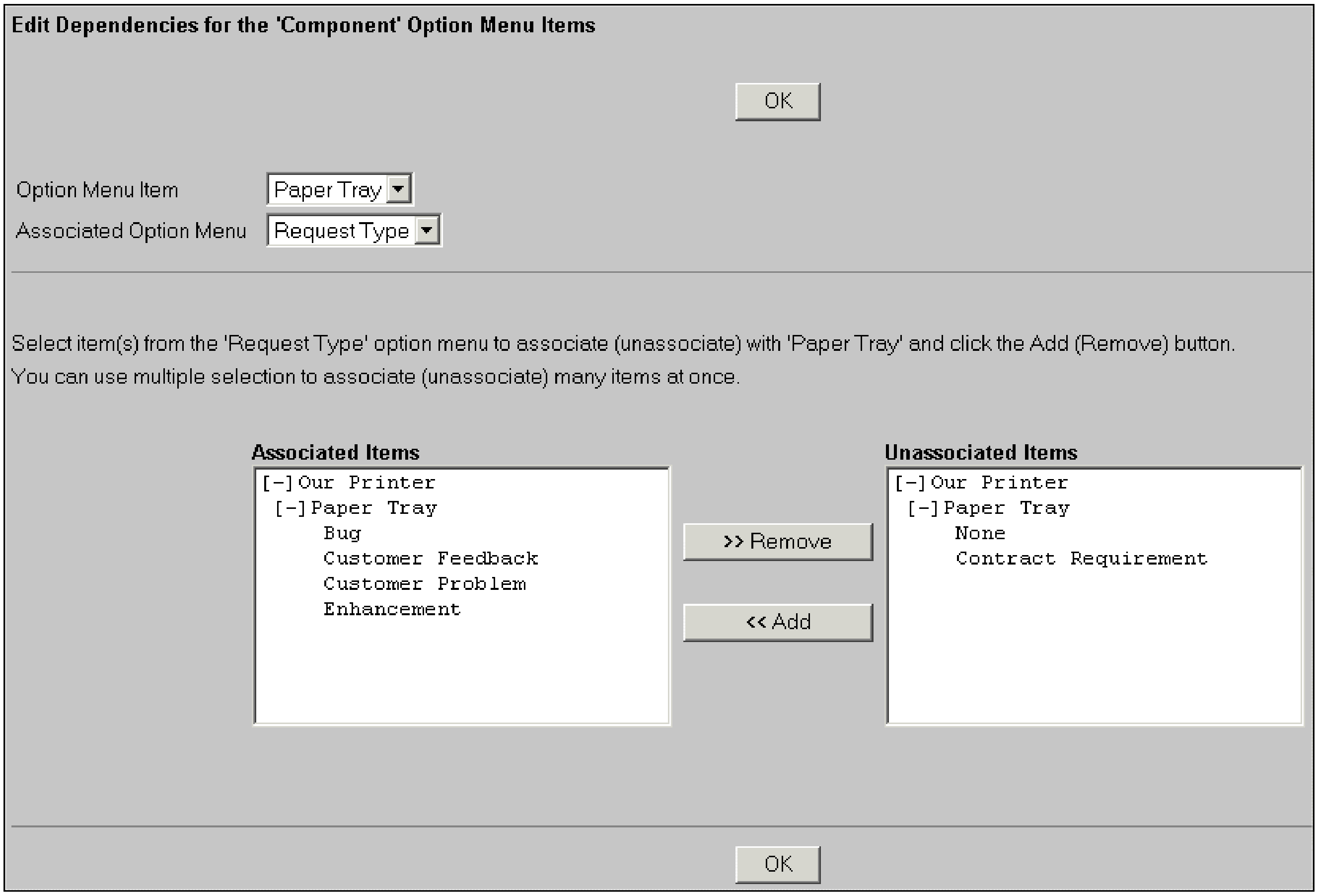



### Dependent Relationships with Multiple Levels of Hierarchy

Dependent relationships between pulldown menus can span multiple levels. For instance, Pulldown A can be the parent of Pulldown B. Pulldown B is the parent of Pulldown C. This is a 3 level dependent relationship. Multiple level hierarchies (with 3 or more levels) are displayed slightly differently than a relationship where there is only 2 levels (one parent and its child pulldown menus). For multiple level hierarchies, the complete tree structure of all of the pulldown menus involved is displayed in the Item Dependencies page for each pulldown. The figure below demonstrates a 3 level hierarchy with the following dependencies established:

**Product > Component > Request Type**

The **Product** field represents the root (or highest) level in the hierarchy. The figure below shows the relationships between the **Component** field and **Request Type**, its child pulldown.




This figure displays which option menu items from "Request Type" are associated with "Paper Tray", an option menu item in the Component field. In the **Associated Items** column, the option menu items "None", "Bug", "Customer Feedback", "Customer Problem", and "Enhancement" are associated with "Paper Tray". The option menu item "Contract Requirement" is unassociated with "Paper Tray".

Note the items "[-] Our Printer" and "[-] Paper Tray" in the tree structure displayed in this figure. "[-] Our Printer" is an option menu item of the Product field (from the root or highest level of the hierarchy). "[-] Paper Tray" is an option menu item of Component field (the second level of the hierarchy). When multiple level hierarchies exist in ProblemTracker, the Item Dependencies page for a pulldown menu will display the tree structure higher than its own level. So, in the example explained above, the figure shows the Item Dependencies page for the Component field and also shows the level above Component.

### Effects of Making Changes to Dependent Pulldowns

Dependent relationships between pulldown fields can be established at any time and also can be removed at any time. Because these changes can be made before and / or after problem records have been added, there are situations where these changes in the dependent relationships could result in additional changes with respect to the option menu items of the pulldowns involved. During the course of changing the relationship between pulldown fields (either in the Define Record or Option Menus section), ProblemTracker will prompt the user with information about the effects of changing dependent relationships. Examples of such changes are discussed below. The following **sample multiple level hierarchy** is provided to illustrate the examples below:

**Product > Component > Request Type > Priority**

In addition, the **root** level is the highest level in the hierarchy (the Product field in this example). The **intermediate leaf** level are the levels in the middle of the hierarchy (the Component or Request Type fields). The **last leaf** level is the lowest level in the hierarchy (the Priority field in this example).

Click on the example to see an explanation of the effects

1. Pulldown Field at the root or last leaf level moved from In Use to Not In Use
2. Pulldown Field at an intermediate leaf level moved from In Use to Not In Use
3. Option Menu Item deleted from a pulldown menu involved at any level
4. Parent Pulldown changed to <No Pulldown>
5. The associations between an Option Menu Item and the next lower level are removed
6. Parent Pulldown changed to another pulldown field

**Explanations for the above cases**

1. **Pulldown Field at the root or last leaf level moved from In Use to Not in Use in the Define Record section**
   When a pulldown field is removed from the data record by moving it from the **In Use** column to the **Not In Use** column, any parent or child pulldown fields associated with the removed field will become independent of the relationship. The removed pulldown field will be removed from all records, but any levels of hierarchy above or below this field will be

preserved.

Using the example, if **Product** were removed from In Use to Not In Use, the Product field and all of its option menu items would be removed from the data record. The option menu items in the **Component** field would be independent of the associations that existed with the Product field. However, the dependent relationship between Component and **Request Type** would be preserved. The dependencies in the level below Request Type are also preserved.

Similarly, if **Priority** were removed from In Use to Not In Use, the Priority field and all of its option menu items would be removed from the data record. The option menu items in the **Request Type** field would be independent of the associations that existed with the Priority field. However, the dependent relationship between Request Type and **Component** would be preserved. The dependencies in the level above Component would also be preserved.

2. **Pulldown Field at an intermediate leaf level moved from In Use to Not In Use in the Define Record section**
When a pulldown field is removed from the data record by moving it from the **In Use** column to the **Not In Use**" column, any parent or child pulldown fields associated with the removed field will become independent of the relationship. The removed pulldown field will be removed from all records, but any levels of hierarchy above or below this field will be preserved.

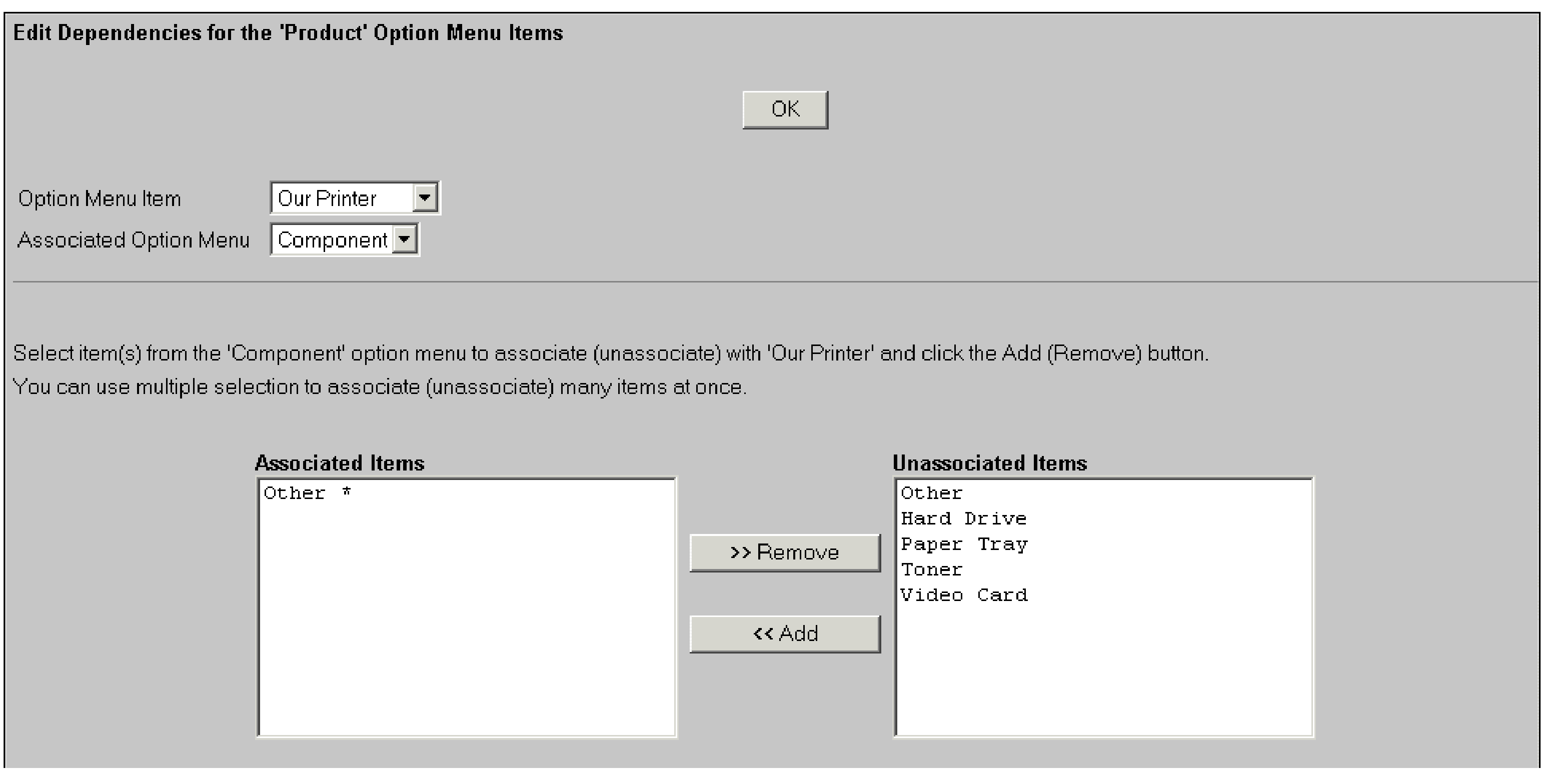
Using the example above, if **Component** were removed from In Use to Not In Use, the Component field and all of its option menu items would be removed from the data record. The option menu items in the **Product** and **Request Type** fields would be independent of the associations that existed with the Component field. However, the dependent relationship between Request Type and **Priority** would still be preserved.

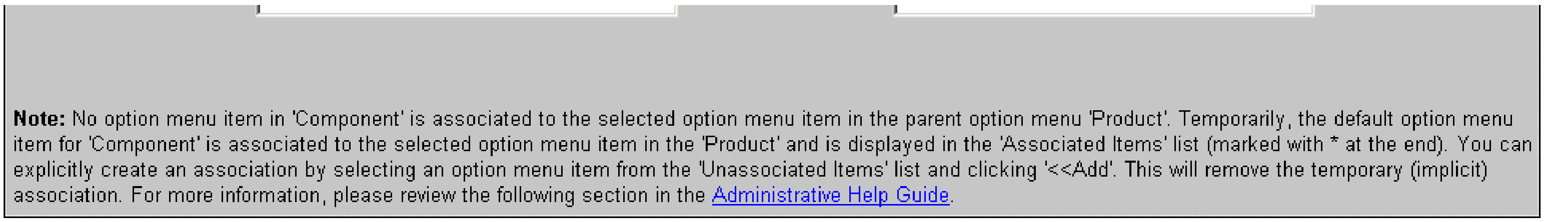
3. **Option Menu Item deleted from a pulldown menu involved at any level**
When an option menu item is removed from the data record by deleting it in the **Edit Items** section of a pulldown menu, the user making the change will be prompted with the options below:
   - Choose one of the remaining menu values for that field to replace the removed value in records that have the obsolete value selected. If this option is chosen, there may be records where the parent and child values do not follow the dependent relationship configured in the Item Dependencies section. Using the example above, **Product** has the option menu items "Our Printer" and "Our Computer". "Our Printer" is associated with the option menu item "Paper Tray" from the "Component" field. "Our Computer" is associated with the option menu item "Hard Drive" from the "Component" field. If we choose to replace the value "Our Printer" in all records where "Our Computer" is selected, these records will have "Our Printer" entered with "Hard Drive" in the "Component" field even though "Hard Drive" is unassociated with "Our Printer" in the Item Dependencies section. However, after completing this operation, you could use the Edit Results operation to globally change these records to have acceptable values. In the case described above, you could run a query with the criteria "Product" = "Our Printer" and "Component" = "Hard Drive". Then, when the results are generated, use the Edit Results operation to change the "Component" field to have a value that is associated with "Our Printer" for all of the records displayed in the query results.
   - Delete any records that contain the obsolete value. Choosing this option will permanently delete these records.
   - Leave the records containing the obsolete value unchanged. Choosing this option may cause unexpected results in the Edit, Task, Query and Metrics pages when the obsolete value is present in a record.
4. **Parent Pulldown changed to <No Pulldown> in the Define Record section**
When the **Parent Pulldown** attribute of a pulldown is changed to <No Pulldown> in the **Define Record** section, the option menu items of this pulldown become independent of any associations that existed between the pulldown and its former parent. However, any dependencies that exist at levels above or below this pulldown will be preserved.

Using the sample hierarchy above, let's say the **Component** field was changed to have <No Pulldown> in the Parent Pulldown attribute in the Define Record section. The option menu items of Component will be independent of the associations that existed with **Product**. However, the associations between the option menu items of Component and levels below it will be preserved.

Using the sample hierarchy, let's say the **Request Type** field was changed to have <No Pulldown> in the Parent Pulldown attribute in the Define Record section. The option menu items of Request Type will be independent of the associations that existed with **Component**. However, the associations between Request Type and **Priority** will be preserved. The associations between **Product** and Component will also be preserved.

5. **The associations between an Option Menu Item and the next lower level are removed in the Item Dependencies page**
If all of the associations between an option menu item and the next lower level are removed, this indicates that the option menu item is not explicitly associated with any option menu item in a child pulldown menu. When this occurs, ProblemTracker automatically creates an implicit (temporary) relationship between the option menu item and the default option menu item of the child pulldown menu. This implicit relationship is shown in the figure below. The "*" after the child option menu item in the **Associated Items** column indicates that the association is implicit.






Using the sample hierarchy and the figure displayed above, the **Product** field has the option menu item "Our Computer". All associations between "Our Computer" and the option menu items of the **Component** field were removed. The default option menu item of Component is "Other". Thus, when all of the associations between "Our Computer" and the option menu items of Component were removed, ProblemTracker automatically created an implicit relationship between "Our Computer" and "Other * ".

6. **Parent Pulldown changed to another pulldown field in the Define Record section**
   When the **Parent Pulldown** attribute of a pulldown is changed to select another pulldown menu in the **Define Record** section, the option menu items of this pulldown become independent of any associations that existed between the pulldown and its former parent. However, any dependencies that exist at levels above or below this pulldown will be preserved.

   Using the sample hierarchy above, let's say the **Component** field was changed to have another field, **Severity**, in the Parent Pulldown attribute in the Define Record section. The option menu items of Component will be independent of the associations that existed with **Product**. However, the associations between the option menu items of Component and levels below it will be preserved.

   Using the sample hierarchy, let's say the **Priority** field was changed to have another field, **Severity**, in the Parent Pulldown attribute in the Define Record section. The option menu items of Priority will be independent of the associations that existed with **Request Type**. However, the associations between Request Type and **Component** will be preserved. The associations between Component and **Product** will also be preserved. ProblemTracker will automatically create an implicit association(s) between the default option menu item of Priority and the option menu items of its new parent, Severity. These temporary associations can be changed by creating explicit associations in the **Item Dependencies** section.

**NetResults ProblemTracker**

# Customizing Workflow

Help Topics | << | >>

## Overview

ProblemTracker allows you to customize the workflow to match your organization's procedure for processing records. A **workflow** process is a set of steps, represented by states and transitions. Each record will move through the workflow steps to be processed by various users who enter information into the record throughout the process. Any number of states may be defined. Each **state** may have one or more transitions. A **transition** is a path from one state to another state. In addition, the workflow can be customized per product. Meaning that a different set of workflow steps and properties can be configured for different products.

The following sections describe aspects of the Workflow Customization in detail:

Workflow States
Workflow Transitions
Workflow Properties

Before customizing your workflow, it may be helpful to review the Tracking Defects with ProblemTracker section to get a feel for how the workflow settings interact with other areas in ProblemTracker.

**NetResults ProblemTracker**

# Workflow States

Help Topics | << | >>

The workflow is a set of steps that are used to process a record. Each step can be represented by a state. After creating the states in your workflow, you will create transitions, or paths, to move records from one state to another.

To **customize** the workflow states:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button

---

## Adding a State

To **add** a new state:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Add State** button
5. Make selections in the options presented. These options are described in detail below
6. Click on the **OK** button to save the new state
7. Click on the Transitions button to begin configuring transitions for the new state, or click **OK** to return to the Define Workflow section

## Properties of a State

**State Name**
Name of the state

**Order**
The order of the state. This will determine the order in which it appears in the **Workflow Administration** table. You may wish to order the states according to their place in the workflow process. For example, if Reported is the first state for all records, you may want to specify "0" as the order for this state. States which have the same value specified in the order field will be listed alphabetically.

**Transition Label Style**
The style of the labels that will be displayed when a transition is displayed in the Task operation. You can choose from three types of label styles:

- Radio
  Transition options will be displayed as a radio button selection (listed vertically).
- Buttons
  Transition options will be displayed as clickable buttons (listed horizontally).
- Pulldown
  Transition options will be listed in a single pulldown menu.

---

## Editing a State

To **edit** a state:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Edit** button listed to the left of the state you wish to modify
5. Make the desired changes to the state's properties
6. Click **OK** to save the changes

---

## Removing a State

To **delete** a state:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Delete** button listed to the left of the state you wish to remove
5. If there are saved queries or saved charts which reference this state, you will be prompted to select a choice for handling these reports:
   - Choose a state to replace the deleted state in the report criteria
   - Delete any report that lists this state
6. After making any necessary selections, click **OK** to delete the state

**NetResults ProblemTracker**

# Workflow Transitions

Help Topics | << | >>

A **transition** is a path used to move a record from one state to another in the workflow or can be used to assign the record to another user. A transition can include fields called **Task Fields** that require a user to enter some information into a record before it moves to the next step in the workflow. In some cases a transition may be a loop (a transition which keeps the record in the same state). A loop transition is used when a record simply needs to have information added to a field, but does not move to another state and / or does not move to another assignee.

---

### Defining Transitions for a State

To **define** the transitions for a state:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button to the left of the state for which you want to define transitions. Use the steps in the sections below for adding, editing, or deleting a transition.

---

### Adding a New Transition

To **add** a new transition:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button to the left of the state for which you want to define transitions
5. Click on the **Add Transition** button
6. Make selections for the properties described below
7. Click **OK** to save the transition

### Properties of Transitions

The following options will be presented when you add or modify a transition:

**Transition Name**
Enter a label that will be used as the name of the transition during the Task operation

**Order**
The order of the transition. This will determine the order in which it appears in the transitions table as well as in the list displayed during the Task operation. Transitions which have the same value specified in the order field will be listed alphabetically.

**New State**
The state to which the record will be routed when this transition is selected during the Task operation. For this option, you may select one of the following:

- A specific state
  Any state in the Workflow State table can be selected as the new state for a transition.

- Prompt with <State Group>
  Selecting this option will allow the user performing the Task operation to choose from a list of all states within a particular state group as the new state for the record. When selecting this option, please select a state group from the second pulldown listed after **New State**. Review the Defining State Groups section for information on creating a state group. The current state of the record will be selected by default during the task operation if the current state is part of the state group selected. Otherwise, the states in the state group will be listed in alphabetical order.

- Previous State
  This option will send the record to the most recent state the record was in prior to its current state. ProblemTracker will examine the Record History to determine the previous state.

**New Assignee**
The user to whom the record will be assigned when this transition is selected during the Task operation. For this option, you may select one of the following choices listed below:

- <State Manager>
  The record will be routed to the State Manager based on the New State for this transition and the value of the Product field in the record. State Managers can be set in the Workflow Properties section and can be defined **per-product**.

- <Same Assignee>
  This option can be used for transitions where a record does not need to be assigned to a different user. For example, if a record simply needs to be updated by the user who is currently assigned to the record.

- Prompt with <User Group>
  This option enables you to restrict the list of possible assignees to the members of a user group. The user performing the Task operation will select the new assignee from a list of users within the User Group that you specify for this option. When selecting this option, please select a user group in the second pulldown next to **New Assignee**. In the third pulldown next to New Assignee, select whether the user "TBD" should be included or excluded from this user group when presented during the task operation. TBD is a built-in user that can be used as a place holder or can signify "assigned to no one". Please review the User Groups Help section for information on creating a user group. The current assignee will be selected by default during the task operation if the current assignee is a member of the user group displayed. Otherwise, the users in the user group will be listed in alphabetical order.

- <Last Assignee for New State>
  When selecting this option, ProblemTracker will examine the Record History to find the last user who was assigned to this record when it was in the state specified in the field **State** for this transition. For instance, if the **New State** is "Scheduled", ProblemTracker will look in the record history for the record and find the last entry where this record was in the Scheduled state. The assignee listed in this entry will become the new assignee for this record. If the record has not passed through the state selected as the New State, another transition will have to be used to process that record since there is not a user who was the Last Assignee.

- Last Assignee for <State>
  When selecting this option, please select a state in the second pulldown next to **New Assignee**. With this option selected, ProblemTracker will examine the Record History to find the last user who was assigned to this record when it was in the state specified in the second pulldown. For instance, if the state selected is "Scheduled", ProblemTracker will look in the record history for the record and find the last entry where this record was in the Scheduled state. The assignee listed in this entry will become the new assignee for this record. If the record has not passed through the state selected for this option, another transition will have to be used to process that record since there is not a user who was the Last Assignee.

- <Reporter>
  This will assign the record to the original user who reported the issue according to the value of the Reported By field.

- <LoginUser>
  This will assign the record to the user performing the Task operation. An example where this option can be used is in cases where a record is assigned to another user, such as TBD, and the user needs to assign the record to his or herself using the Task operation.

- A specific user
  Any user with "Internal" selected as the user type can be selected as the new assignee for a transition. The user type is set when the user account is created in the Workgroup Management System.

### History Comment

- Selecting **Required** for this option will require the user to enter a history comment when selecting this transition during the Task operation.
- Selecting **Optional** will allow the user to leave this field blank when this transition is chosen during the Task operation.
- When **Do Not Display** is selected here, the history comment field will not be presented to the user when this transition is chosen during the task operation. Even though the history comment is not displayed, the record history will still reflect that the task operation was performed on a record. In addition, if Do Not Display is selected and there are no task fields configured for the transition, the transition is set up for fast tasking. Up to 2000 characters can be entered into the History Comment.

### Clone Record

- If **Yes** is selected for this option, ProblemTracker will first create a copy (clone) of the record which the user selected for the Task operation (a new record will be added with all field values the same as the record that was selected), then it will perform the Task operation on the newly created record (clone). The originally selected record ("parent" of the clone) will only have its Record History updated to note that a clone was made of the record. The clone ("child" record) will also have an extra Record History entry to note that it was created as a clone of the parent. Whether or not an Email Notification Rule (with a condition such as "change of Assignee") is triggered by this Task operation will be based on a comparison between the parent record (record being copied) and the child record (copy) after the Task operation completes (e.g. is the Assignee different for the child than for the parent). No "Add" Email Notification Rules will be triggered (to avoid getting one notification for an Add and a second one for a Task for what, to the end user, is a single Task operation). Additional general information on cloning a record is available in the Cloning a Record section of the View page help in the Users Guide.

- If **Yes** is selected for this option, you can also choose to have the file attachments and/or source code file associations copied from the parent record by checking the Attachments and/or Source Code Files boxes.

**Fast Tasking**
Fast Tasking is the process where a transition is chosen and the user clicks on the OK button, the record will immediately be updated because it is set such that there are no task fields and the history comment should not be displayed. If a transition is configured to allow fast tasking and is configured to display alert settings during the task operation, the alert settings will not be displayed during the task operation. The default alert settings for the transition will be used instead.

---

## Editing a Transition

To **edit** a transition:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button to the left of the state where the transition is defined
5. Click on the **Edit** button to the left of the transition
6. After making changes to the transition, click **OK** to save your modifications. For details on the properties of a transition, see the Properties of a Transition section above.

---

## Removing a Transition

To **delete** a transition:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button to the left of the state where the transition is configured
5. Click on the **Delete** button to the left of the transition
6. Click **OK** to confirm, then **OK** again to complete the operation. The transition will be removed from the transition list.

---

## Defining Fields For the Task Operation

For each transition within a particular state, you can specify which fields should be presented to the user for the Task operation. By only presenting the user with the necessary fields, you can ensure each user will correctly adhere to the workflow process.

To **add** Task Fields to a transition:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button to the left of the state where the transition is configured
5. Click on the **Task Fields** button to the left of the desired transition
6. Click on the field in the **Not In Use** column, then click on the **Add** button
7. Click on the **Edit** button to configure properties for the field when it is presented during the Task operation. The properties are described in the next section below.
8. Click on the **Update** button to save your selections
9. Click on the **OK** button to return to the Transition list

To **edit** the properties of a Task Field in a transition:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button to the left of the state where the transition is configured
5. Click on the **Task Fields** button to the left of the desired transition
6. Click on the field in the **In Use** column, then click on the **Edit** button
7. Make changes to the properties for the field when it is presented during the Task operation. The properties are described in the next section below.
8. Click on the **Update** button to save your selections
9. Click on the **OK** button to return to the Transition list

To **remove** Task Fields from a transition:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button to the left of the state where the transition is configured
5. Click on the **Task Fields** button to the left of the desired transition
6. Click on the field in the **In Use** column, then click on the **Remove** button
7. Click **OK** to return to the Transition list

## Properties for Task Fields

The following properties can be set for Task Fields when they are presented during the Task operation:

**Order**
The order in which the Task Field will appear on the page during the Task operation relative to the other task fields configured for the same transition. By default, the order will be the order value as listed in the Define Record section. Select an integer value. If multiple task fields have the same value for the order field, the task fields will be listed in alphabetical order.

**Type**
Specifies whether the field is required, optional, or read only when it appears during the Task operation. Selecting **Required** indicates that a user will not be able to complete the Task operation until something is entered or a different value selected for the field. For Integer, Float, Text, TextArea, or Date types this means that a blank value will not be allowed. For pulldown fields, this means that the user must select a value other than the initial value displayed on the form. Selecting **Optional** indicates that the user is not required to enter information into the field to complete the Task operation. Selecting **Read Only** indicates that the contents of the field will be displayed for the user's reference, but the field cannot be modified.

**Initialize (Reset)**
For Date fields, this property specifies whether the field should be automatically initialized to the current date/time when it appears on the Task page. You may wish to use a combination of setting the **Type** to "Read Only" and **Initialize (Reset)** to "Yes" for date fields. This combination will allow the date field to be set to the current date and time when the Task operation is performed, but the user will not be allowed to modify the date field.

For Text, TextArea, URL, Integer, and Float fields, this property specifies whether the field should be reset to blank. By setting the **Initialize (Reset)** property to "Yes" and setting the **Type** property to "Required", you can force a new value to be entered for a Text, TextArea, URL, Integer, or Float field. This property can be useful in combination with the Clone Record option in a Transition as you may find that you would like several fields to be reset when creating a copy (clone) of an existing record.

Note 1: For Float and Integer fields, if you set the **Initialize (Reset)** property to "Yes" and the **Type** property to "Read Only", the field value will be set to 0 (or 0.0) because Float and Integer fields must always have a value (blank is not a valid value for Float or Integer).
**Note 2: For all field types, if you set the Initialize (Reset) property to "Yes" the existing value (if any) of the field will be overwritten. Any data previously entered in the field will be lost.**

For Pulldown fields, this property specifies whether the field should be reset to its default value. By setting the **Initialize (Reset)** property to "Yes" and setting the **Type** property to "Required", you can force a user to select a value other than the default.

For Dependent Pulldown fields, if the parent pulldown is set to be initialized, the parent pulldown will be set to its default value. The value of child pulldown menus may be changed to its default relative to value of the parent pulldown if:

- The child pulldown is also a task field in the same transition and is set to be initialized OR
- The child pulldown is also a task field in the same transition and a value other than the default is

selected in the parent pulldown (selecting another value in the parent will cause the items listed in the child pulldown to be updated based on the dependencies configured between the two fields).

If the child pulldown is not present as a task field, it will retain the same value even if the value does not match the value set for the parent pulldown.

For RelNum fields, this property specifies whether each component of the field should be reset to its default value.

For YesNo fields, this property specifies whether the field should be set to "Yes", its default value.

---

## Alerts

Alerts are email notification messages that can be sent automatically by ProblemTracker at a later date and time to remind a user or group about a record. Alert settings can be configured for each transition. When an alert is set for a transition, when the Task operation is performed on a record using this transition, the alert settings will be applied to the record. It is also possible to allow users to be prompted to configure the Alert settings during the Task operation. Information on configuring default Alert settings for a transition can be found in the Administration section for the Alerts feature.

## Defining State Groups

Often when formulating criteria for queries and charts or setting up the workflow, you may wish to limit the criteria or the workflow options to a particular group of states. ProblemTracker allows you to do this by defining **State Groups**. A State Group is a collection of workflow states that appears as a choice on the Query, Metrics, and Workflow sections.

To **add** a State Group:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon.
3. Click on the **Define Workflow** button in the Admin section.
4. Click on the **State Groups** button.
5. Click on the **Add New Group** button.
6. Enter a name for the State Group, then click on the **OK** button.
7. Click on the **Edit State Group** button to add states to the new group.
8. Click on a state in the **Not In Use** column, then click on the **Add** button to move it to the **In Use** column. Repeat this until all states you wish to add are in the In Use column.
9. Click **OK** to return to the State Groups page.

To **edit** a State Group:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon.
3. Click on the **Define Workflow** button in the Admin section.
4. Click on the **State Groups** button.
5. Click on the **Edit** button to the right of the state group you wish to modify.
6. To remove a state from the state group, click on the state in the **In Use** column, then click on the **Remove** button to move the state to the **Not In Use** column. To add a state to the state group, click on the state in the Not In Use column, then click on the **Add** button to move the state to the In Use column.
7. Click on the **OK** button to return to the State Groups page.

To **delete** a State Group:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon.
3. Click on the **Define Workflow** button in the Admin section.
4. Click on the **State Groups** button.
5. Click on the **Delete** button to the right of the state group you wish to modify, then select **OK** to confirm the action.

## Workflow Properties

ProblemTracker allows you to define workflow properties for each product. These workflow properties include specifying a user that is treated as the person (manager) with overall responsibility for issues in a given state (the State Manager which is used for automated assignment during the Add and Task operations) as well as the set of states which can be selected during the Add operation (Allowed Add States) and the default state (initially selected state) used in the Add operation (Default Add State).

A set of default workflow properties are defined in ProblemTracker. These default workflow properties are applied to each new product added to ProblemTracker via the Option Menus section. You can update the workflow properties of some (or all) existing products to match the default workflow properties. And, you can update (customize) the workflow properties for each product individually.

To **customize** the **default** workflow properties:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon.
3. Click on the **Define Workflow** button in the Admin section.
4. In the **Product** Pulldown field at the top of the page, select "*(Default)", then click on the **Workflow Properties** button.
5. Modify the properties described below, then click **OK** to save your changes.

To **customize** the workflow properties for a **specific product**:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon.
3. Click on the **Define Workflow** button in the Admin section.
4. In the **Product** Pulldown field at the top of the page, select the product you wish to modify, then click on the **Workflow Properties** button.
5. Modify the properties described below. If you wish to apply the default workflow properties to a product, click on the **Load Default Values** button.
6. Click **Update** to save your changes.

To **push** the **default** workflow properties to **some (or all) products**:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon.
3. Click on the **Define Workflow** button in the Admin section.
4. In the **Product** Pulldown field at the top of the page, select "*(Default)", then click on the **Workflow Properties** button.
5. If you would like to update the default workflow properties before updating the product workflow properties, you can make modifications to the properties now.
6. Click on the **Update & Push to Selected Products** button. This will save any changes you've made to the default workflow properties and display a page with a list of products.

7. Click the **All** button to select all products if you want all products to have the same workflow properties (all product workflow properties will be set to the default workflow properties). Or, select individual products you wish to update with the default workflow properties.
8. Click the **OK** button to update the selected products with the default workflow properties.

## Properties

The following properties can be set for the default workflow properties or for a specific product.

**State Managers**
The manager of a state can receive notification email when certain events occur related to records in the database when they either enter or leave the state. They can also have records automatically assigned to them by the Add or Task operations.

A state manager can be specified for each product, allowing you to assign different managers for the same state on a per product basis.

**Default State**
The Default State indicates the state a record will be routed to when it is first added to the database. A Default State can be defined for each product, allowing you to configure different states for records that are added to the system on a per-product basis.

**Allowed Add States (state group)**
Select a state group to limit the states available for selection when Status is visible on the Add page. The state group "All" is selected by default, indicating that all states will be displayed in the Status field when it is visible on the Add page. When another state group is selected for this property, only the states that are included in the state group can be selected for the Status field when a record is created using the Add page. Details on adding or editing state groups can be found in the Defining State Groups section above.

---

## Configuring a Different Workflow per Product

Each product can have a different workflow in ProblemTracker by configuring the Workflow Properties and available transitions. For example, Product A and Product B have different workflows as shown below:

**Product A Workflow**
Reported -> Scheduled -> In Test

**Product B Workflow**
Scheduled -> In Development -> In Test

To set up Product A's workflow:

1. Configure the Workflow Properties for Product A to set the Default Add State to be "Reported"
2. Create a transition in the Reported state to move records to the Scheduled state. This transition should have New State set to "Scheduled".

3. Create a transition in the Scheduled state to move records to the In Test state. This transition should have New State set to "In Test".

To set Product B's workflow:

1. Configure the Workflow Properties for Product B to set the Default Add State to be "Scheduled"
2. Create a transition in the Scheduled state to move records to the In Development state. This transition should have New State set to "In Development".
3. Create a transition in the In Development state to move records to the In Test state. This transition should have New State set to "In Test".

---

## Automatic Assignment for the Add and Task

The Workflow Properties can be used to automatically assign records to particular users and states. Because Workflow Properties can be set per Product, it is possible to assign records to different states and / or users for each product.

The Workflow Properties can determine the Status and Assignee automatically when records are created using the Add form or processed using the Task operation. Automatic assignment functions for the Add operation are based on whether the Product, Status, and, Assigned To fields are visible on the Add page. Automatic assignment functions for the Task operation depend on the settings for the transition selected and the value of the Product field for the record being processed.

### Automatic Assignment Guidelines for Add Page

When a field is visible on the Add page, this indicates that the field's visibility settings are configured such that the field is displayed on the Add page when a user creates a new record. Please review the Field Visibility section of the Customizing the Data Record Help section.

ProblemTracker's automatic assignment for a new record is a combination of the values selected for the Product, Status, and Assigned To fields on the Add page. These fields can either be selected by the user on the Add page or selected automatically based on the guidelines described below:

- The Product field of a record determines which Workflow Properties are used to route a new record to a particular state and user

- When the Product field is **not visible** on the Add page, the user **cannot** select a Product for the new record. When a new record is saved, the Product field is set to the default value.

- When the Status field is **visible** on the Add page, the user can accept the default for the Status field (by not making a selection), which will route the record to the state listed in the field **Default State** in the Workflow Properties for the Product of this new record. If the user chooses to make a selection for the Status field, when the new record is saved, it will be routed to the state selected by the user.

- When the Status field is **not visible** on the Add page, the user **cannot** select a state. When the new record is saved, it is routed to the state configured as the **Default State** in the Workflow Properties for the Product of this new record.

- When the Assigned To field is **visible** on the Add page, the user can accept the default for the Assigned To field (by not making a selection), which will assign the new record to the **State Manager** in the Workflow Properties for the Product **and** State of this new record. If the user chooses to make a selection for the Assigned To field, when the new record is saved, it will be assigned to the user selected in the Assigned To field.

- The value State Manager can be listed as the default for the Assigned To field when the General Preference Include State Manager in the Assignee List on Add operation is enabled. When a new record is saved with "State Manager" selected, the record will be assigned to the **State Manager** in the Workflow Properties for the Product **and** State of this new record.

- When the Assigned To field is **not visible** on the Add page, the user **cannot** select an assignee. When the new record is saved, it is assigned to the **State Manager** in the Workflow Properties for the Product **and** State of this new record.

- If all three fields (Product, Status, Assigned To) are **not visible** on the Add page, the newly added record will be saved with Product set to its default value, Status set to the Default State for the default Product, and Assigned To set to the State Manager for the Default State.

#### Automatic Assignment Guidelines for the Task Operation

When a record is processed using the Task Operation, the settings in the transition selected determine whether automatic assignment is used.

- The value of the **Product** field in a record is used to determine the State Manager for each state according to the Workflow Properties set for the Product.
- If a transition has **New Assignee** set to "<State Manager>", the record will be routed to the State Manager for the **New State** that corresponds to the transition.

---

## Alerts

Alerts are email notification messages that can be sent automatically by ProblemTracker at a later date and time to remind a user or group about a record. Alert settings can be configured for each product. The alert settings defined for each product will be used when a new record is created using the Add page with a particular product selected. It is also possible to allow users to be prompted to configure the Alert settings during the Add operation. Information on configuring default Alert settings for a product can be found in the Administration section for the Alerts feature.

# Knowledge Base Overview

The Knowledge Base is a feature that facilitates the process of creating and publishing articles to allow end users (customers, vendors, partners, any users) to search these articles for answers to questions and issues. Providing an information source that end users can use self-sufficiently reduces the effort needed to support end users. The Knowledge Base also provides a means of documenting and proliferating information to minimize the time needed to resolve an issue.

## Enabling the Knowledge Base

A Knowledge Base license key is required to use this feature. Enter your license key in the corresponding tab of the ProblemTracker License Manager.

Once your license key has been entered, create a new workgroup with "Knowledge Base" selected as the template type in the Workgroup Management System (WMS). An explanation of how this template is set up can be found in the section Using the Knowledge Base template. To create a new workgroup in WMS, refer to the Adding a Workgroup section of the WMS Help Guide.

To enable the Knowledge Base in the new workgroup, go to the General Preferences section by performing the following steps:

1. Login to the Knowledge Base workgroup as Admin
2. Click on the Admin icon
3. Click on the General Preferences button
4. Scroll to the Knowledge Base section, set the preference called Enable Knowledge Base to "Yes"
5. Click OK to save this change

## Knowledge Base Components

There are several components of the Knowledge Base that can be customized:

- Workflow
  You can configure a set of workflow steps for the process of creating, reviewing, and publishing Knowledge base articles. A new Knowledge Base workgroup has a default workflow configured which is explained in detail in the Knowledge Base template section of this Help Guide.

- Search Page
  Customize the page where users will perform searches. You will be able to select the content displayed and options provided such as search methods (all words, any word, exact phrase) and preferences.

- Results Page
  Define the fields that will be displayed as part of the search results.

- Item Page
  Design how each individual Knowledge Base article will be displayed e.g. which field will be used as the article's title, which other fields will be included in the article.

- Preferences
  Set preferences such as date and time formats that are applied to the Knowledge Base for all searches.

- **Customize the KB Pages with your own HTML**
  The Search, Results, and Item pages include the ability to add your own HTML to change the look and feel of the pages presented to your users. Refer to the sections for each component above for details on customizing the HTML for each of the Knowledge Base pages.

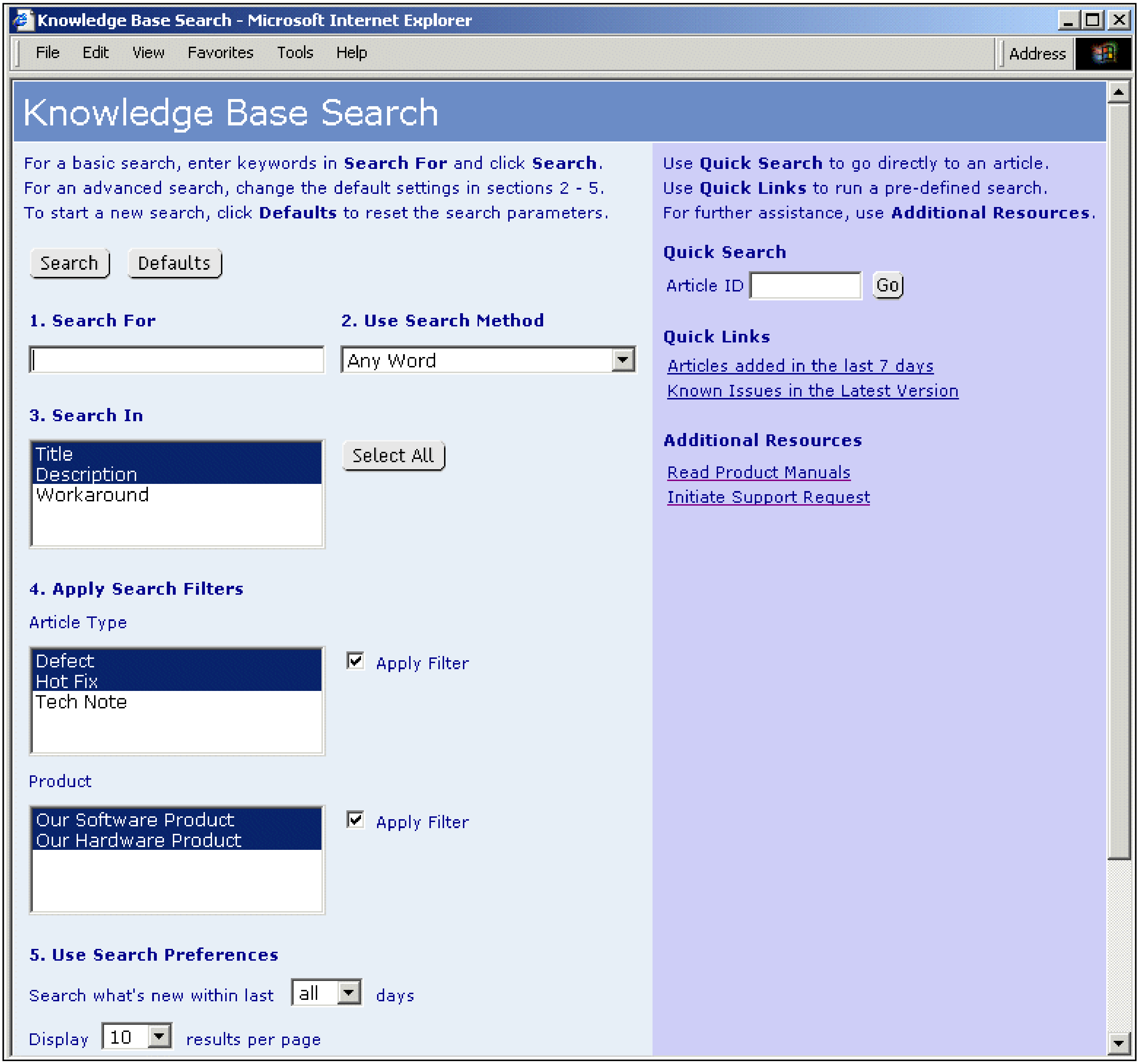
# Search Page



The Search Page is the first page users will see when they attempt to use the Knowledge Base. The URL for this page is:

**http://servername/workgroup/kb/search.asp**

where **servername** is the TCP / IP name of the machine where ProblemTracker is installed and **workgroup** is the name of the ProblemTracker workgroup you created as the Knowledge Base. An example of a Search Page is shown in the image below. The Search Page is configured with default settings. A detailed explanation of the default settings can be found in the section Using the Knowledge Base template.



## Customizing the Search Page

To customize the Search Page:

1. Login to the Knowledge Base workgroup as Admin
2. Click on the Admin icon
3. Click on the **Knowledge Base** button
4. Click on one of the buttons to the left of the Search Page. Details about these options can be found below.

## Header and Footer

Click on the **Header** or **Footer** button to the left of Search Page on the Knowledge Base Configurations Page to customize the Header or Footer section of the Search Page. You can enter your own custom HTML into the text box provided. Click OK to save your changes. Please do not enter any header tags into this area. Some examples of header tags are <HTML>, </HTML>, <BODY>, </BODY>.

## Contents

Several items can be customized in the Contents of the Search Page. The Contents section contains the tools end users will employ to search through the Knowledge Base. The settings you choose in this page will determine how users will be able to conduct searches to return the desired information.

To customize the options on the Contents page:

1. Login to the Knowledge Base workgroup as Admin
2. Click on the Admin icon
3. Click on the **Knowledge Base** button
4. Click on the **Contents button** to the left of "Search Page"

For all components that can be customized as Contents of the Search Page, a **Visible** column displays whether this component is visible to users on the Search page. A checkmark in the Visible column indicates that the component is visible. By default, all components are visible. To remove the component from being displayed on the Search page, click on the **Edit** button and uncheck the box for the **Is Visible** option, then click OK to save your change. When a component is invisible (check mark not present in the Visible column for that component), the default selection for this component will be used during all searches. The default settings are described in the component details below. The components **Search Words**, **Right Pane**, and **Left Pane** cannot be made invisible.

## Search Words

Search Words is the component where users enter the key word(s) to be used as search criteria. Click on the **Edit** button to the left of "Search Words" to customize the label. By default, this is set to "1.Search For". Click **OK** to save your changes.

## Search Methods

This component displays the allowed methods of searching the Knowledge Base information. Examples of Search Methods are "All Words", "Any Word", "Exact Phrase", and "Boolean Expression".

Click on the **Edit** button to modify the label of this field. By default, it is set to "2. Use Search Method". Click **OK** to save the change.

When the **Is Visible** box is checked, this component is displayed on the Search Page. If you choose to make this component invisible by unchecking the box, the value selected in the **Set Default** section will be used for all searches.

Click on the **Select Methods** button to choose which Search Methods will be provided for use while searching the Knowledge Base. Click on a method to highlight it and click OK to save. At least one method must be selected. Multiple search methods can be selected by holding the "CTRL" button on your keyboard while clicking on multiple search methods.

- **All Words:** The search will return all Knowledge Base articles which contain all of the words typed into the "Search Words" field.

  **Example:** "page error" is typed into the Search Words field. The results returned will be articles which contain both "page" and "error" in the article.
- **Any Word:** The search will return all articles which contain any of the words typed into the "Search Words" field.

  **Example:** "page error" is typed into the Search Words field. The results returned will be articles which contain either "page" or "error" in the article.
- **Exact Phrase:** The search will return all articles which contain the exact match for the string typed into the "Search Words" field.

  **Example:** "page error" is typed into the Search Words field. The results returned will be articles which contain the string "page error" in the article.
- **Boolean Expression:** You can allow the use of Boolean operators such as "AND" and "OR". A + sign can be used as "AND". You can also use quotes to distinguish a string of words as one part of the Boolean expression.

  **Example:** "page error" AND "cannot find server" is typed into the Search Words field. The results returned will be articles which contain the phrase "page error" and also the phrase "cannot find server".

Click on the **Set Default** button to choose which Search Method will be used as the default. If the Search Methods component is visible on the Search Page, the default will be selected as the search method for all searches unless changed by the user performing a search. If it is not visible on the Search Page, the default will be used as the Search Method for all searches. Click **OK** to save your default selection.

---

## Search Fields

Any of the text fields (fields of the format Text or BigText) in use can be selected as part of the Knowledge Base search. The settings for this component determine which text fields within the Knowledge Base articles will be searched to find a match for the key word(s) entered in the Search Words field.

Click on the **Edit** button to modify the label for this component. By default, it is set to "3. Search In".

When the **Is Visible** box is checked, this component is displayed on the Search Page. If you choose to make this component invisible by unchecking the box, the value selected in the **Set Defaults** section will be used for all searches.

Click on the **Select Fields** button to choose which fields are available as Search Fields on the Search Page. At least one value must be selected for this field. Multiple values can be selected for this field by holding down the "CTRL" button on your keyboard as you click on multiple fields. Click **OK** to save your selections.

Click on the **Set Defaults** button to select which fields are selected by default. If the Search Fields component is visible on the Search Page, the default(s) will be selected for all searches unless changed by the user performing the search. If it is not visible on the Search Page, the default(s) will be used for all searches. Multiple values can be selected for this field by holding down the "CTRL" button on your keyboard as you click on multiple fields. Click **OK** to save your default selections.

---

## Search Filters

Any of the pulldown fields in use can be selected to narrow down the search. The settings for this component determine which pulldown fields and their corresponding option menu items can be selected as filters. Selecting an item(s) as a filter on the Search Page will cause the search to return all articles that match the Search Words criteria AND match the filter(s) selected.

**Example:** Product is configured as a Search Filter. The Product field contains an option menu item called "Our Browser". When "Our Browser" is selected as a filter when performing a search of the Knowledge Base, the search results will be all articles that matched the key word(s) entered into the Search Words field AND have "Our Browser" selected for the Product field.

Click on the **Edit** button to modify the label for this field. By default, this is set to "4. Apply Search Filters".

When the **Is Visible** box is checked, this component is displayed on the Search Page. If you choose to make this component invisible by unchecking the box, the value selected in the **Set Defaults** section will be used for all searches.

Check the box for **Allow Multiple Selection for Filters** if you wish to allow users to select more than one option menu item in each filter to be used in the search. When multiple option menu items are selected as filters, the search will return all articles which match the criteria listed in the Search For field AND which match one of the option menu items selected as filters.

**Example:** Product is configured as a Search Filter. The Product field contains option menu items called "Our Browser" and "Our Database". When "Our Browser" and "Our Database" are selected as filters when performing a search of the Knowledge Base, the search results will return all articles that matched the key word(s) entered into the Search Words field AND have either "Our Browser" OR "Our Database" selected for the Product field.

Check the box for **Include 'Apply Filter' option** if you wish to allow users to choose which filters should be applied. Unchecking this box indicates that a user will have to select an option menu item for each filter displayed, which will be used as part of the search criteria.

In the **Apply Filter Label** field, enter the name to be used for the check box option on the Search Page which determines whether the filter will be used in the search. By default, this label is "Apply Filter".

Select an option for **Initial Apply Filter Settings**.

- When choosing the option **Apply All Filters (all checked)** with **Include 'Apply Filter' option** enabled, the Search Page will have the "Apply Filter" box checked for all filters displayed.
- When choosing the option **Don't Apply Any Filter (all unchecked)** with **Include 'Apply Filter' option** enabled, the Search Page will have the "Apply Filter" box unchecked for all filters displayed.
- When choosing the option **Apply If Search Filter Has Default(s)** with **Include 'Apply Filter' option**, the Search Page will have the "Apply Filter" box checked for any filter which has a default(s) selected in the **Set Defaults** section for Search Filters. Click **OK** to save your selections for the **Search Filters** component.

  Click on the **Select Filters** button to select the pulldown fields that will be displayed as possible filters on the Search page. Multiple values can be selected by holding down the "CTRL" button on your keyboard as you click on multiple fields. Selecting a pulldown field indicates that all option menu items for this pulldown will be displayed as possible filters on the search page. Click **OK** to save your selections.

  Click on the **Set Defaults** button to select the option menu item(s) that will be selected by default as Search Filters. If the Search Filters are set to be visible on the Search Page, the default(s) will be selected as filters for all searches unless changed by the user performing the search. If the Search Filters are not visible on the Search Page, the default(s) (if any) will be used for all searches. Multiple values can be selected for each filter by holding down the "CTRL" button on your keyboard as you click on multiple fields. Click **OK** to save your selections.

---

## Search Preferences

This option allows you to define the following preferences for the search results:

- Searching records added to the Knowledge Base within a given number of days with respect to a date field, such as, limiting the search to return articles where the Publication Date field is within the last X number of days.
- Limiting the number of results to be displayed on the Results page
- Whether the results page should be displayed in the same browser window or launch a new one

Click on the **Edit** to modify the label for this field. By default, it is set to "5. Use Search Preferences".

When the **Is Visible** box is checked, this component is displayed on the Search Page. If you choose to make this component invisible by unchecking the box, the values selected in the **Set Preferences** section will be used for all searches. Click **OK** to save your changes.

Click on the **Set Preferences** button to configure the Search Preferences. You can choose to display each preference by checking the box in the **Visible** column

The preference **Search what's new within the last given number of days from a Date Field** narrows the search results to be articles that were modified within the last X number of days from the Date Field selected. You can select a default setting for the number of days by making a choice for this field in the Preference column. The available choices for number of days are all, 2, 7, 14, 30, 60, 90, 180. You can also set which date field is referenced to determine the article's age for all searches. All of the Date type fields in use in the Knowledge Base workgroup will be displayed as choices for this setting. If this preference is visible on the Search Page, the users can specify the number of days to limit the search results. If this preference is invisible, the default number of days set as the default will be used for all searches.

The preference **Display a given number of results per page** sets the number of articles that will be displayed per page in a list as the result of a search. A default can be set by making a choice in the Preference column for this field. The choices for this setting are 10, 20, 30, 50, 100. If the field is visible on the Search page, users will be able to make their own selection from the above choices. If the field is invisible, the default choice will be used for all searches.

The preference **Open search results item in same or new window** allows you to choose whether the list of results are displayed in the same browser window as the Search Page or are opened in a new browser window. If this field is visible on the Search Page, the users can make their own selection. If it is invisible, the value set in the Preference column will be used for all searches.

After making your selections, click **OK** to save the preferences.

---

## Quick Search

Quick Search is a feature that allows end users to type in the number of the Knowledge base article he or she wishes to see to immediately view that article.

Click on the **Edit** to modify the label for this field. By default, it is set to "Quick Search".

When the **Is Visible** box is checked, the Quick Search section will be displayed on the Search Page. Click **OK** to save your changes.

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## Quick Links

Quick Links is a feature that allows you to save Knowledge Base searches with particular criteria as links on the Search Page. Your end users can click on these links to immediately run one of the saved search reports.

Click on the **Edit** to modify the label for this field. By default, it is set to "Quick Links".

When the **Is Visible** box is checked, the Quick Links section will be displayed on the Search Page. Click **OK** to save your changes.

Click on the **Modify Links** button to add and edit the Quick Links displayed on the Search page. A new browser window will be launched with the Knowledge Base Search Page displayed.

**To add a Quick Link:**

1. Enter a name for the Quick Link in the **Quick Link Label** field. This name will be displayed in the Quick Links section of the Search Page.
2. Enter the order for the Quick Link to be displayed relative to other Quick Links in the **Quick Link Order** field.
3. Make selections in the search criteria fields to be saved as the search criteria for the saved Knowledge Base search: Search For, Search Methods, Search In, Filters, and Preferences
4. Click on the **Add** button to save this search as a Quick Link.
5. The Quick Link will be displayed in the right column in the Quick Links section

**To edit a Quick Link**, click on the Edit icon to the right of the Quick Link in the right pane.

**To delete a Quick Link**, click on the Delete icon to the right of the Quick Link in the right pane.

---

## Right and Left Panes

The right and left panes on the Search Page can be customized to add your own custom HTML to the Header and Footer. These sections can be used to provide instructions about how to use the Search Page, links to additional resources for your end users, etc.

Click on the **Header** or **Footer** button to the left of **Right Pane** or **Left Pane** to customize the Header or Footer section of either pane. You can enter your own custom HTML into the text box provided. Click OK to save your changes. Please do not enter any header tags into this area. Some examples of header tags are <HTML>, </HTML>, <BODY>, </BODY>.

By default, HTML has been entered to provide the following information in the panes:

- The **Right Pane Header** provides instructions for using the **Quick Search** and **Quick Links** sections that appear in the pane
- The **Right Pane Footer** is set to provide an **Additional Resources** section with other links that could assist end users, such as links to

**Read Product Manuals** and **Initiate Support Requests**
- **Left Pane Header** provides instructions for performing a Knowledge Base search

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## Customizing the Style Sheet for the Search Page

A style sheet is used to determine the look and feel of the Search Page. You can use your own style sheet by placing a copy of your style sheet into the Styles directory of your workgroup's Knowledge Base files. The directory can be found at:

**<installation directory>/*workgroup*/KB/Styles**

where <installation directory> is the location where you installed your ProblemTracker files. By default, the <installation directory> is at C:\Inetpub\wwwroot\ProblemTracker and *workgroup* is the name of the workgroup used as Knowledge Base.

Click on the **Style** button to the left of the Search Page to specify the name of your customized style sheet. In the **Style Sheet File Name** field, enter the name of your style sheet file in the format **FileName.Extension** as in the example **KBStyle.css**, which is the style sheet used by default.

Check the box for the option **Apply to all pages** to apply the style sheet entered in the **Style Sheet File Name** field to all pages related to the Knowledge Base. Enabling this option will overwrite any other style sheets specified in the **Style** section for the Results and Item pages.

Click **OK** to save your selections.

**NetResults ProblemTracker**

# Results Page

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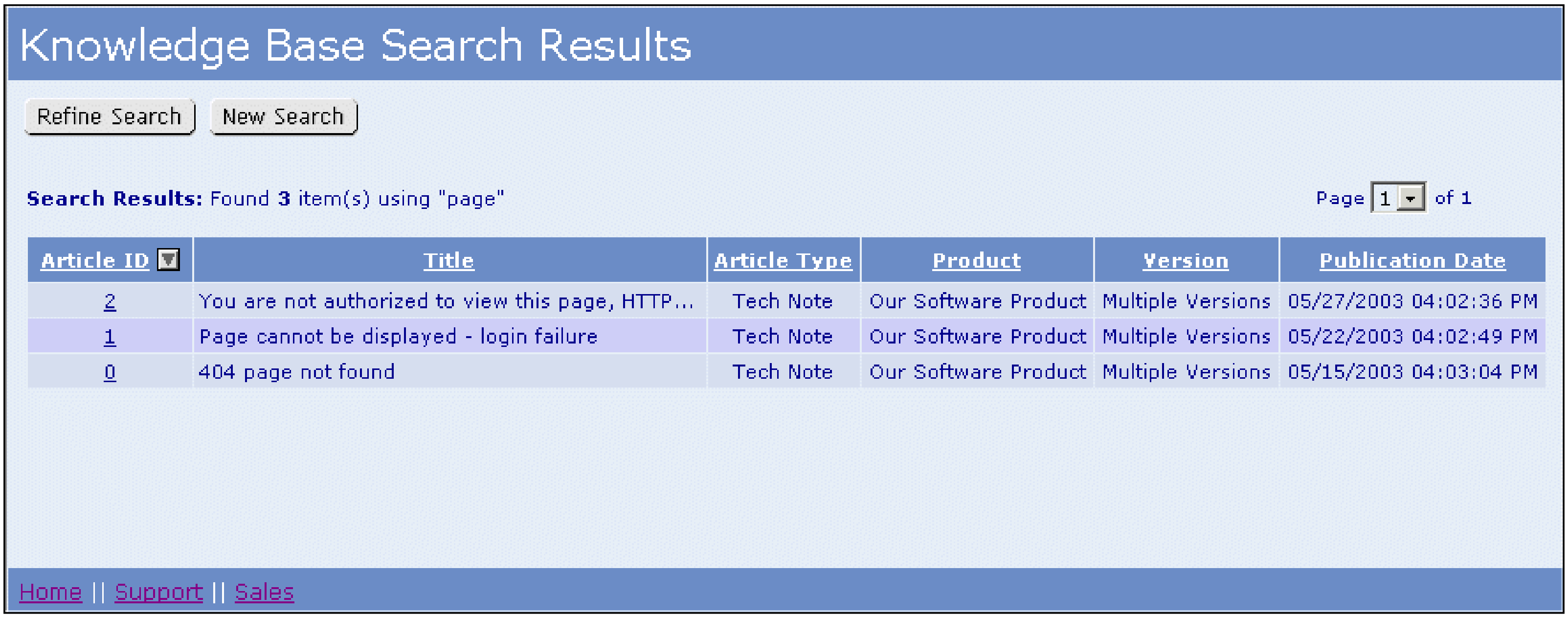
The Results Page is the page that will display the list of articles that matched the criteria specified on the Search page. Various aspects of the Results Page can be customized as described below. A set of results is displayed as an example below.




---

### Header and Footer

Click on the **Header** or **Footer** button to the left of Results Page on the Knowledge Base Configurations Page to customize the Header or Footer section of the Results Page. You can enter your own custom HTML into the text box provided. Click OK to save your changes. Please do not enter any header tags into this area. Some examples of header tags are <HTML>, </HTML>, <BODY>, </BODY>.

---

### Contents

Click on the **Contents** button to the left of the Results Page on the Knowledge Base Configurations Page to customize the contents of the Results page. Specifically, you can select which fields will be used as the columns on the list where articles are displayed on the Results Page. All fields in use in the Knowledge Base workgroup are available to be selected as columns for the Results Page. Fields listed in the **Selected Items** column are the fields that will appear on the Results Page.

To **add** a field to the **Selected Items** column:

1. Click on the name of a field in the **Not Selected Items** column
2. Click on the **Add** button
3. If desired, change the order in which the field appears relative to the other fields in the Selected Items column by clicking on the **Edit** button, then entering the number to be used as the new order. Click **OK** to save the new value for the order.

To **remove** a field from the **Selected Items** column:

1. Click on the name of a field in the **Selected Items** column
2. Click on the **Remove** button

The Record Number field (called PRN by default) is required to be displayed on the Results page so that each article has a unique identifier. Thus, the Record Number field cannot be removed from the **Selected Items** column.

When a BigText field is selected to be displayed on the Results page, the contents of the field will be truncated to 255 characters in the results of a Knowledge Base search.

---

### Customizing the Style Sheet for the Results Page

A style sheet is used to determine the look and feel of the Results Page. You can use your own style sheet by placing a copy of your style sheet into the Styles directory of your workgroup's Knowledge Base files. The directory can be found at:

**<installation directory>/*workgroup*/KB/Styles**

where <installation directory> is the location where you installed your ProblemTracker files. By default, the <installation directory> is at C:\Inetpub\wwwroot\ProblemTracker and *workgroup* is the name of the workgroup used as Knowledge Base.

Click on the **Style** button to the left of the Results Page to specify the name of your customized style sheet. In the **Style Sheet File Name** field, enter the name of your style sheet file in the format **FileName.Extension** as in the example **KBStyle.css**, which is the style sheet used by default.

Check the box for the option **Apply to all pages** to apply the style sheet entered in the **Style Sheet File Name** field to all pages related to the Knowledge Base. Enabling this option will overwrite any other style sheets specified in the **Style** section for the Search and Item pages.

Click **OK** to save your selections.

**NetResults ProblemTracker**

# Item Page

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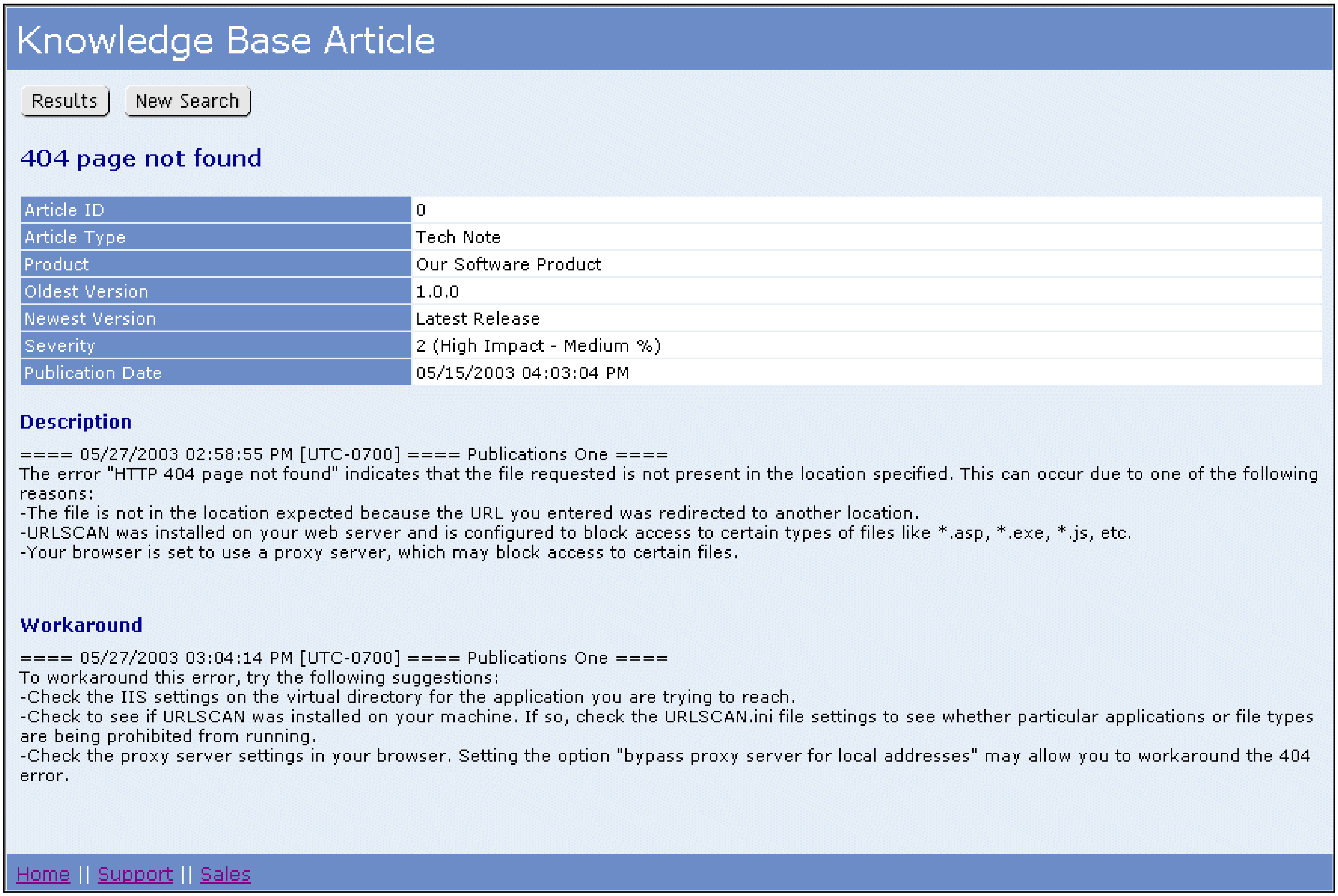
The Item Page is the page that will display the information within a Knowledge Base article. Various aspects of the item Page can be customized as described below.




## Header and Footer

Click on the **Header** or **Footer** button to the left of Item Page on the Knowledge Base Configurations Page to customize the Header or Footer section of the Item Page. You can enter your own custom HTML into the text box provided. Click OK to save your changes. Please do not enter any header tags into this area. Some examples of header tags are <HTML>, </HTML>, <BODY>, </BODY>.

## Contents

The contents of the Item Page can be customized to determine which fields will displayed in the sections of each article. To customize the contents of the Item Page, click on the **Contents** button to the left of the Item Page on the Knowledge Base Configurations Page.

To customize the options on the Contents page:

1. Login to the Knowledge Base workgroup as Admin
2. Click on the Admin icon
3. Click on the **Knowledge Base** button
4. Click on the **Contents button** to the left of "Results Page"

## Article Title

Click on the **Edit** button to the left of **Title** to select a field that will be used as the title for each article. All fields that are a **Text** type field will be available to be selected as the Article Title. Information on adding a Text type field to the database can be found in the Customizing the Data Record Help section. Click **OK** to save your selection.

---

### Summary

Click on the **Edit** button to the left of **Summary** to select the fields that will be displayed in the Summary section of the article. All fields in use in the Knowledge Base workgroup **except** fields that **BigText** type fields will be available to be displayed in the Summary section. Fields listed in the **Selected Items** column are the fields that will appear in the Summary section.

To **add** a field to the **Selected Items** column:

1. Click on the name of a field in the **Not Selected Items** column
2. Click on the **Add** button
3. If desired, change the order in which the field appears relative to the other fields in the Selected Items column by clicking on the **Edit** button, then entering the number to be used as the new order. Click **OK** to save the new value for the order.

To **remove** a fields from the **Selected Items** column:

1. Click on the name of a field in the **Selected Items** column
2. Click on the **Remove** button

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### Body

Click on the **Edit** button to the left of Body to select which fields will be displayed in the Body section of each Knowledge Base article. All fields in use in the Knowledge Base workgroup will be available to be selected for the Body section. Fields listed in the **Selected Items** column are the fields which will appear in the Body section.

To **add** a field to the **Selected Items** column:

1. Click on the name of a field in the **Not Selected Items** column
2. Click on the **Add** button
3. If desired, change the order in which the field appears relative to the other fields in the Selected Items column by clicking on the **Edit** button, then entering the number to be used as the new order. Click **OK** to save the new value for the order.

To **remove** a field from the **Selected Items** column:

1. Click on the name of a field in the **Selected Items** column
2. Click on the **Remove** button

You can choose to display fields that are BigText (TextArea) type fields as Text or HTML. By default, the fields will be displayed as Text. To display the fields as HTML, check the box called **Display TextArea Fields as HTML**. Click **OK** to save this change.

---

### Customizing the Style Sheet for the Item Page

A style sheet is used to determine the look and feel of the Item Page. You can use your own style sheet by placing a copy of your style sheet into the Styles directory of your workgroup's Knowledge Base files. The directory can be found at:

**<installation directory>/*workgroup*/KB/Styles**

where <installation directory> is the location where you installed your ProblemTracker files. By default, the <installation directory> is at C:\Inetpub\wwwroot\ProblemTracker and *workgroup* is the name of the workgroup used as Knowledge Base.

Click on the **Style** button to the left of the Item Page to specify the name of your customized style sheet. In the **Style Sheet File Name** field, enter the name of your style sheet file in the format **FileName.Extension** as in the example **KBStyle.css**, which is the style sheet used by default.

Check the box for the option **Apply to all pages** to apply the style sheet entered in the **Style Sheet File Name** field to all pages related to the Knowledge Base. Enabling this option will overwrite any other style sheets specified in the **Style** section for the Search and Results pages.

Click **OK** to save your selections.

**NetResults ProblemTracker**

# Knowledge Base Preferences

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There are several preferences that are applied to all areas of the Knowledge Base. These preferences include setting the workflow state where Knowledge base articles are published as well as selecting date and time formats.

**To set the Knowledge Base Preferences:**

1. Login to ProblemTracker as Admin
2. Click on the **Admin** icon
3. Click on the **Knowledge Base** button
4. Click on the **Preferences** button to the left of "All Pages"
5. Make selections for the preferences, then click **OK** to save your selections

The preferences that can be set for all Knowledge Base pages are described below:

**State(s) in which the Knowledge Base articles can be published**
Choose a state or a state group as the state(s) where articles are published to the Knowledge Base. When a Knowledge Base article has the Status field set to the state(s) selected for this preference, the article can be viewed using the Search Page -- it is available to all end users searching the Knowledge Base.

Multiple states can be selected for this preference by creating a state group in the < a href="bots_admin_process.htm">Define Workflow page of the Administration section and selecting the new state group for this preference.

**Date Format**
Select the date format that should be used when displaying date fields in the Knowledge Base articles and related pages (Search, Results, and Item pages).

**Time Format**
Select the time format that should be used when displaying date fields in the Knowledge Base articles and related pages (Search, Results, and Item pages). Selecting **12 Hour** will display the time using the numbers 1-12 to represent each hour. Choosing **24 hour** will display the time using the numbers 0-24 to represent each hour.

**Time Zone**
Select the time zone that should be used when displaying date fields in the Knowledge Base articles and related pages (Search, Results, and Item pages). The list of available time zones is based on the operating system of the ProblemTracker server machine. The following Help sections contain the times for the server operating systems supported by ProblemTracker: Windows 2000 and XP Time Zones Windows NT 4.0 Time Zones

**Adjust to Daylight Saving Time (DST)**

Checking the box here will enable the system to adjust the workgroup data to account for daylight saving time. If you selected a time zone for the workgroup where daylight saving time is observed, it is recommended that you enable this option.

# Customizing Alerts (Enterprise Edition Only)



## Overview

**Note: This feature is only available in ProblemTracker Enterprise Edition.**

Alerts are a form of email notification messages that can be triggered by a lack of change in a record's state within a certain time period. For example, a problem record should not stay within a particular state for longer than 2 days. An alert can be sent if the record is still within the same state after a period of 2 days has passed. Alerts can also be used to remind a user about a record at a later date and time.

Alerts can be configured per record. Each record can have different alert settings including when, how, how often, and to whom the alerts should be sent.

Alerts can also be configured for each transition in the workflow. With the necessary privileges, users can override these alert settings when moving a record to another state using the Task operation.

When specifying when to send an alert either for a given record or a transition, a fixed date and time can be entered or a date and time based on a date field within the record can be used. In addition, alerts can be sent once or configured to repeat periodically. Any combination of users and / or user groups can receive alerts for a particular record.

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## Enabling the Alerts Feature

Performing the following steps will allow you to enable the Alerts feature in your workgroup:

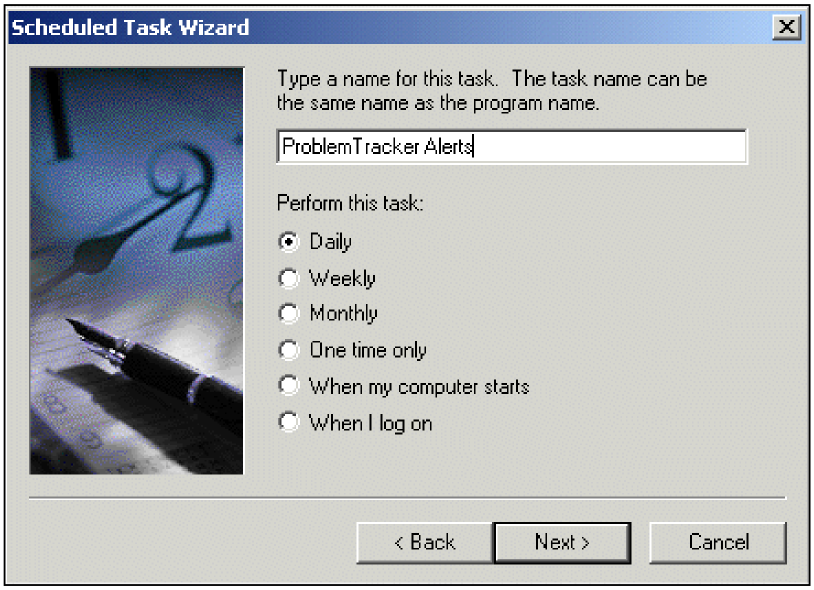
**Enter the Alerts license key in the License Manager**
You must enter a license key into the License Manager in order to use the Alerts feature.

**Enable Alerts in the General Preferences section**

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon in the top button bar.
3. Click on the **General Preferences** button.
4. In the "General Options" section, set **Enable Alerts Function** to "Yes".
5. Click **OK** to save this change.

**Create a Scheduled Task for the Alerts Feature**
Alerts must be configured in the Scheduled Tasks section of the Control Panel on your ProblemTracker server. To create this scheduled task, perform the following steps:

1. Go to **Start > Settings > Control Panel** on the machine where ProblemTracker is installed.
2. Double click on **Scheduled Tasks**.
3. Double click on **Add Scheduled Task**, then click **Next**.
4. Click on the **Browse** button, then navigate to the location you selected to for the ProblemTracker files during the installation. By default, this location is **C:\Program Files\NetResults\ProblemTracker 5**.
5. Select the file called PTAlerts.jse, then click on the **Open** button.
6. Enter a name for the scheduled task such as "ProblemTracker Alerts", then for the option **Perform this task:**, select the radio button next to "Daily". Click **Next** to proceed.




7. The current time will be displayed as "Start Time". For the **Perform this task:** option, select "Every Day". The current date will be displayed as "Start Date". Click **Next** to continue.


8. Enter the username of an Administrator user (it is recommended that you use the local Administrator user). Enter and confirm the password of this user. Click **Next**.
9. The values you entered will be displayed. Check the box next to the option. **Open advanced properties for this task when I click Finish**, then click on the **Finish** button.

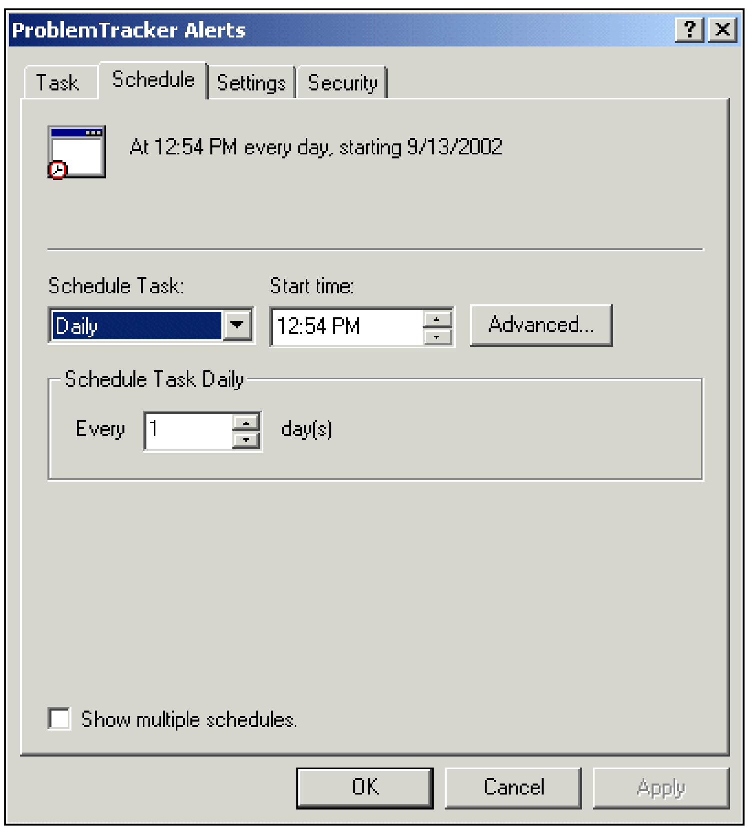

10. The Advanced properties will be displayed. Click on the **Task** tab. In the **Run** field, enter the following:

    **CScript.exe "<PTAlerts.jse file path>" //B //H:CScript**

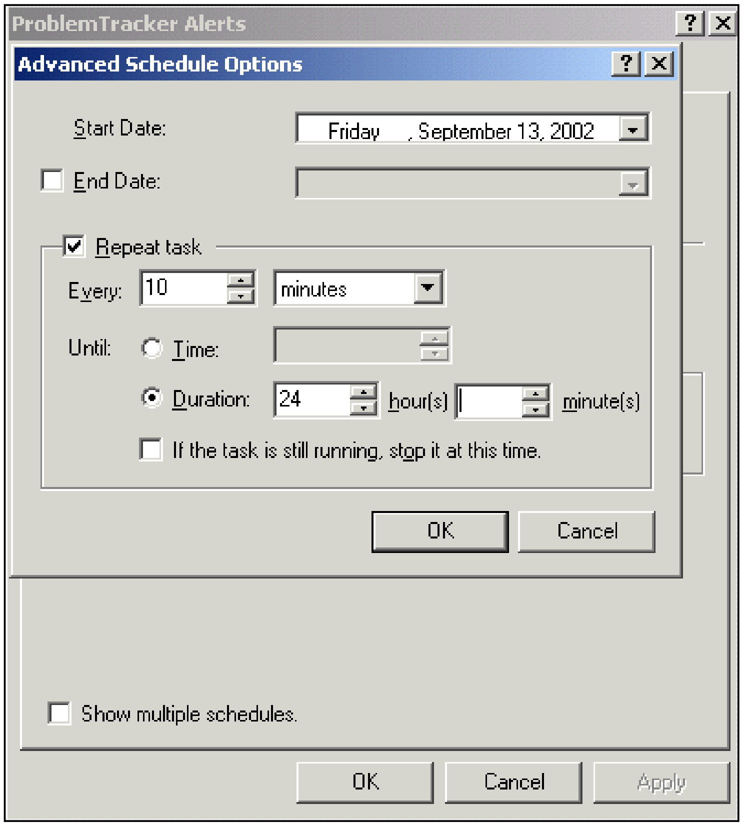
    where **<PTAlerts.jse file path>** is the path where the PTAlerts.jse file resides. As mentioned above, by default, this path is **C:\Program Files\NetResults\ProblemTracker5**. Using the default path as an example, the Run field should have the following entered:

    **CScript.exe "C:\Program Files\NetResults\ProblemTracker5\PTAlerts.jse" //B //H:CScript**

    Please note that the PTAlerts.jse file path should be enclosed with double quotes.
11. Click on the **Schedule** tab, then click on the **Advanced** button.




12. Check the box next to **Repeat task**, then for **Every** select a length of time. We recommend using a minimum of 10 minutes. This time dictates how frequently you wish to run the Alerts Scheduled Task to check for new alerts. You can specify any repeat time you wish, but make sure that it is more than 10 minutes. For **Until** select the radio button next to "Duration". Enter "24 hours" for the "Duration". Click **OK**.




13. Click on the **Settings** tab. Check the box for the option **Stop the task if it runs for:**, then enter "0" for hours and "30" for minutes. Click **Apply**, then click **OK** to save these changes and dismiss the Properties for the Scheduled Task.

**Configure SMTP Mail Server for use with Alerts**
An SMTP mail server is required to generate the alert notification messages. This can be configured in the Email Configuration section.

**Ensure an email address is entered for the users that will receive alerts**
A valid email address is required for a user to receive alerts. Email addresses are entered in a user's profile in the Workgroup Management System.

After enabling the Alerts feature using the steps above, configure the user group privileges and default settings for Alerts as described below.

## Alerts User Group Privileges

The following are the user group privileges related to the Alerts feature. These privileges can be set in the User Group Privileges page of the User Administration section. These privileges will only be displayed in the Privileges page if Alerts has been enabled using the steps in the section above.

- **Edit Alert Settings**
  Members of user groups with this privilege can edit the alert settings for a record
- **Edit Own Alert Settings**
  Members of user groups with this privilege can edit the alert settings for a record in which they are the Assignee.
- **View Alert Settings**
  Members of user groups with this privilege can view the alert settings for a record

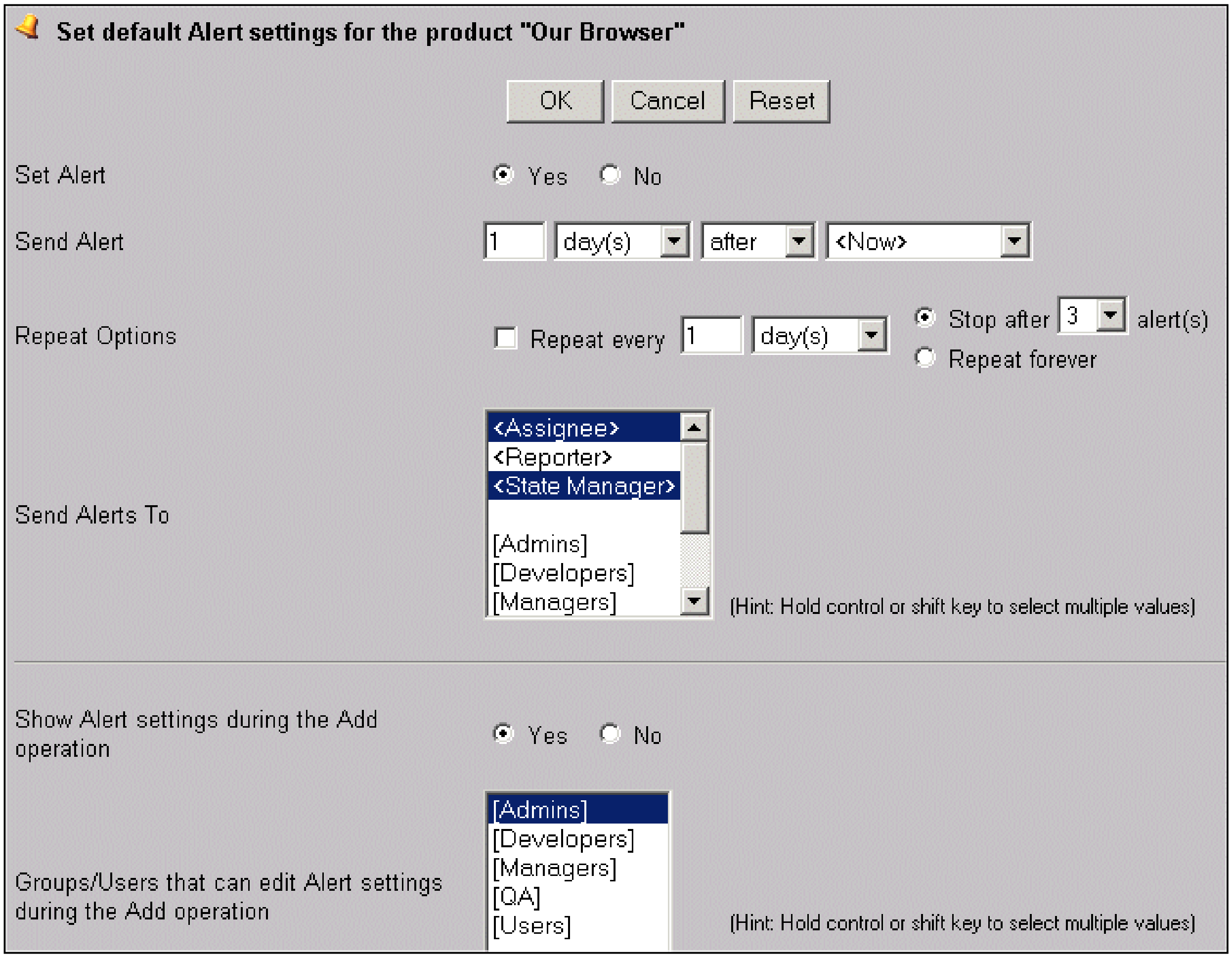
## Configuring Alerts Settings for Products

Alert settings for the Add operation can be configured per product. You can also specify a default set of alert settings. The default alert settings will be used as the alert settings each new product added to ProblemTracker via the Option Menus section. They can also be used to update existing (per product) alert settings (if, for instance, you'd like the alert settings for some or all products to be the same).

To **configure** alert settings **for a specific product**:

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon in the top button bar.
3. Click on the **Define Workflow** button.
4. Select a product in the pulldown at the top of the page.

5. Click on the **Alerts** button.
6. Make selections for the fields described below, then click **Update** save the changes.




- **Set Alert**
  Selecting Yes indicates an alert should be generated for a newly added record which has the current product selected.
- **Show Alert settings during the Add operation**
  Selecting Yes indicates that the user should be prompted to select alert settings on the Add page when creating a new record.
- **Groups / Users that can edit alert settings during the Add operation**
  Click on the groups and / or users that should be allowed to edit the alert settings on the Add page when creating a new record. To select multiple users and / or groups, hold down the **CTRL** button on your keyboard while clicking on each user and group you would like to select.
- **Send Alert**
  The period of time that should pass before the alert is sent. You can enter a number from 1 - 99, select the interval (hour, day, week, or month), select "before" or "after" as the point of reference for the alert, and a starting point for the time period. The starting point can be "<Now>", or can be based on any of the date fields in the record. Example 1: By entering "1 day after <Now>", the alert will be sent 1 day after the record is added. Example 2: By entering "1 day before <Date Field>", the alert will be sent 1 day before the date entered in the date field selected.

  If a date field is selected as the date to generate an alert and this date field has no value in a record, an alert will not be generated. If a date field is selected as the date to generate an alert and this date field is later removed from the record (moved from the "In Use" to "Not In Use" column in the Define Record section, then <Now> will be set as the date to generate an alert (to replace the date field that was removed).
- **Repeat options**
  Check the box to allow the alert to be sent multiple times after the initial time period (in Send Alert field above) has passed. Select the repeat period by entering a number from 1 - 99 and the interval (hour, day, week, month). Then, select how many times the alert should be repeated. Select either **Stop after X alerts** where X is a number from 1 - 10 or **Repeat forever**. Repeat forever will continue to repeat the alert periodically until the state of the record is changed.
- **Send Alerts To**
  Click on the groups and / or users who should receive the alert message if the record's state has not changed when the configured time period has passed. To select multiple users and / or groups, hold down the **CTRL** button on your keyboard while clicking on each user and group you would like to select.

7. After clicking **Update** to save the changes, select another product from the pulldown on the **Define Workflow** page, then click on the **Alerts** button to configure the alert information for another product.

To **configure default** alert settings (used for new products):

1. Login to the workgroup as Admin.
2. Click on the **Admin** icon in the top button bar.

3. Click on the **Define Workflow** button.
4. Select "*(Default)" in the pulldown at the top of the page.
5. Click on the **Alerts** button.
6. Make selections for the fields described above, then click **Update** save the changes.

To **push** default alert settings to **some (or all) products**:

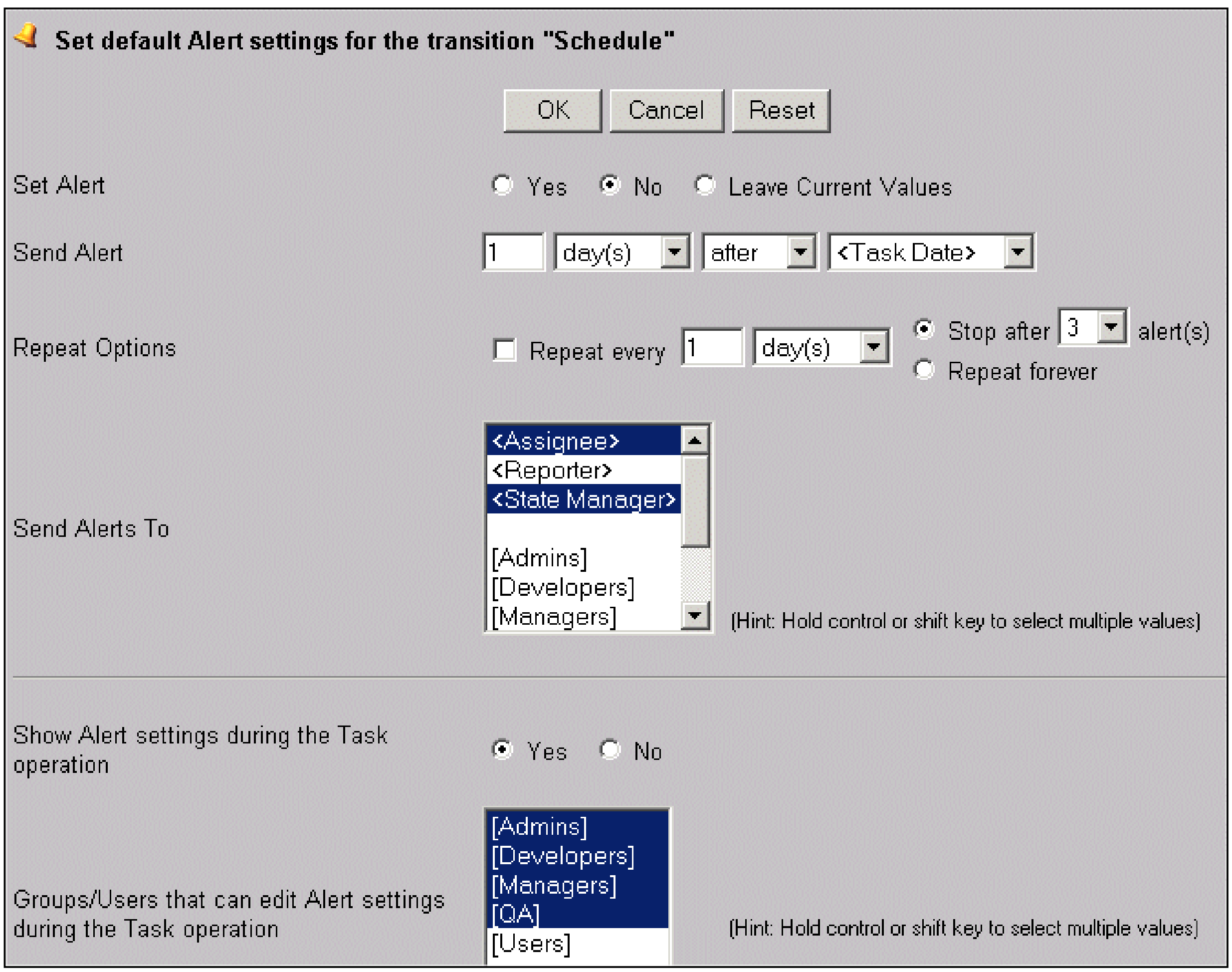
1. Login to the workgroup as Admin.
2. Click on the **Admin** icon in the top button bar.
3. Click on the **Define Workflow** button.
4. Select "*(Default)" in the pulldown at the top of the page.
5. Click on the **Alerts** button.
6. If you wish to change the default alert settings before updating existing products with these settings, make those changes now.
7. Click on the **Update & Push to Selected Products** button. This will save any changes you've made to the default alert settings and display a page with a list of products.
8. Click the **All** button to select all products if you want all products to have the same alert settings. Or, select individual products you wish to update with the default alert settings.
9. Click the **OK** button to update the selected products with the default alert settings.

### Configuring Default Alert Settings for Transitions

Default alert settings can be configured for each Transition in your workflow. These default settings will be used when the Transition is selected during a Task operation.

To configure default alert settings for a transition:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon in the top button bar
3. Click on the **Define Workflow** button
4. Click on the **Transitions** button for a state
5. Click on the **Alerts** button for a transition
6. Make selections for the fields described below, then click **OK** save the changes




- **Set Alert**

Selecting "Yes" indicates an alert should be generated for a record that has been tasked using this transition and using the alerts settings below. By selecting this option, the user will not be prompted to Set the Alert Settings when selecting this transition. Selecting "No" indicates that no alert should be sent when this transition is selected for a record. Selecting "Leave Current Values" indicates that an alert should be generated for a record that has been tasked using this transition, but the existing alert settings in the record should be used instead of the settings for this transition. The existing alert settings are those that were set during the Add operation or by the transition selected the last time a task operation was performed on the record.

- **Show Alert settings during the Task operation**
  Selecting Yes indicates that the user should be prompted to select alert settings when this transition is selected during the Task operation. If a transition is configured for "fast-tasking" (the transition has no task fields and history comment is set to "do not display"), then the alert settings will not be displayed during the Task operation.
- **Groups / Users that can edit alert settings during the Task operation**
  Click on the groups and / or users that should be allowed to edit the alert settings during the Task operation when selecting this transition. To select multiple users and / or groups, hold down the **CTRL** button on your keyboard while clicking on each user and group you would like to select.
- **Send Alert**
  The period of time that should pass before the alert is sent. You can enter a number from 1 - 99, select the interval (hour, day, week, or month), select "before" or "after" as the point of reference for the alert, and a starting point for the time period. The starting point can be "<Now>", or can be based on any of the date fields in the record. Example 1: By entering "1 day after <Now>", the alert will be sent 1 day after the record is added. Example 2: By entering "1 day before <Date Field>", the alert will be sent 1 day before the date entered in the date field selected.

  If a date field is selected as the date to generate an alert and this date field has no value in a record, an alert will not be generated. If a date field is selected as the date to generate an alert and this date field is later removed from the record (moved from the "In Use" to "Not In Use" column in the Define Record section, then <Task Date> will be set as the date to generate an alert (to replace the date field that was removed).
- **Repeat options**
  Check the box to allow the alert to be sent multiple times after the initial time period (in Send Alert field above) has passed. Select the repeat period by entering a number from 1 - 99 and the interval (hour, day, week, month). Then, select how many times the alert should be repeated. Select either **Stop after X alerts** where X is a number from 1 - 10 or **Repeat forever**. Repeat forever will continue to repeat the alert periodically until the state of the record is changed.
- **Send Alerts To**
  Click on the groups and / or users who should receive the alert message if the record's state has not changed when the configured time period has passed. To select multiple users and / or groups, hold down the **CTRL** button on your keyboard while clicking on each user and group you would like to select.

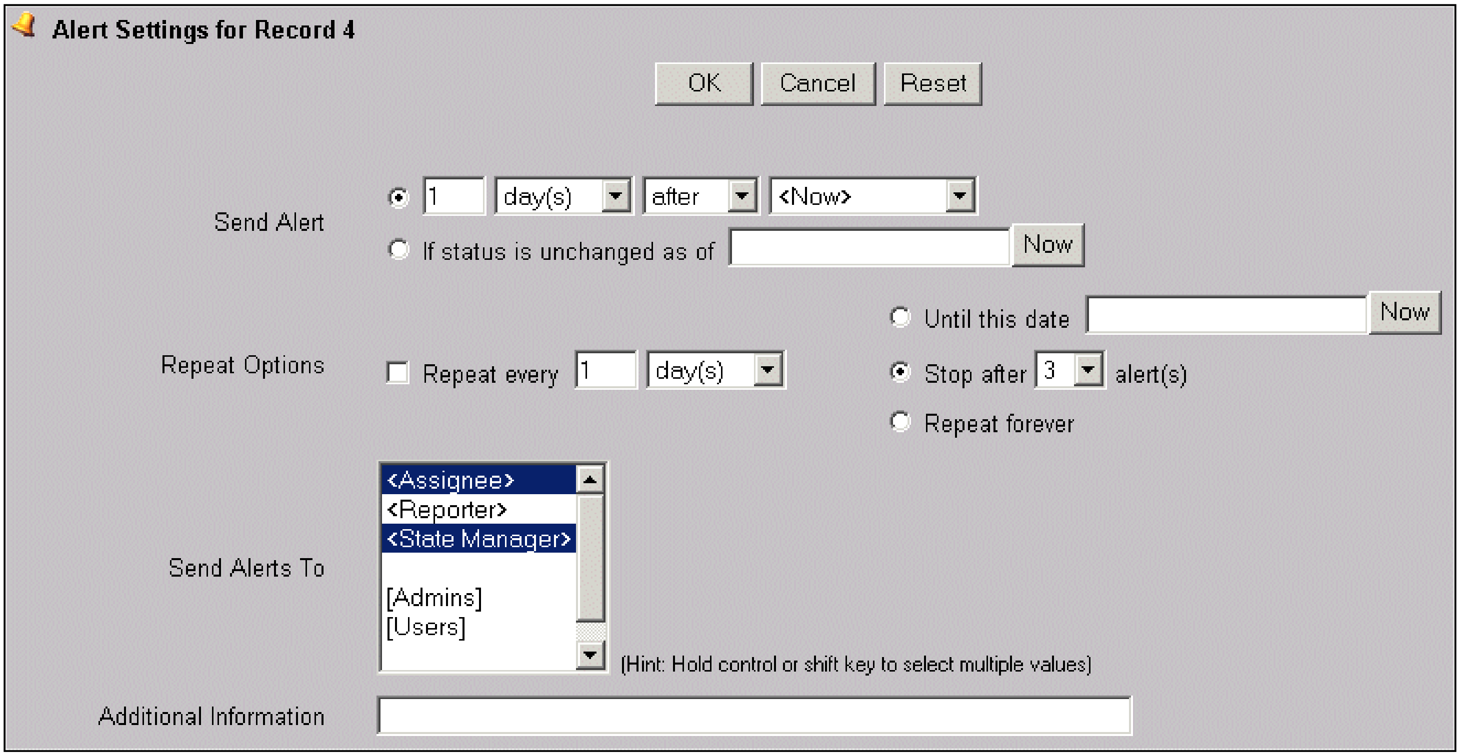
7. After clicking **OK** to save the changes, click on the **Alerts** button for another transition to configure the default alerts settings.

### Configuring Alert Settings during Add Operation

When a record is added, the reporter may be prompted to configure alert settings depending on the default alert settings for the product selected in the record (setting the default alert settings for a product are defined in the Configure Default Alert Settings per Product section above.

In order for the user to **view** the alert settings when adding a new record, the product selected in the record must have **Show Alert Settings during Add Operation** set to "Yes" and the user must be a member of a group with the privilege "View Alerts Settings". On the Add page, the user meeting the criteria mentioned above will see the **Set Alert** field with a check box. Checking the box will allow the user to view the alert settings. When the user clicks **OK** to add a new record, the alert settings will be displayed, but cannot be modified. The **Additional Information** field can be modified to add a note or other information to be included in the alert notification message. Click **OK** to save the information entered.

For a user to **edit** the alert settings when adding a new record, the product selected in the record must have **Show Alert Settings during Add Operation** set to "Yes" and the user (or a group of which the user is a member) must be specified in **Groups / Users that can edit Alert Settings during the Add operation**. On the Add page, the user meeting the criteria mentioned above will see the **Set Alert** field with a check box. Checking the box will allow the user to edit the alert settings. When the user clicks **Add** or **Add & Copy** to add a new record, the alert settings will be displayed. The user can modify the following settings with respect to alerts. By default, the values displayed here will be the values selected in the default Alerts settings for the product selected in the record.

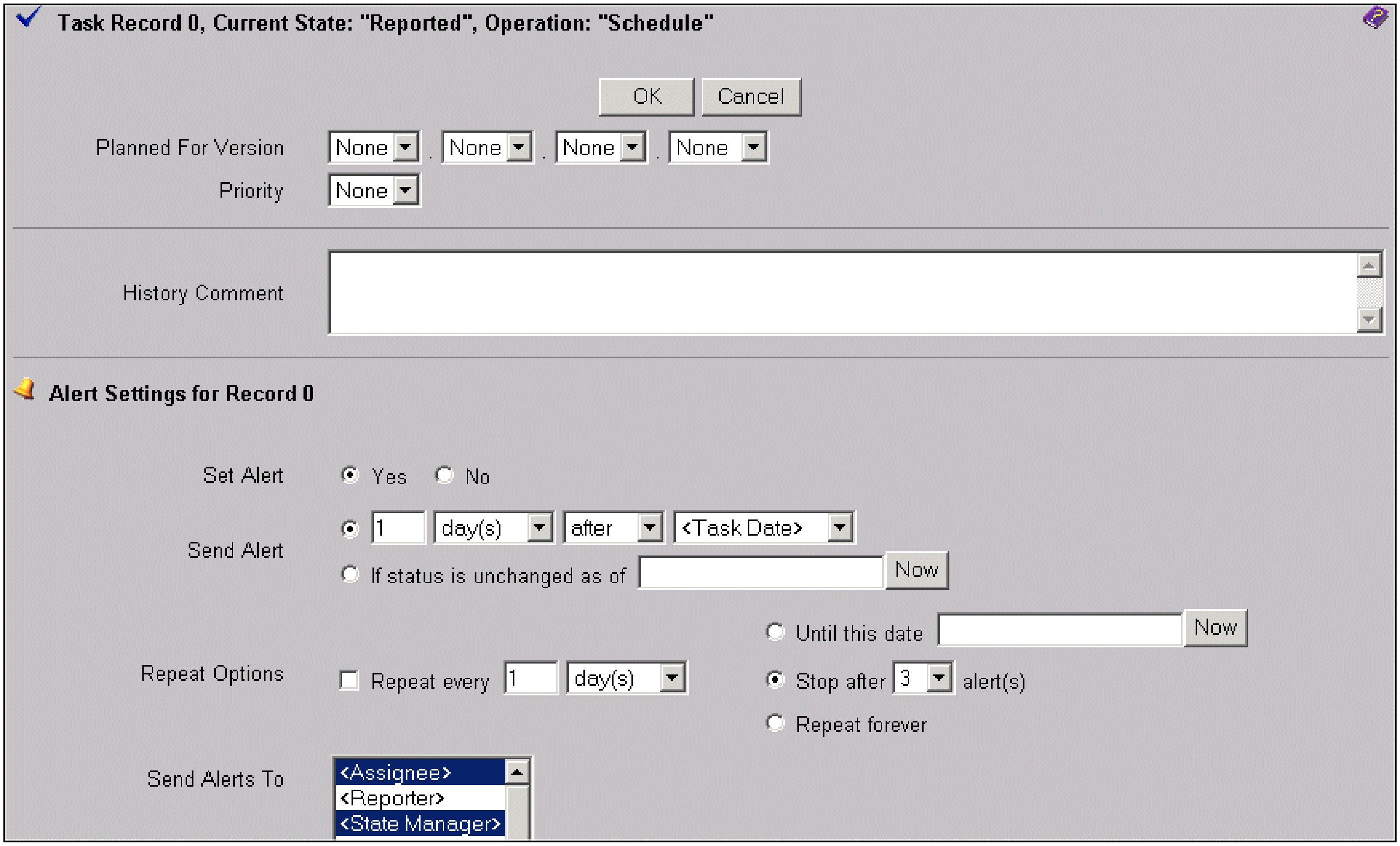



## Configuring Alert Settings during Task Operation

When the task operation is performed on a record, the user may be prompted to configure alert settings depending on the default alert settings for the transition selected (setting the default alert settings for a transition are defined in the Configure Default Alert Settings per Transition section above.

In order for the user to **view** the alert settings when performing the task operation for a record, the transition selected must have **Show Alert Settings during Task Operation** set to "Yes" and the user must be a member of a group with the privilege "View Alerts Settings". After selecting a transition during the task operation, the user meeting the criteria mentioned above will be able to see the alert settings section, but cannot modify the values. The **Additional Information** field can be modified to add a note or other information to be included in the alert notification message. Click **OK** to complete the Task operation.

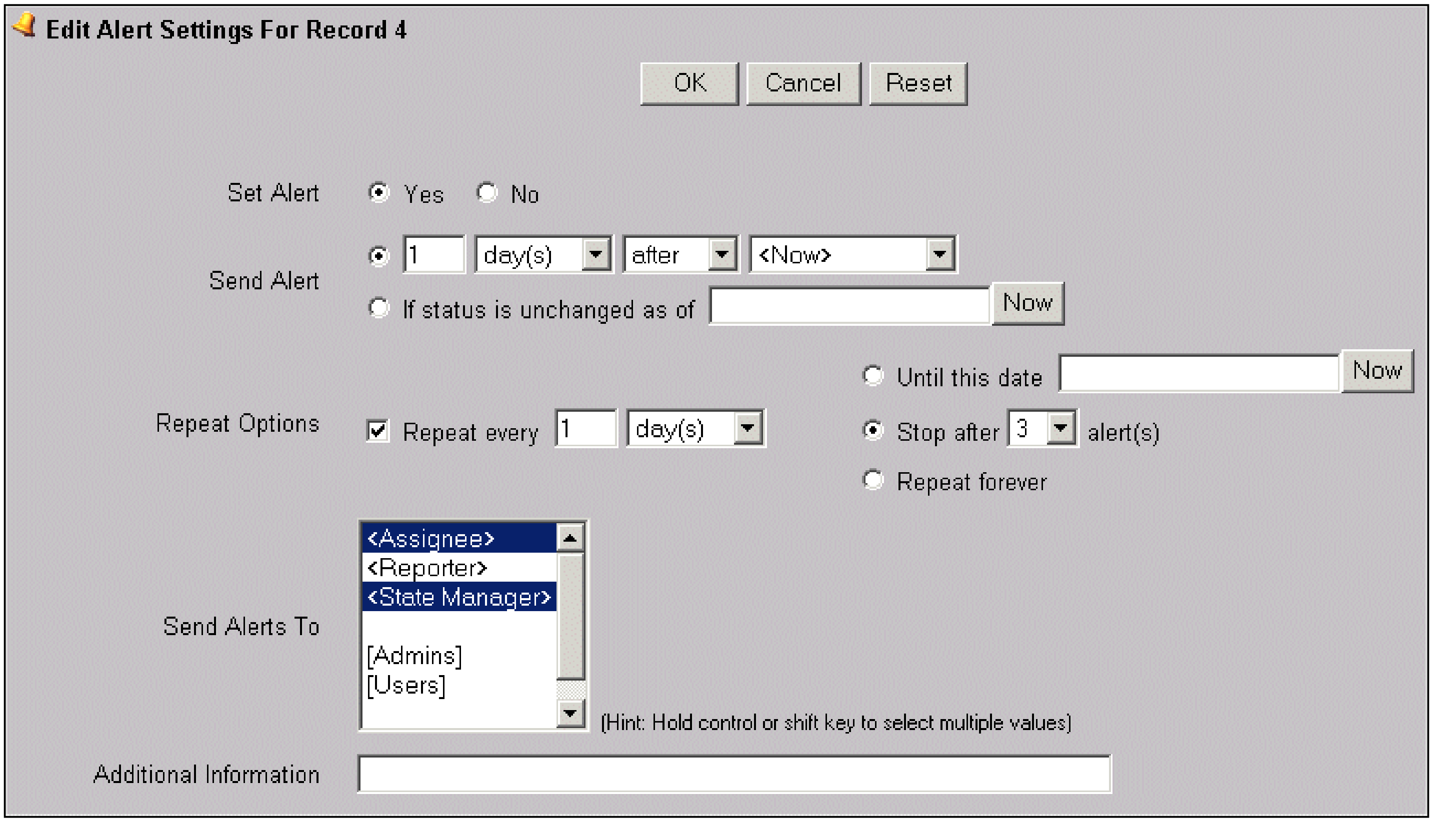
For a user to **edit** the alert settings during the Task operation, the transition selected must have **Show Alert Settings during Task Operation** set to "Yes" and the user (or a group of which the user is a member) must be specified in **Groups / Users that can edit Alert Settings during the Task Operation**. After selecting a transition, the user meeting the criteria mentioned above will see the alert settings section. The user can modify the following alert settings. By default, the values displayed here will be the values selected in the default Alert settings for the transition selected.




## Editing Alert Settings

A user can edit the alert settings for a record if they have the required privileges. If a user is a member of a group with the "Edit Own Alerts" privilege, the user can modify the alert settings for a record in which they are the Assignee. If a user is a member of a group with the "Edit Alert Settings" privilege, the user can modify the alert settings for any record.

A user meeting the criteria mentioned above can edit the alert settings for a record by clicking on the Edit icon in the top button bar and entering a record number or by clicking on the Edit icon next to a record number in a report on the Query or Home page. Clicking on the Edit Alerts button will display the following alert settings for the record:


Edit Alert Settings For Record 4
OK
Cancel
Reset
Set Alert
Yes
No
Send Alert
1
day(s)
after
<Now>
If status is unchanged as of
Now
Repeat Options
Repeat every
1
day(s)
Until this date
Now
Stop after
3
alert(s)
Repeat forever
Send Alerts To
<Assignee>
<Reporter>
<State Manager>
[Admins]
[Users]
(Hint: Hold control or shift key to select multiple values)
Additional Information

**NetResults ProblemTracker**

# Customizing Discussions (Enterprise Edition Only)



## Overview

**Note: This feature is only available in ProblemTracker Enterprise Edition.**

The Discussions feature is a means of allowing users to discuss various topics pertaining to a record. This allows users to collaborate without having to coordinate a meeting for everyone to contribute to the discussion. For example, a record may be assigned to a particular developer, but several developers are needed to provide input for an enhancement's design or the resolution of a bug. These discussions can continue in parallel to the record's progression through the workflow.

Discussions are also useful for integrating a new user into a project. The user can review the information present in the discussion to become familiar with the project's progress to date.

A discussion can be started for any record. The user initiating the discussion can invite other users or user groups to participate in the discussion. Within the discussion for each record, multiple threads can be started to discuss multiple topics. Users can post and reply to messages within a particular thread. Users can also choose to receive email messages to notify them about a new discussion or new posts to a discussion.

## Enabling Discussions

Performing the following steps will allow you to enable the Discussions feature in your workgroup:

1. **Enter the Discussions key in the License Manager**
   You must enter a license key into the License Manager in order to use the Discussions feature.

2. **Enable Discussions in the General Preferences section**

   1. Login to the workgroup as Admin
   2. Click on the **Admin** icon in the top button bar
   3. Click on the **General Preferences** button
   4. In the "General Options" section, set **Enable Discussion** to "Yes"
   5. Click **OK** to save this change

3. **Configure SMTP Mail Server for use with Discussions**
   An SMTP mail server is only required if you wish to generate notification messages related to the discussions (for inviting users to a new discussion or notifying users when a new post has been made to the discussion). This can be configured in the Email Configuration section.

4. **Ensure an email address is entered for the users that will receive discussion notification messages**
   A valid email address is only needed if you want a user to receive notification messages for discussions. Email addresses are entered in a user's profile in the Workgroup Management System.

After enabling the Discussions feature using the steps above, configure the user group privileges and default settings for Discussions as described below.

## Discussions User Group Privileges

The following are the user group privileges related to the Discussions feature. These privileges can be set in the User Group Privileges page of the User Administration section. These privileges will only be displayed in the Privileges page if Discussions have been enabled using the steps in the section above.

**View Messages**
Members of groups with this privilege may view messages within discussion threads for any record the group can access.

**Post Messages**
Members of groups with this privilege may post a new message or reply to a message within the discussion threads for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" privilege as well.

**Initiate Discussion Threads**
Members of groups with this privilege may create a new discussion thread for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" and "Post Messages" privileges as well.

**Edit Messages**
Members of groups with this privilege may edit the messages within a discussion for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" privilege as well.

**Delete Messages and Threads**
Members of groups with this privilege may delete the messages and / or threads within a discussion for any record the group can access. Granting this privilege to a group automatically grants the group the "View Messages" privilege as well.

The privileges above make reference to "any record the group can access". If record visibility is enabled with a workgroup, the user can only access a record or the discussion within a record if that record is visible to a user group in which the user is a member.

## Default User Preferences for Discussions

The following default user preferences can be set for the Discussions feature. These settings will be used when a new user is added to ProblemTracker. These settings can be configured in the User Preferences page of the Admin section.

- **New Post Notification**
  This option determines when a user will be notified about discussions via email. Selecting "No Email" indicates that a user should not receive any email notification messages related to discussions. Selecting "Receive Email for each New Post" indicates that a user will receive one email notification for each new post in a discussion to which he / she is subscribed. Selecting "Receive Email for the first New Post to each Thread" indicates that the user will receive one email for the first post made to a discussion thread to which he / she is subscribed. Once a user visits the message list for the thread, another email will be sent when the next new post to the thread is made.

- **Invitation Notification by Email**
  This option determines whether a user should receive an email notification message when he / she has been invited to participate in a discussion initiated for a particular record. Selecting "Yes" indicates that the user should receive an email invitation for each new discussion.

- **Message Display Window**
  Enter the number of lines of text you wish to see when displaying a message within a discussion. The default setting is 5 lines of text.

Each user can change their own settings in the Personal Preferences page.

**NetResults ProblemTracker**

# Adding Records via Email

Help Topics | << | >>

## Overview

The ability to add records to ProblemTracker via an email message is available as an additional option. This feature allows your end users or customers to send an email to a POP3 or IMAP email account. One email account is required for each product option menu item where this feature is to be used. ProblemTracker's Email Processor reads and parses the information in the email message and uses the information to create a new record.

The subject and body of the email can be saved as fields within the record created. You can also configure ProblemTracker to attach the original email message to the record created. Some of the options include setting the status of the new record, choosing whether to map the sender's email to set the "Reported By", and sending a reply to the unmapped emails. A complete list of options can be found when configuring the Incoming Mail options.

The requirements and steps for enabling this feature are described in the sections below.

## Requirements for using Add Record via Email

The following items are required for use of the Add Record via Email feature:

**Mail Server**
A POP3 or IMAP Mail Server configured with at least one user account (see below) for use by ProblemTracker is required. Most "Internet" email accounts are POP3 or IMAP server accounts.

**User Accounts (Mailboxes)**
A user account (mailbox) on a supported mail server is required for each product (project) that will use this feature. If you are using multiple workgroups on the same ProblemTracker installation, all products where this feature will be used must have a unique user account even if the products are located in different workgroups. **Warning: ProblemTracker will delete emails that it reads from its mailbox.** As such, if it is important that you keep a copy of all emails sent to a particular email address (e.g. support@mycompany.com), you should not configure ProblemTracker to read directly from the mailbox for that address. Instead, you should create an email account for ProblemTracker that receives copies (for example, via a mailing list or forward option) of all emails sent to the mission critical email account. In general, it is a good idea to set up the ProblemTracker mailboxes as "secondary" email accounts at least until you are certain you have the Add Record via Email feature configured properly.

**Mail Client**
A mail client program which can send email to the Mail Server you are using and which uses (or can be configured to use) one of the supported character sets (us-ascii, iso-8859-1, windows-1252, or utf-8) is required for each user who sends email to ProblemTracker. Typically the mail client program will use SMTP to communicate with the mail server, though your Mail Server may support additional protocols. Most mail

programs which can send email over the Internet (e.g. Microsoft Outlook Express, Netscape Mail, Microsoft Outlook, etc.) or which can send email to a server which can send email over the Internet (e.g. newer versions of Microsoft Exchange, newer versions of IBM Lotus Notes, etc.) will meet the Mail Client requirement.

The following components are required to be installed on the ProblemTracker server machine for use of the Add Record via Email feature.

**Operating System**
Windows 2000 Server is required for use of the Add Record via Email feature. (Windows XP Professional is also supported by this feature for evaluation purposes only, as it is not a "server" platform.)

**SOAP Interface**
Microsoft SOAP Toolkit 3.0 must be installed on the machine where ProblemTracker is installed. To download this component, browse to the Microsoft SOAP Toolkit 3.0 Download Page.

Microsoft WinHTTP 5.1 and Microsoft XML Core Services (MSXML) 4.0 are included when SOAP Toolkit 3.0 is installed.

**Windows Installer**
Windows Installer 2.0 or later is required to install SOAP. If you have Windows 2000 with Service Pack 3 or newer, you already have Windows Installer 2.0 installed. When installing SOAP, you will be prompted if you do not have the appropriate Windows Installer version. To download this component if needed, browse to the Microsoft Windows Installer 2.0 Download Page for Windows 2000.

**Browser**
Internet Explorer 5.0 or newer is required for installation of Microsoft SOAP Toolkit 3.0. To download the latest version of Internet Explorer, browse to the Microsoft Internet Explorer Download Page.

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## Enabling the Add Record via Email feature

Perform the following steps to enable this feature:

**Enter the Email license key into the License Manager**
You must enter a license key into the License Manager in order to use this feature feature.

**Install Required Components**
Install the required components on the ProblemTracker server as mentioned in the Server Requirements section above.

**Enable the Add Record via Email option in General Preferences**
For each workgroup where this feature will be used

1. Login to the workgroup as Admin
2. Click on the Admin icon
3. Click on the General Preferences button

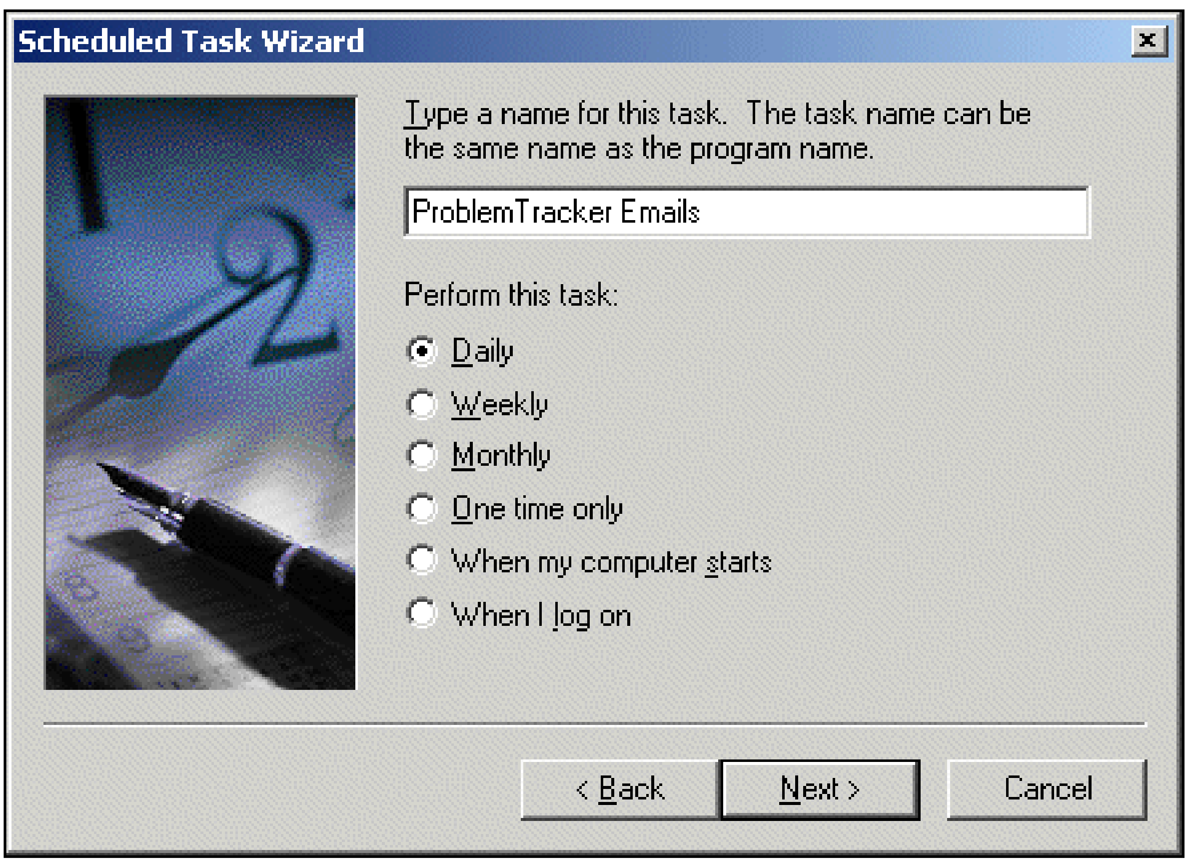
4. Set the "Enable Add Record via Email" option to Yes
5. Click OK to save this change

**Enter the Outgoing Mail Server Settings**
Configure the "Set Mail Server Configuration" section of the Mail Server used by this ProblemTracker workgroup. If you are using other features that generate email notifications, a mail server may already be set up for your workgroup. The same mail server can be used for all features that generate email notifications.

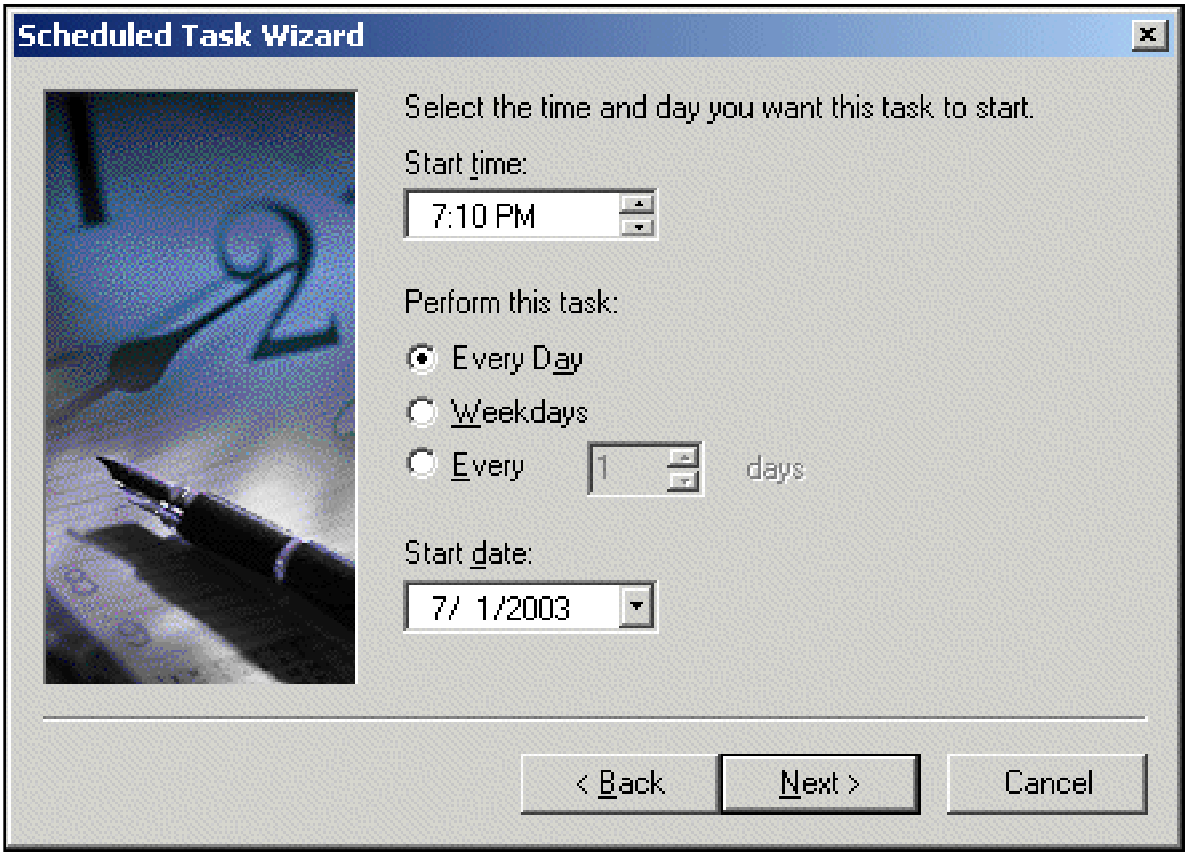
**Configure the Incoming Mail Server Settings**
Make selections for the options related to handling the incoming messages in the Incoming Mail section of the Email Configuration page.

**Create a Scheduled Task for the Add Record via Email Feature**
Set up the Email Processor in the Scheduled Tasks section of the Control Panel on the machine where ProblemTracker is installed using the steps below.

1. Go to Start->Settings->Control Panel on the machine where ProblemTracker is installed
2. Double click on Scheduled Tasks
3. Double click on "Add Scheduled Task", then click Next
4. Click on the Browse button, then navigate to the location you selected to for the ProblemTracker files during the installation. By default, this location is C:\Program Files\NetResults\ProblemTracker 5
5. Select the file called PTEmails.jse, then click on the Open button
6. Enter a name for the scheduled task such as "ProblemTracker Add Record via Email", then for the option "Perform this task:" select the radio button next to "Daily". Click Next to proceed.



7. The current time will be displayed as "Start Time". For the "Perform this task:" option, select "Every Day". The current date will be displayed as "Start Date". Click Next to continue.




8. Enter the username of an Administrator user (it is recommended that you use the local Administrator user). Enter and confirm the password of this user. Click Next.
9. The values you entered will be displayed. Check the box next to the option "Open advanced properties for this task when I click Finish", then click on the Finish button.

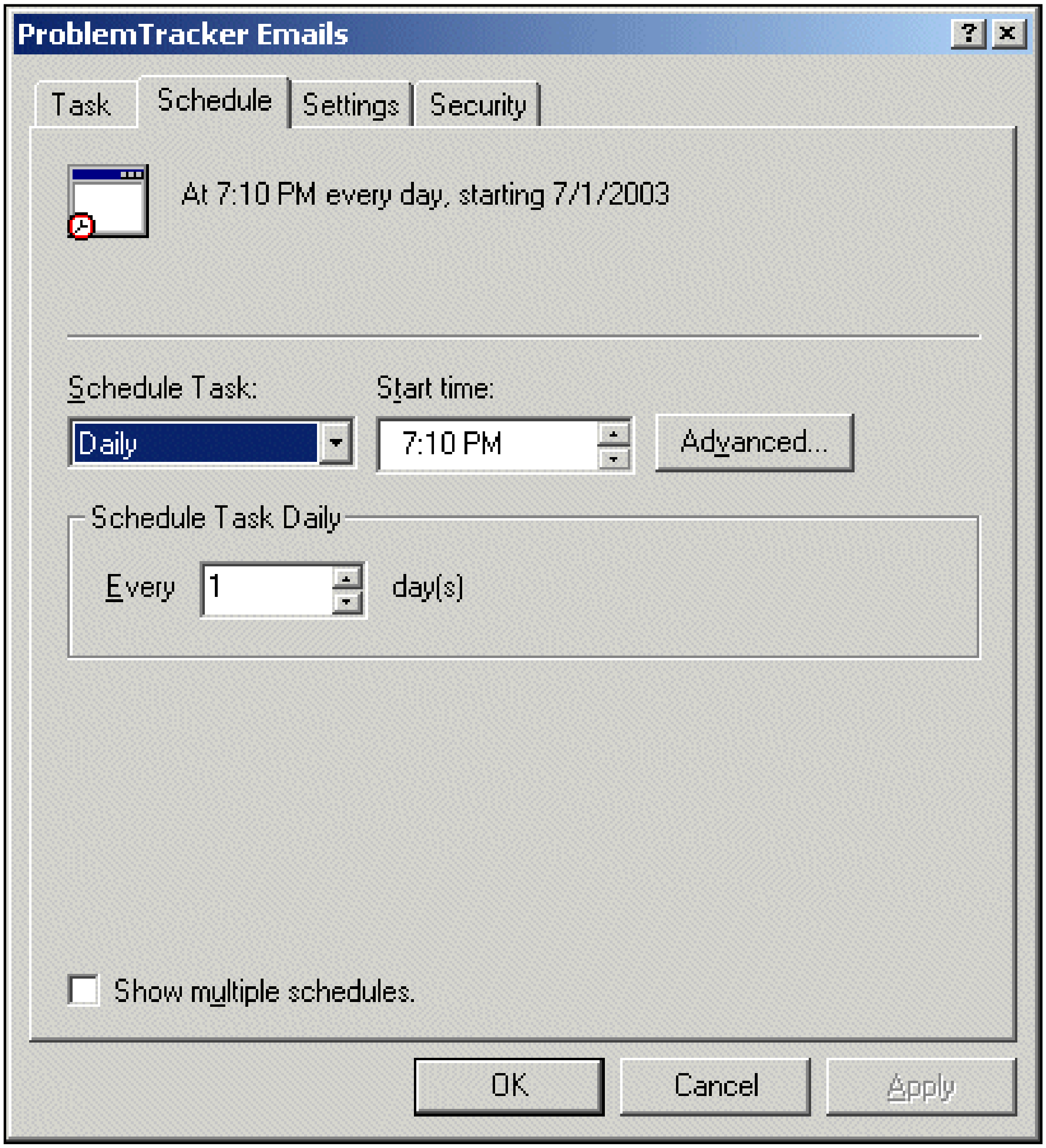

10. The Advanced properties will be displayed. Click on the Task tab. In the "Run" field, enter the following:

    **CScript.exe "<PTEmails.jse file path>" //B //H:CScript**

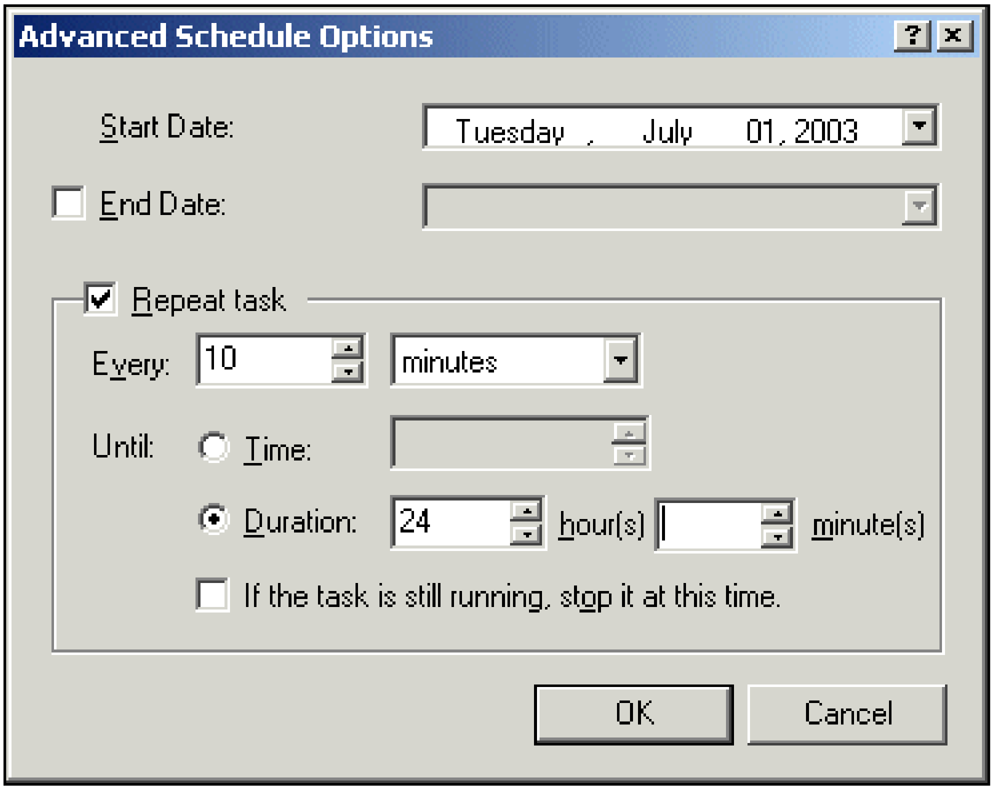
    where **<PTEmails.jse file path>** is the path where the PTEmails.jse file resides. As mentioned above, by default, this path is **C:\Program Files\NetResults\ProblemTracker5**. Using the default path as an example, the Run field should have the following entered:

    **CScript.exe "C:\Program Files\NetResults\ProblemTracker5\PTEmails.jse" //B //H:CScript**

    Please note that the PTEmails.jse file path should be enclosed with double quotes.
11. Click on the Schedule tab, then click on the Advanced button.




12. Check the box next to "Repeat task", then for "Every" select a length of time. We recommend using a minimum of "10 minutes". This time dictates how frequently you wish to run the Email Processor to check for new emails. You can specify any repeat time you wish, but make sure that it is more than 10 minutes. For "Until" select the radio button next to "Duration". Enter "24 hours" for the "Duration". Click OK.




13. Click on the Settings tab. Check the box for the option "Stop the task if it runs for:", then enter "0" for hours and "30" for minutes. Click Apply, then click OK to save these changes and dismiss the Properties for the Scheduled Task.

---

## Adding a Record via Email

After enabling this feature using the steps above, to add a record via email, send an email to the mail account specified in the Incoming Mail Configuration that corresponds to the product for which you want to add a new record.

---

## Required Fields on Add Page

The Add via Email feature bypasses the "Required For Add" attribute for all field types. This is especially useful with respect to the Product field as it allows you add records via email for the default option menu item in the Product field while still requiring that a non-default value be selected on the Add page within ProblemTracker.

---

## Record Visibility for Records Added via Email

When Record Visibility is enabled in a workgroup, the visibility of each record added via email will be set based on the whether the email message is mapped or unmapped. The only exception is that all records are made visible to the Admins user group regardless of whether the email was mapped or unmapped.

When the option **Set Reporter by Mapping "From" Address** in the Incoming Mail Configuration is set to "Yes", this indicates that ProblemTracker should attempt to match the From email address of the incoming message to the email address listed in the profile information for any user account. If the From email address in the incoming message matches an email address for a user in the workgroup, this user will be set as the Reporter of the record created by the incoming message. This is a **Mapped** email.

The new record resulting from a mapped email will be set such that it is visible to the user groups in which the Reporter is a member as well as the Admins user group.

When the option **Set Reporter by Mapping "From" Address** in the Incoming Mail Configuration is set to "No", ProblemTracker will not attempt to map the From email address to a user in the workgroup. This is an **Unmapped** email. Or, if the Set Reporter by Mapping 'From' Address is set to "Yes" and a match is not found, this is also an **Unmapped** email.

The new record resulting from an unmapped email will be set such that it is visible to the user groups selected for the option **Record Visibility for Unmapped Emails** in the Incoming Mail Configuration section as well as the Admins user group.

**NetResults ProblemTracker**

# Customizing The Home Page

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After logging in, each user is presented with their home page. By default, this page displays a report displaying the records assigned to the user and the records reported by the user.

## Home Page Reports

The ProblemTracker Home Page displays reports generated by saved queries or charts. Any saved query or saved chart can be displayed on the Home Page. The saved queries and charts that can be displayed for each particular user depend on the user type (non-Restricted or Restricted) and on the user's group membership.

Up to three reports can be displayed on the Home Page. The **results** of each report are generated by the saved query or saved chart selected. The **format** of each report (e.g. column headings, sort order, chart properties) is determined by the saved report layout or saved chart layout associated with the saved query or chart selected.

By default in most ProblemTracker templates, the following saved group queries are displayed on the Home Page:

**For non-Restricted users**

- The First Home Page Report is called "Assigned To Me" and is generated by a saved group query called "Assigned To Me [Users]". This saved group query is accessible to all non-Restricted users and returns all records assigned to the user currently logged into ProblemTracker. The saved report layout associated with this report is called "Home Report 1 [Users]".

- The Second Home Page Report is called "Reported By Me" and is generated by a saved group query called "Reported By Me [Users]". This saved group query is accessible to all non-Restricted users and returns all records added by the user currently logged into ProblemTracker. The saved report layout associated with this report is called "Home Report 2 [Users]".

**For Restricted users**
The First Home Page Report is called "Added By Me [RestrictedUsers]". The saved report layout associated with this saved query is "Added By Me [RestrictedUsers]".

## Customizing the Home Page

The following elements of the Home Page reports can be customized. Click on one of the items listed below to see details:

- Saved queries or charts selected for each of three Home Page reports
- Criteria used to generate a particular saved query or chart

- Layout associated with a saved query or chart

**Selecting a Saved Query or Chart for one of the Home Page Reports**
To temporarily select a different saved query or chart to be displayed for any of the Home Page reports while you are logged in, you can click on the pulldown menu displayed at the top of one of the Home Page reports. All personal and group saved queries and / or saved charts to which you have access will be displayed in the pulldown.

To select a different saved query or chart to be displayed for any of the Home Page reports by default when you log in, you can select the reports by clicking on the Personal Preferences link in the upper right corner of the Home Page. In the Personal Preferences page, scroll down to the Report Settings section. Select one of the saved queries or saved charts listed in the pulldown menu for either the First , Second, or Third Home Page Report fields. Click OK to save your selection. You also have the option to select "<No Report>" for the Second and Third Home Page Report fields.

To set the Home Page reports to be displayed by default when any new user accounts are added to the workgroup, set the First, Second, and Third Home Page Report fields in the User Preferences section.

You also have the option of creating your own saved query or saved chart to be used as one of the Home Page reports. Instructions for creating a new saved query can be found in the Using Saved Queries & Reports Help section. Steps for creating a new saved chart can be found in the Metrics Help section.

**Changing the criteria used to generate a Saved Query or Saved Chart displayed as one of the Home Page Reports**
To modify the criteria in a Saved Query, review the information in the section Edit a Saved Query. To modify the criteria in a Saved Chart, review the information in the section Edit a Saved Chart section.

When a Saved Query is selected as one of the Home Page Report, the way this report is displayed (columns, field order, sort order) on the Home Page is based on the settings of the saved report layout associated with the Saved Query selected. You can either choose a different report layout to be associated with a Saved Query or you can edit the report layout already associated with a Saved Query. For information on either of these options, please review the Saved Reports section.

Similarly for the Saved Charts, each Saved Chart has a Chart Layout associated. You can choose a different chart layout or edit an existing chart layout to change the chart's formats (e.g. whether it is a bar chart or pie chart, whether it has a legend, etc.). Information on Chart Layouts can be found in the Metrics section.

## Overview

ProblemTracker is fully integrated with Internet standard SMTP email, supporting the following features:

### Outgoing Mail Features

- ***Email Notification*** messages can be sent to users and groups triggered by an action performed on a record (adding, editing, tasking, deleting) or a change in status or assignment
- ***Alerts*** messages can be sent to users and groups at a designated date and time as a reminder about a record or a means of escalating a record.
- ***Discussion*** messages can be sent to users and groups to invite them to participate in a discussion or to notify them about a new post to a discussion.

### Incoming Mail Feature

- The ***Adding Records via Email*** feature allows issues to be created in ProblemTracker from incoming email messages

To configure settings related to email features:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Email Configuration** button

The following sections provide details of setting the Outgoing and Incoming Mail configuration:

- Email Notification Messages
- Examples of Email Notification Messages
- Outgoing Mail Server Configuration and Global Options
- Setting Email Notification Preferences
- Incoming Mail Configuration
- Sending an Administrative Email

**NetResults ProblemTracker**

# Email Notification Messages



## Overview

The following section discusses the features and operations that can trigger email notification messages to be sent from ProblemTracker.

---

## Alerts

The Alerts feature can send email notification messages at a designated date and time to remind a user or group about a record or to notify a user or group that a record's status has not changed within a specific period of time. Information on configuring the Alerts feature to send email notification messages can be found in the Alerts section of this Help guide.

---

## Discussion

The Discussion feature can send email notification messages to invite a user or group to participate in a discussion for a record or can notify a user or group about a new post to a discussion thread. Information on configuring the Discussion feature to send email notification messages can be found in the Discussion section of this Help guide.

---

## Email Notifications triggered by Operations in ProblemTracker

ProblemTracker can be configured to automatically send email notification messages when the following actions are performed on a record:

- **Add**
- **Edit**
- **Delete**
- **Task**
- **Change of Status**
- **Change of Assignment**

Any combination of users and groups can be selected to be notified for each operation mentioned above.

Email notification preferences can be set on a per product basis, allowing custom rules to be used for each product in the workgroup. Such customization may be necessary to account for changes in the workflow process or the users participating in the process.

## Add Options

When a record is created, a notification email can be sent to any of the following individuals and / or groups:

**Assignee**
The individual who is currently assigned to the record

**Reporter**
The individual who reported the record

**State Manager**
The manager assigned to the workflow state of the record when it is added

**User Group**
The user groups configured within the workgroup will be listed. You can select any user group(s) to receive notification when a record is added

## Edit Options

When a record is edited, a notification email can be sent to any of the following individuals and / or groups:

**Assignee**
The individual who is currently assigned to the record

**Assignee (new)**
The individual selected in the Assigned To field (if the Assignee is changed during the Edit operation)

**Assignee (previous)**
The individual who was the previously assigned to the record (if the Assigned To field is changed during the Edit operation)

**Reporter**
The individual who reported the record

**State Manager**
The manager assigned to the workflow state of the record when it is edited

**State Manager (new)**
The manager assigned to the new workflow state of the record (if the Status field is changed during the Edit operation)

**State Manager (previous)**
The manager assigned to the previous workflow state of the record (if the Status field is changed during the Edit operation)

**User Group**
The user groups configured in the workgroup will be listed. You can select any user group(s) to receive notification when a record is edited.

## Delete Options

When a problem record is deleted, a notification email can be sent to any of the following individuals and / or groups:

**Assignee**
The individual who is currently assigned to the record

**Reporter**
The individual who reported the record

**State Manager**
The manager assigned to the workflow state of the record when it is deleted

**User Group**
The user groups configured in the workgroup will be listed. You can select any user group(s) to receive notification when a record is deleted.

## Task Options

When the Task operation is performed on a record, a notification email can be sent to any of the following individuals and / or groups:

**Assignee**
The individual who is currently assigned to the record

**Assignee (new)**
The individual assigned to the record (if the Assigned To field is changed during the Task operation)

**Assignee (previous)**
The individual who was previously assigned to the record (if the Assigned To field is changed during the Task operation)

**Reporter**
The individual who reported the record

**State Manager**
The manager assigned to the workflow state of the record when the Task operation is performed

**State Manager (new)**
The manager assigned to the new workflow state of the record (if the Status field is changed during the Task operation)

**State Manager (previous)**
The manager assigned to the previous workflow state of the record (if the Status field is changed during the Task operation)

**User Group**
The user groups configured in the workgroup will be listed. You can select any user group(s) to receive notification when the Task operation is performed on a record.

## Assignment Change Options

When a change of assignment occurs for a record, notification email can be sent to the following individuals and / or groups:

**Assignee (new)**
The individual the record is being assigned to

**Assignee (previous)**
The individual the record was assigned to before the change of assignment

**Reporter**
The individual who reported the record

**State Manager**
The manager assigned to the current workflow state of the record

**User Group**
The user groups configured in the workgroup will be listed. You can select any user group(s) to receive notification when a record is re-assigned.

## Status Change Options

When a change of state occurs for a record, a notification email can be sent to the following individuals and / or groups:

**Assignee**
The individual who is currently assigned to the record

**Reporter**
The individual who reported the record

**State Manager (new)**
The manager assigned to the new workflow state

**State Manager (previous)**

The manager assigned to the original workflow state

**User Group**
The user groups configured in the workgroup will be listed. You can select any user group(s) to receive notification when a record's Status has changed.

You can establish notification rules based on changes to particular states. Examples of notification rules that can be used simultaneously for changes to particular states:

- When the Status of a record is changed to the Closed state, the Reporter, the previous State Manager, and the new State Manager are notified.
- When the Status of a record is changed to Fixed, the Reporter, the new State Manager, and the Managers user group are notified.

Please note that these are just examples of the many combinations that are possible to establish notification rules for a change in state.

Please review the Setting Notification Preferences section for details on configuring default and per-product email preferences.

**NetResults ProblemTracker**

# Email Notification Message Types

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Email notification messages can be generated automatically by ProblemTracker triggered by the actions performed on a record. Notification messages can also be triggered by the use of the Alerts and Discussion features. Each of the features above generates a notification message with a unique structure. Common to all message types is the inclusion of hyperlinks to take the user receiving the message to the workgroup, record, or discussion thread specified in the message. The hyperlink is created based on the configuration set for the workgroup in the Workgroup Management System The structure of each message type is described below.

## Email Notification Messages based on Email Preferences

The Email Preferences set for each product in ProblemTracker can be set to send an email message when an operation is performed on a record (such as adding, deleting, editing, or tasking a record) or when the record's status or assignment has changed. The email messages generated by these preferences are of the form shown in the example below. This example is a message sent to a user who has been assigned to a record:

Hello Developer One,

The following record has been assigned to Developer One.

To view this record, login to ProblemTracker.
( http://SERVERNAME/pteval/ptlogin.asp?page=view&record=3 ) - (pteval workgroup).

History Comment:

PRN: 3
Title: Add a print wizard
Product: Our Browser
Platform: All
Reported In Version: 2.1.1.None
Request Type: Enhancement
Severity: 2 (High Impact - Medium %)
Description:

---

==== 06/26/2003 10:08:27 AM [UTC-0700] ==== Development Manager ====
Add a print wizard per the attached specification

---

Reported By: Development Manager
Date Reported: 06/26/2003 10:08:08 AM [UTC-0700]
Workaround:
Status: In Development
Assigned To: Developer One
Released In Version: None.None.None.None
Planned For Version: 2.2.-.-

The fields that are included in the email notification messages can be customized. Whether a particular field is displayed in the email message is determined by the Field Visibility settings for that field. Field Visibility can be customized for each fields in the Define Record section of the Administration page.

## Alerts Notification Messages

The Alerts feature can be configured to send an email notification message about a record at a particular date and time as shown in the example below Each message includes a link to the record that generated the alert, information about how long a record has been its current state, when the next alert will be sent, additional information from the alerts settings for the record, and fields from the record:

Hello Process Manager,

Alert for Record 2 ( http://servername/pteval/ptlogin.asp?page=view&record=2 ).
In Reported State from 09/18/2002 03:12:39 PM for more than 1 hour(s).
Next alert is due on 09/18/2002 05:12:39 PM.
Additional Information: This is a critical record

PRN: 2
Title: Add print wizard
Product: Our Spreadsheet
Platform: All
Reported In Version: 2.1.3
Request Type: Enhancement

Note: This is an alert notice sent automatically by ProblemTracker.

The fields that are included in the message can be customized. Whether a particular field is displayed in the email message is determined by the Field Visibility settings for that field. Field Visibility can be customized for each field in the Define Record section of the Administration page.

## Discussion Notification Messages

The Discussion feature can be configured to send an email notification message to invite a user or group to participate in a discussion for a record or to notify a user that a new post has been added to a discussion. The sample messages below have the subject (name) of the discussion thread, the record number where the thread is located, and a link to the thread:

**Sample 1 - Invitation to participate in a new discussion**

Hello Development Manager,

You are invited to the "Specification Review" discussion thread for Record 2.

To read or post messages to this thread, login to ProblemTracker.
( http://servername/pteval/ptlogin.asp?page=thread&record=2&threadid=0 )
After login the message list for this thread will be displayed.

Note: This email is sent automatically by ProblemTracker.
To change your discussion notification preferences, login to ProblemTracker,
( http://servername/pteval/ptlogin.asp )
click Personal Preferences, modify Discussion Settings, click OK.

**Sample 2 - New post to a discussion in which the user is subscribed**

Hello Developer One,

A new message has been posted to the "Specification Review" discussion thread for Record 2.

To read or post messages to this thread, login to ProblemTracker.
( http://servername/pteval/ptlogin.asp?page=thread&record=2&threadid=0 )
After login the message list for this thread will be displayed.

Note: This email is sent automatically by ProblemTracker.
To change your discussion notification preferences, login to ProblemTracker,
( http://servername/pteval/ptlogin.asp )
click Personal Preferences, modify Discussion Settings, click OK.

**NetResults ProblemTracker**

# General Email Configuration

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## Enable Email Notification

Before using the email integration features (email notification triggered by actions performed on a record, alerts, and discussion messages), you must first perform some basic configuration.

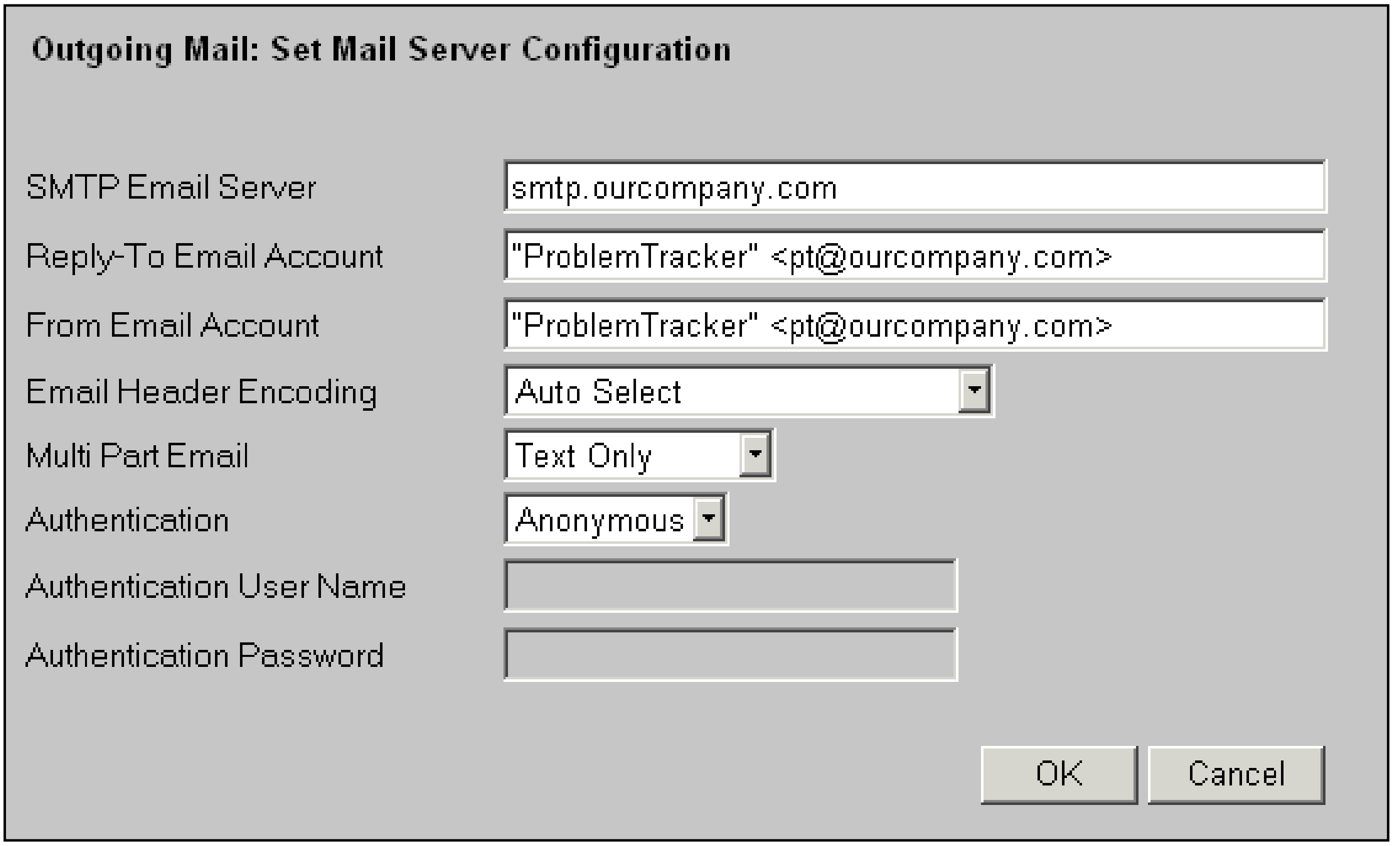
The steps for enabling email notification are:

- **Configure Your Mail Server**
  The SMTP Mail Server that you plan to use with ProblemTracker needs to be configured to allow **forwarding** or **relaying** from the machine where ProblemTracker is installed. For most mail servers, this can be done by entering the IP Address of the machine where ProblemTracker is installed into the list of machines allowed to relay or forward through the mail server. Check with your mail server administrator to configure this. If the ProblemTracker server is not allowed to relay through your mail server, ProblemTracker will be unable to generate email notification messages.

- **Set the Mail Server Configuration**
  Enter the Mail Server information to be used when generating the outgoing email messages.

  To reach the Mail Server Configuration options:

  1. Login to the workgroup as Admin (or another user who is a member of the Admin user group)
  2. Click on the **Admin** icon
  3. Click on the **Email Configuration** button
  4. Select the option **Set Mail Server Configuration**, then click on the **Continue** button




5. Enter the name of the mail server you would like to use in the **SMTP Mail Server** field. You can enter the name of the mail server as a host name (e.g. *smtp.mydomain.com*) or as an IP address (e.g. *192.168.22.118*). For best performance, it is recommended that you use a mail server located on the same machine as ProblemTracker and reference it by IP address by entering **127.0.0.1** (a special IP address which is interpreted by the IP protocol to mean the local machine and does not require a host name lookup). If you do not have a mail server installed on the same (web server) machine as ProblemTracker, we recommend installing the Microsoft SMTP Service (which is included with Internet Information Services on Windows Server operating systems). Then, configure it to forward email to your main mail server for distribution to the recipients. By having a local mail server (dedicated to ProblemTracker), you may significantly speed up ProblemTracker operations which send email notifications (Add, Edit, Task, and Delete). Detailed steps for configuring the Microsoft SMTP service on Windows 2000 and setting up a smart host to route to your main mail server can be found in the following FAQ entry:

   **www.problemtracker.com/pt_faq_performance.htm#performance**

   **NOTE:** Please ensure that the mail server you enter for this option is set such that it allows the IP address of the machine where ProblemTracker is installed to forward or "relay" messages through your mail server. Most mail servers are set to not to allow such forwarding or relaying by default to prevent forwarding of spam. This is especially important if your mail server is on a separate machine from ProblemTracker.

6. In the **Reply-To Email Account**, enter the email address (e.g. admin@mycompany.com) that should be used when users attempt to reply to an email message generated by ProblemTracker (or when a destination mail server rejects an email for some reason and sends a delivery failure notification). If you wish to include a name with the email address, enter the information in the form **"Name" <email address>** (with a space between " and <) as shown in the example above. The double quotes around the name are required unless there is no blank space in the name. The less than and greater than symbols are required around the email address. If you include a name and the double quotes and less than/greater

than symbols are not used, ProblemTracker may not be able to send the email or you users may not be able to receive it. Without a valid email address entered into this field, ProblemTracker will be unable to send email notification messages. It may also be a good idea to tell your users to make sure that their spam filters allow all email from this address (put it on their "white list").

7. In the **From Email Account**, enter the email address (e.g. admin@mycompany.com) that should appear in the **From** field of the email message sent by ProblemTracker. If you wish to include a name with the email address, enter the information in the form **"Name" <email address>** (with a space between " and <) as shown in the example above. The double quotes around the name are required unless there is no blank space in the name. The less than and greater than symbols are required around the email address. If you include a name and the double quotes and less than/greater than symbols are not used, ProblemTracker may not be able to send the email or you users may not be able to receive it. Without a valid email address entered into this field, ProblemTracker will be unable to send email notification messages. It may also be a good idea to tell your users to make sure that their spam filters allow all email from this address (put it on their "white list").

8. Select the type of **Email Header Encoding** you would like to use in the pulldown menu. The encoding that you choose for this option should be based on the characters that will be used in this workgroup. In general, email headers must contain only US-ASCII characters. Headers that contain non US-ASCII characters must be encoded so that they contain only US-ASCII characters. This process involves using either **"B" (BASE64)** or **"Q" (Quoted-Printable)** to encode certain characters. The "Q" encoding is recommended for use when most of the characters to be encoded are in the ASCII character set; otherwise, the "B" encoding should be used. If you are not sure what type of encoding is compatible with your mail server, choose **Auto Select** for this option.

9. Choose a format for the email content in the **Multi Part Email** pulldown menu. This option determines whether the email messages generated by ProblemTracker will contain only **Text** or **Text and HTML**. For example, if the character set for your workgroup is UTF-8, email from ProblemTracker may also contain UTF-8 characters. If your email client cannot display UTF-8 characters, selecting Text and HTML for this option might help. If your email client can display HTML format, the UTF-8 characters in the email message can be displayed correctly.

10. Select the type of **Authentication** that should be used when generating email notification messages. By default, **Anonymous** authentication is selected. Anonymous authentication will generate email messages using ProblemTracker's anonymous user account, PUSR4<hostname>, as the effective user. This anonymous user account is configured automatically by the installation setup program.

    If you wish to use **Basic** authentication, an **Authentication User Name** and **Authentication Password** need to be provided in the corresponding fields. This user account will be used to authenticate ProblemTracker's request to the mail server when generating email messages.

11. Click on the **OK** button to save your Mail Server Configuration settings

- **Set the Global Email Options**
  The Global Email Options section allows you to choose whether the contents of Text and BigText (TextArea) fields should be truncated when displayed in the email messages generated by ProblemTracker.

  To reach the Global Email Options section:

  1. Login to the workgroup as Admin (or another user who is a member of the Admin user group)
  2. Click on the **Admin** icon

3. Click on the **Email Configuration** button
4. Select the option **Set Global Email Options** , then click on the **Continue** button
5. Select **No** if you wish to display the entire contents of the Text and BigText (TextArea) fields when they are configured to be included in the email notification messages. Selecting **Yes** for this option will truncate the Text fields to 55 characters and the BigText (TextArea) fields to 250 characters when displayed in email notification messages.
6. Click on the **OK** button to save your selection

- **Set the Default and Per-Product Email Preferences**
  Set the preferences that will determine what actions will trigger email notifications, which users and / or user groups will receive the emails, and the content of the emails. Details on setting these preferences can be found in the Setting Email Notification Preferences section of this Help Guide.

## Disable Email Notification

If at any time you wish to turn off all email notification, remove the information from the **SMTP Email Server** setting in the Mail Server Configuration section mentioned above.

**NetResults ProblemTracker**

# Setting Notification Preferences

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The body of a ProblemTracker email notification is divided into seven sections which you can configure. Listed from the top (first line of email body) to the bottom, they are as follows.

1. **Greeting** - the first line of the email, e.g. "Hello Sue Smith,".
2. **Introduction** - a few lines to introduce the email, e.g. a sentence or two to let the user know this is an automated response from ProblemTracker.
3. **Operation Description** - a few lines to describe why this email notification is being sent, e.g. this issue has been assigned to you (the recipient of the email).
4. **Link** - link (URL) to the record in ProblemTracker (record is displayed after you enter your login information).
5. **History Comment** - the History Comment that was entered by the user who triggered the email, e.g. comment they entered when using the Edit operation to update a record.
6. **Fields** - the fields of the record this email notification references. Which fields are included can be limited by User Group.
7. **Signature** - the last section of the email, typically used for the signature at the bottom of the email (contact information).

The Greeting, Introduction, and Signature can be configured per product (for example, the signature part can be different for each product support group). The Subject line of the email as well as the Operation Description part of the email body can be configured per email notification rule. Each product can have its own unique set of conditions (defined by the email notification rules) which trigger email notifications. User Group membership (privileges) of the recipient can be used to determine which parts of the email are sent. And, each recipient's personal preferences are used to customize the content of the email they receive. For example, Date/Time fields will be formatted according to the recipient's time zone and date and time format preferences.

Email notification preferences are customizable for each product. However, it is very likely that some aspects of the preferences are common across all products. ProblemTracker allows you to specify a default set of email notification preferences that are applied when a new product is added to the workgroup. Some or all of these default preferences can be pushed down to (overwrite the current preferences for) all existing products as well.

## Default Email Preferences

To set the Default Email Preferences, follow the steps below to add, edit, or delete the default email Notification Rules and to set the default Common Email Content. The Default Email Preferences will be used as the email preferences for newly added products. You can also use the Push Default Email Preferences to All Products operation to update the email preferences for all existing products to match the (perhaps recently updated) Default Email Preferences.

To **add** an email Notification Rule:

1. Login to the workgroup as Admin (or another user who is a member of the Admins user group).

2. Click on the **Admin** icon.
3. Click on the **Email Configuration** button.
4. Select the option **Set Default Email Preferences**, then click on the **Continue** button.
5. Select a **Condition** (details of each option that can be selected are described in the Options section below). Check the **Notification Rule List** to see if the condition you selected is already on the list. If so, you may wish to edit an existing preference rather than create a new one.
6. In the **Notification List**, select the user(s) and / or user group(s) that should receive an email message when the condition occurs. Descriptions of the special user roles such as Assignee, Reporter, etc. can be found in the Options section below.
7. Enter information into the **Subject** field. This text will appear as the Subject line of the email message generated when the condition occurs. Up to 80 characters can be entered as the Subject.
8. Enter information into the **Operation Description** field. This text will appear in the body of the email message after the **Greeting** and **Introduction**. Up to 255 characters can be entered as the Operation Description (end of line characters do count towards that limit).
9. For the Subject and Operation Description, you can specify variables so that information from the issue that triggered the email notification is included. For an explanation and example of the variables that can be used, review the Variables section below.
10. Click on the **Add Notification** button. The preference will now be displayed in the **Notification Rule List**. Except when the Notification Rule is selected, it will be displayed with a green background until you click the **OK** button. This is to let you know that this rule has been added, but has not yet been saved. You can continue to create more rules, or you can click the **OK** button to save your changes.

To **edit** an email Notification Rule:

1. Login to the workgroup as Admin (or another user who is a member of the Admins user group).
2. Click on the **Admin** icon.
3. Click on the **Email Configuration** button.
4. Select the option **Set Default Email Preferences**.
5. Click on the **Continue** button.
6. In the **Notification Rule List**, click on the Notification Rule you wish to modify, then click on the **Edit Notification** button (you can also simply double click on the Notification Rule).
7. The fields in the **Notification Rule** section will be updated with the information associated with the Notification Rule you selected.
8. Make changes to the fields in the **Notification Rule** section.
9. Click on the **Update Notification** button. The Notification Rule will be displayed with an orange background color until you click the **OK** button. This is to let you know that this rule has been edited, but the changes have not yet been saved. You can continue to edit more rules, or you can click the **OK** button to save your changes.

To **delete** an email Notification Rule:

1. Login to the workgroup as Admin (or another user who is a member of the Admins user group).
2. Click on the **Admin** icon.
3. Click on the **Email Configuration** button.
4. Select the option **Set Default Email Preferences**.
5. Click on the **Continue** button.
6. In the **Notification Rule List**, click on the preference you wish to delete, then click on the **Delete Notification** button

7. Click on the **OK** button to save this change.

To **set common email message** content:

1. Login to the workgroup as Admin (or another user who is a member of the Admins user group).
2. Click on the **Admin** icon.
3. Click on the **Email Configuration** button.
4. Select the option **Set Default Email Preferences**.
5. Click on the **Continue** button.
6. Enter or edit information in the **Greeting** field. This information will be displayed as the first text in the body of all email messages generated by the email Notification Rules listed above. Up to 80 characters can be entered as the email greeting.
7. Enter or edit information in the **Introduction** field. This information will appear immediately after the **Greeting** in the body of all email messages generated by the email Notification Rules listed above. Up to 255 characters can be entered as the email introduction (end of line characters do count towards that limit).
8. Enter or edit information in the **Signature** field. This text will appear as the final portion of the body of all email messages generated by the email Notification Rules listed above. Up to 255 characters can be entered as the email signature (end of line characters do count towards that limit).
9. For the Common Email Content fields, you can specify variables so that information from the issue that triggered the email notification is included. For an explanation and example of the variables that can be used, review the Variables section below.
10. Click **OK** to save your changes.

## Setting Email Preferences for a Product

To set the email preferences for a product, follow these steps in the Default Email Preferences section above, but instead of selecting **Default Email Preferences**, select **Set Email Preferences for Product** and select a Product in the pulldown to the right of the Set Email Preferences for Product selection.

When specifying email preferences for a product, you will also have one additional option: **Load Default Values**. If you click the **Load Default Values** button, the current Default Email Preferences will be used to overwrite the settings for the product. After loading the default email preferences, you can customize the rules for the product. Make sure to click **OK** to save your changes when you are done (you must click OK even if all you do is click Load Default Values to update the product email preferences to match the default email preferences).

## Push Default Email Preferences to All Products

You may wish to push a certain set of email preferences to all Products to minimize the amount of manual configuration done across all products.

To **push a default set of email preferences to all products** within your workgroup:

1. Login to the workgroup as Admin (or another user who is a member of the Admin user group)
2. Click on the **Admin** icon

3. Click on the **Email Configuration** button
4. Select the option **Push Default Email Preferences to All Products**, then click on the **Continue** button
5. The Rule List, Greeting, Introduction, and Signature as configured in the Default Preferences section will be displayed. Check the boxes to the left of the preferences to wish to push to all products. The preferences with boxes checked will overwrite any current settings in each of the Per-Product Email Preference sections.
6. Click **OK** to proceed with pushing the selected preferences to all products

## Limiting Email Content by User Group

You can limit the information contained in an email notification message by user group. To limit the sections included in the email messages (e.g. Greeting, Introduction, Signature, etc.), enable or disable the Email Privileges for each user group. To limit the fields (e.g. Reported By, Assigned To, Description, etc.), set the field visibility for each field or set the field visibility for each user group.

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## Options Available when configuring Email Preferences

Details of the fields that can be set in the Default and Per-Product Email Preference section are described below.

## Conditions

The Conditions below are the actions that can trigger an email notification message to be sent.

- **Add**
  Setting a preference with this condition will send an email notification message when a record is added to the workgroup: using the Add page, using the Inet page, using the Clone operation on the View page, by submitting via email, or by executing the ProblemTracker API AddRecord operation.

- **Edit**
  Setting a preference with this condition will send an email notification message when a record is edited using the Edit operation.

- **Delete**
  Selecting this condition will send an email notification message when a record is deleted using the Delete operation.

- **Task**
  Selecting this condition will send an email notification message when the Task operation is performed on a record.

- **Change of**
  There are 2 parts to the **Change of** condition:

- **Change of Status to <State or State Group>**
  Creating a preference with this condition will send an email notification message when a record's status is changed to the **State** selected. If a State Group is selected, an email notification message will be sent when a record's status is changed to one of the states in the State Group selected. To select this condition, select **Change of** in the first pulldown, select **Status** in the second pulldown, then select the **State** or **State Group** that should used for this preference.

- **Change of Assignment**
  Creating a preference with this condition will send an email notification message when a record's Assignment (Assigned To field) is changed. To select this condition, select **Change of** in the first pulldown, then select **Assigned To** in the second pulldown.

## Variables that can be used in the Email Content

There are a list of variables that are supported so that you can reference the specific record number, status, assignees when entering the content for email notifications. For example, if you want the Subject line for a preference to say "PRN 31 previously assigned to Development Manager has been re-assigned to Developer One", but since each record has an individual record number and may have various possible users that can be assigned at any point in the process, it is necessary to enter the content using variables. To set the Subject line such that it will enter the relevant PRN and user names for each record, enter the following into the Subject field exactly as it appears below:

**PRN <number> previously assigned to <old assignee> has been re-assigned to <new assignee>**

The variables supported by ProblemTracker are listed below

| To specify this information in the email content | Enter this variable into the field |
|---|---|
| record number - PRN | <number> |
| workgroup name | <workgroup> |
| previous user selected in the Assignee field | <old assignee> |
| new user selected in the Assignee field | <new assignee> |
| current user selected in the Assignee field | <assignee> |
| previous state selected in the Status field | <old status> |
| new value selected in the Status field | <new status> |
| current state selected in the Status field | <status> |
| the user selected in the Reporter field | <reporter> |
| the user receiving the email notification message | <recipient> |

| | |
|---|---|
| the user whose action triggered the email | <action user> |

In addition to the variables listed above, you can also include the value of any field in the record (except for BigText/TextArea and Date fields) by specifying the Field Name (in all lower case characters) and surrounding the name with < and >. For example, <text1>, <pulldown23>, or <product>. To find the Field Name for a particular field, click on the Admin icon, click on the Define Record button and note the name in parentheses (to the right of the Field Label). You can also select the field and click the Edit button between the two panes to view the field properties. The Field Name is the left-most property in the Field Attributes section. Note: **The field name variable must be specified in all lower case characters** (e.g. <text1> not <Text1>) to be properly recognized by the ProblemTracker email processor.

## Notification List

The options below are available for selecting which users receive email notification messages for a particular preference.

**Assignee**
The user currently assigned to the record

**Assignee (new)**
The user assigned to the record after a change in the record's Assigned To field has been made

**Assignee (previous)**
The user who was assigned to the record prior to a change made in the record's Assigned To field

**Reporter**
The user who created the record using the Add or Inet form

**State Manager**
The user who is listed as the manager of the record's current state according to the per-product Workflow Properties

**State Manager (new)**
The user who is listed as the manager of the record's current state (according to the per-product Workflow Properties) after a change in the record's Status field has been made

**State Manager (previous)**
The user who is listed as the manager of the record's previous state (according to the per-product Workflow Properties) prior to a change in the record's Status field

**User Groups**
All user groups in this workgroup will be displayed to be selected for the Notification List

Incoming Mail settings are used for the Add Record via Email feature. The Incoming Mail settings will not be displayed in the Email Configuration page of the Administration section unless an Email License Key has been entered into the ProblemTracker License Manager and the "Enable Add Record via Email" option is set to "Yes" in General Preferences.

To configure the Incoming Mail settings,

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Email Configuration** button
4. Select an option in the **Incoming Mail** section (described below)
5. Click on the **Continue** button

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## Set Global Mail Options

The following options are applied to all incoming mail processed by a particular workgroup:

**Send Mail Processing Status (as Email) to User**
Select a user who will receive email messages about the processing status of incoming mail for this workgroup. By default, this is set to Admin. Any user that is added to the workgroup and has a valid email address entered into the user profile information can be selected. Select <None> if you do not wish to send any status email messages.

**Send Mail Processing Status (as Email) on**
Select the condition which will send an email message about the processing status of incoming mail for this workgroup. By default, this is set to "Success and Failure", which will generate an email message every time ProblemTracker checks for email (even if there is no email to process). **Warning: Since this setting will generate a status email every time ProblemTracker checks for email, we strongly recommend changing this setting (to Failure or None) once incoming email configuration is complete and connectivity to your mail server has been verified.** Selecting "Failure" will generate an email message only when ProblemTracker gets an error attempting to check for email (e.g. can not connect to the mail server) or gets an error while attempting to convert an incoming message to a new record. Selecting <None> indicates that no email messages should be sent regardless of the processing status of each incoming message. These email messages will be sent to the user specified in the option "Send Mail Processing Status (as Email) to User".

**Record Visibility for Unmapped Emails**
Select the user groups which should be able to access records added via email that could not be mapped to a user account in ProblemTracker (there was no user account with a matching email address). To select multiple user groups, hold down the CTRL button on your keyboard while clicking on the user groups you wish to select. The Admins user group is not displayed on the list because all records added via email are made visible to the

Admins user group. If the option "Action for Unmapped Emails" is set to "<Delete Email>" in the per-product Incoming Mail Configuration, this option does not apply since it is only used for unmapped emails. For further information please review the Record Visibility for Records Added via Email help section.

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## Set Default Mail Configuration

You can configure a set of default properties for incoming mail. These default properties can be applied to all products in the workgroup using the Push Default Mail Configuration to All Products option. By default, these properties will only be applied to any new products added to the workgroup. **You will not be able to submit records via email until you set the Incoming Mail Configuration for each product.** You can either do this by:

- Using the Push Default Mail Configuration to All Products option to load the defaults into all products, then set the Mail Account User Name and Password for each product.

  **OR**

- Configure the Set Mail Configuration for Product <Product Name> section for each product.

**Mail Server Type**
Select the type that corresponds to the mail server entered into the mail server name field below. The mail server types supported are POP3 and IMAP.

**Mail Server Name**
Enter the name of the mail server to be used by default to process the incoming email messages intended for this workgroup. The mail server name can be of the form "smtp.yourcompany.com" or can be the IP Address of the machine where your mail server is installed.

**Save Email 'Subject' as**
Select a field of **Text** type to which the contents of the email message's subject will be saved in the new record. Choosing <None> will not save the email message's subject in any field. A **Text** field must be selected, if “Enable Add Record via Email” is set to “Yes”. Please note that Field Visibility settings are not enforced when a record is created via email. Thus, if the Text field selected for this option is configured such that it is not visible to certain groups on the Add page, this restriction will not be enforced for records added via email.

**Save Email 'Body' as**
Select a field of **BigText** type to which the contents of the email message's body will be saved in the new record. Choosing <None> will not save the email message's body in any field. A **BigText** field must be selected, if "Enable Add Record via Email" is set to "Yes". If the body of an email is not plain text (for example, it's an image, audio, or HTML file), then it will be saved as a file attachment and a note telling the user that the body was saved as an attachment will be placed in the BigText field you selected. If the body of the email comes in multiple versions (MIME multipart/alternative format), the plain text version (if any) will be saved in the BigText field you selected and the other alternative versions will be saved as file attachments.

Please note that Field Visibility settings are not enforced when a record is created via email. Thus, if the

BigText field selected for this option is configured such that it is not visible to certain groups on the Add page, this restriction will not be enforced for records added via email.

If the body of an email message exceeds the maximum number of characters supported in the BigText field for your database type, the body of the email may be truncated.

**Default Initial State for Incoming Emails**
When a new record is created by an incoming email, the Status field of the new record will be set with the state selected in this option. The state selected also determines the assignee of the new record. The user assigned to the new record will be the State Manager as determined by the Workflow Properties of the product to which this record pertains and the state selected for this option.

**Set Reporter by Mapping 'From' Address**
You can use the email address in the 'From' field of the incoming message to set the "Reported By" field for the new record. This is done by setting this option to "Yes", which will allow ProblemTracker to compare the email address listed in the 'From' field of the incoming message to the email addresses entered in the user profiles in the workgroup's User Administration section. If the address is not found or this option is set to "No", the incoming email will be processed according to the setting of the "Action for Unmapped Emails" option.

**Action for Unmapped Emails**
ProblemTracker can be configured to map the email address in the 'From' field of the incoming message to the email addresses entered in the user profiles in the workgroup's User Administration section. The result of this mapping will set the "Reported By" field for the new record. If the mapping does not find a match in the User Administration table OR if the option "Set Reporter by Mapping 'From' Address" is set to "No", one of the following actions can be selected to process the incoming message:

- Selecting "<Delete Email>" will result in the incoming email message being deleted and no record will be created.
- Selecting "<Set Reporter to Inet>" will set the "Reported By" field of the new record to be the "Inet" user. The Inet user is a built-in user within ProblemTracker used to distinguish records reported anonymously.

**Send Reply to Unmapped Emails**
Setting this option to "Yes" indicates that a confirmation (reply) email message should be sent to the email address from which the incoming message originated. The reply email will be sent to the sender only when the email address is not mapped against the email addresses of the user profiles. If it is mapped, then emails will be sent based on the standard email notification rules for the selected Product.

**Save Email 'From' as**
Select a **Text** type field to which the Email 'From' field will be saved in the new record. All **Text** type fields will be listed in the pulldown for this option. Selecting <None> will not save the 'From' field to any field in the new record. Please note that Field Visibility settings are not enforced when a record is created via email. Thus, if the Text field selected for this option is configured such that it is not visible to certain groups on the Add page, this restriction will not be enforced for records added via email.

**Save Attachments in Email**
If the incoming message contains any file attachments, these can be saved as files attached to the new record

by setting this option to "Yes". Please note that the Add Attachments user group privilege is not enforced for records that are added via email. When this option is set to "Yes", any user will be able to create a record that contains an attachment using the Add Records via Email feature.

**Save Raw Email as an Attachment**
Select "Yes" for this option if you wish to save the entire incoming email as a file attached to the new record. The entire contents of the email including the attachments (raw email prior to processing by ProblemTracker) will be saved as a text file (with .txt as extension) and attached to the new record. This can be useful if some of the information in the email could not be stored in the ProblemTracker fields you've selected (for example, if the Subject line is very long and must be truncated to be stored in the Text field you've selected).

**Stop Processing Emails on First Error**
Incoming messages are processed in batches periodically by ProblemTracker's Email Processor. If there is an issue which prevents an incoming message from being processed successfully, you can choose whether ProblemTracker should attempt to process any remaining incoming messages. Setting this option to "Yes" indicates that ProblemTracker should not process any additional incoming messages once an error occurs (an incoming message cannot be processed successfully).

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## Set Mail Configuration for a Specific Product

Each product within the workgroup has its own set of incoming mail settings. The settings described below must be configured for each product where the Add Record via Email feature will be enabled.

To configure the incoming mail settings for a particular product:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Email Configuration** button
4. Select the option **Set Mail Configuration for Product** in the **Incoming Mail** section
5. Select a product in the pulldown
6. Click on the **Continue** button
7. Make selections to the settings, then click **OK** to save your changes. Alternatively, you can apply the default settings by clicking on the **Load Defaults** button, make selections to the per-product incoming mail settings described below, then click **OK** to save your changes.

Per-product Incoming Mail Settings:

**Enable Add Record via Email**
In order to enable the Add Record via Email feature for each product, this property must be set to "Yes", which will allow records to be added to this workgroup via email.

**Mail Account User Name**
Enter a unique mail account (mailbox) on the mail server specified in the "Mail Server Name" field to receive the incoming email messages. Enter the User Name for this account.

**Mail Account User Password**

Enter the password that corresponds to the user account (mailbox) specified in the "Mail Account User Name" field above.

**Warning: ProblemTracker deletes all emails that it successfully reads.** It is possible that ProblemTracker could read (and delete) an email, but still be unable to store the full information from the email into your workgroup. If you need to keep a copy of all emails sent to a particular mailbox, do not use that mailbox for ProblemTracker. Instead, create a new mailbox and forward copies of email from the mission critical mailbox (or create a mailing list to distribute emails to both mailboxes). In general, this is a good idea, at least until you have made certain you have configured the Add Record via Email feature properly. Please contact your email administrator for information on how to set up email accounts.

**Mail Server Type**
Select the type that corresponds to the mail server entered into the mail server name field below. The mail server types supported are POP3 and IMAP.

**Mail Server Name**
Enter the name of the mail server to be used by default to process the incoming email messages intended for this workgroup. The mail server name can be of the form "smtp.yourcompany.com" or can be the IP Address of the machine where your mail server is installed.

**Save Email 'Subject' as**
Select a field of **Text** type to which the contents of the email message's subject will be saved in the new record. Choosing <None> will not save the email message's subject in any field. A **Text** field must be selected, if “Enable Add Record via Email” is set to “Yes”. Please note that Field Visibility settings are not enforced when a record is created via email. Thus, if the Text field selected for this option is configured such that it is not visible to certain groups on the Add page, this restriction will not be enforced for records added via email.

**Save Email 'Body' as**
Select a field of **BigText** type to which the contents of the email message's body will be saved in the new record. Choosing <None> will not save the email message's body in any field. A **BigText** field must be selected if "Enable Add Record via Email" is set to "Yes". If the body of an email is not plain text (for example, it's an image, audio, or HTML file), then it will be saved as a file attachment and a note telling the user that the body was saved as an attachment will be placed in the BigText field you selected. If the body of the email comes in multiple versions (MIME multipart/alternative format), the plain text version (if any) will be saved in the BigText field you selected and the other alternative versions will be saved as file attachments. Please note that Field Visibility settings are not enforced when a record is created via email. Thus, if the BigText field selected for this option is configured such that it is not visible to certain groups on the Add page, this restriction will not be enforced for records added via email.

**Default Initial State for Incoming Emails**
When a new record is created by an incoming email, the Status field of the new record will be set with the state selected in this option. The state selected also determines the assignee of the new record. The user assigned to the new record will be the State Manager as determined by the Workflow Properties of the product to which this record pertains and the state selected for this option.

**Set Reporter by Mapping 'From' Address**
You can use the email address in the 'From' field of the incoming message to set the "Reported By" field for the

new record. This is done by setting this option to "Yes", which will allow ProblemTracker to compare the email address listed in the 'From' field of the incoming message to the email addresses entered in the user profiles in the workgroup's User Administration section. If the address is not found or this option is set to "No", the incoming email will be processed according to the setting of the "Action for Unmapped Emails" option.

**Action for Unmapped Emails**

ProblemTracker can be configured to map the email address in the 'From' field of the incoming message to the email addresses entered in the user profiles in the workgroup's User Administration section. The result of this mapping will set the "Reported By" field for the new record. If the mapping does not find a match in the User Administration table OR if the option "Set Reporter by Mapping 'From' Address" is set to "No", one of the following actions can be selected to process the incoming message:

- Selecting "<Delete Email>" will result in the incoming email message being deleted and no record will be created.
- Selecting "<Set Reporter to Inet>" will set the "Reported By" field of the new record to be the "Inet" user. The Inet user is a built-in user within ProblemTracker used to distinguish records reported anonymously.

**Send Reply to Unmapped Emails**

Setting this option to "Yes" indicates that a confirmation (reply) email message should be sent to the email address from which the incoming message originated. The reply email will be sent to the sender only when the email address is not mapped against the email addresses of the user profiles. If it is mapped, then emails will be sent based on the standard email notification rules for the selected Product.

**Save Email 'From' as**

Select a **Text** type field to which the Email 'From' field will be saved in the new record. All **Text** type fields will be listed in the pulldown for this option. Selecting <None> will not save the 'From' field to any field in the new record. Please note that Field Visibility settings are not enforced when a record is created via email. Thus, if the Text field selected for this option is configured such that it is not visible to certain groups on the Add page, this restriction will not be enforced for records added via email.

**Save Attachments in Email**

If the incoming message contains any file attachments, these can be saved as files attached to the new record by setting this option to "Yes". Please note that the Add Attachments user group privilege is not enforced for records that are added via email. When this option is set to "Yes", any user will be able to create a record that contains an attachment using the Add Records via Email feature.

**Save Raw Email as an Attachment**

Select "Yes" for this option if you wish to save the entire incoming email as a file attached to the new record. The entire contents of the email including the attachments (raw email prior to processing by ProblemTracker) will be saved as a text file (with .txt as extension) and attached to the new record. This can be useful if some of the information in the email could not be stored in the ProblemTracker fields you have selected (for example, if the Subject line is very long and must be truncated to be stored in the Text field you have selected).

**Stop Processing Emails on First Error**

Incoming messages are processed in batches periodically by ProblemTracker's Email Processor. If there is an issue which prevents an incoming message from being processed successfully, you can choose whether

ProblemTracker should attempt to process any remaining incoming messages. Setting this option to "Yes" indicates that ProblemTracker should not process any additional incoming messages once an error occurs (an incoming message cannot be processed successfully).

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## Push Default Mail Configuration to All Products

You can apply some or all of the Default Mail Configuration settings to all products in the workgroup using the "Push Default Mail Configuration to All Products" option. This allows you to make changes to the incoming mail settings of all products in a single operation. However, the settings you choose when using the "Push Default Mail Configuration to All Products" option will overwrite the existing settings for all products.

To apply some or all of the default settings using this option:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Email Configuration** button
4. Select the option **Push Default Mail Configuration to All Products** in the Incoming Mail section
5. Click on the **Continue** button
6. On the next page, each default setting and its value will be displayed next to a check box. Check the box to apply a default setting to all products. This will overwrite any other values configured for the checked option in the settings for each product . Unchecked options will not be changed in the settings for each product.
7. Click **OK** to complete the operation

**NetResults ProblemTracker**

# Sending An Administrative Email

Help Topics | << | >>

You can send an email with any message you would like to a user or user group from within ProblemTracker. You may wish to do this while performing administrative tasks to notify users affected by any changes. Or, you may use this facility to troubleshoot problems receiving email messages.

To **send an email** to a user or a user group, follow these steps:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Send Email** button
4. Select a user or user group (user groups are listed as [User Group]) from the pulldown labeled **To:**,
5. Enter a message subject in the **Subject:** field, and a message in the **Body**.
6. Click on the **OK** button to send the email and return to the ProblemTracker Administration section.

## Source Code Control Integration

Source Code Control Integration allows you to associate source code files to problem records within your ProblemTracker database. This is useful in order to denote which source code files were changed during the course of processing a problem record.

Additionally, ProblemTracker allows you to note the version of the source code file where a problem was found, and subsequently, fixed. This facilitates the ability to track the source code files that are affected by a particular problem or bug fix.

**Source Code Files:**

| Operations | File | Project | Problem Version | Fixed Version |
|---|---|---|---|---|
| | frmComment.frm | $/Project1/Project11/Project111/ | 2.2 | 2.31 |

The Source Code Control Interface within ProblemTracker has the ability to compare versions of a source code file to show the differences in the content between versions.

The history of each source code file maintained by your source code control database can be accessed via ProblemTracker. The history information provides easy access to details related to each version of the source code file. Information such as file type, type and date of action, user who performed action, and comments about the action are displayed in the history entry for each version.

Various actions related to the Source Code Control Interface have been added as privileges, allowing you to control which functions user groups can access such as, viewing and editing the list of source code files associated with a problem record.

## Requirements for Source Code Control Integration

Microsoft Visual SourceSafe Version 6.0 (Server or Client) must be installed on the server machine where ProblemTracker is installed. If your Microsoft Visual SourceSafe database is installed on a machine other than your ProblemTracker server, please refer to the following FAQ entry for special instructions:

**http://www.problemtracker.com/pt_faq_howdoi4x.htm#scciperm**

For the latest information about the requirements for using Source Code Control Integration, please refer to the following page on our web site:

**http://www.problemtracker.com/pt_sysreq.html**

**Each person who uses the Source Code Control Integration feature must be a licensed user of Microsoft Visual SourceSafe. Indirect use of Microsoft Visual SourceSafe via ProblemTracker does not release you from your legal obligations under the Microsoft Visual SourceSafe license agreement. ProblemTracker does require that each user of source code control integration enter a Microsoft Visual SourceSafe username and password. However, it is still your responsibility to ensure that all users are in full compliance with the Microsoft Visual SourceSafe license agreement. Please review your Microsoft Visual SourceSafe license agreement for details.**

## Source Code Control Options

To enable Source Code Control within ProblemTracker:

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **General Preferences** button
4. Set the following options related to Source Code Control:

    - **Enable Source Code Control Integration**
      Select Yes to enable Source Code Control Integration
    - **Source Code Control Product**
      Microsoft Visual SourceSafe Version 6.0 will appear in this section and cannot be changed
    - **Path to srcsafe.ini**
      Enter the path for the srcsafe.ini file on the server machine where ProblemTracker is installed. Alternatively, if you click on the **Find** button, the path will be detected based on your registry settings related to Microsoft Visual SourceSafe. If there is more than one Microsoft Visual SourceSafe ini file on your machine, the Find button may not detect the one that you want to use. In this case, you can type in the path of the ini file you wish to use.
    - **Path to ss.exe**
      Enter the path for the ss.exe file on the server machine where ProblemTracker is installed. Alternatively, if you click on the **Find** button, the path will be detected based on your registry settings related to Microsoft Visual SourceSafe. If there is more than one Microsoft Visual SourceSafe ini file on your machine, the Find button may not detect the one that you want to use. In this case, you can type in the path of the ini file you wish to use.

5. Click **OK** to save the changes made to the Source Code Control Options
6. Set up the file system permissions related to Source Code Control Integration using the following FAQ entry:

   **http://www.problemtracker.com/pt_faq_howdoi4x.htm#scciperm**

## Source Code Control User Privileges

In order for a user to access any information related to Source Code Control, they must be members of a group with the appropriate privileges assigned in the User Group Privileges section. User Privileges related to Source Code Control include:

- **View Source Code List**
  Members of groups with this privilege are allowed to view the list of Source Code files associated with a record

- **Edit Source Code List**
  Members of groups with this privilege are allowed to edit the Source Code List, including adding new files to be associated with a record

## Source Code Control Login Settings

Each user must supply their SourceSafe Login Settings in order to edit the source code list.

To enter the login information, each user should:

1. Login to the workgroup
2. Click on the **Preferences** link
3. In the **SourceSafe Login Settings** section, enter the **User ID** and **Password** he or she uses to access the Microsoft Visual SourceSafe database
4. Click **OK** to save these settings

**NetResults ProblemTracker**

# Inet Page (Anonymous Add)

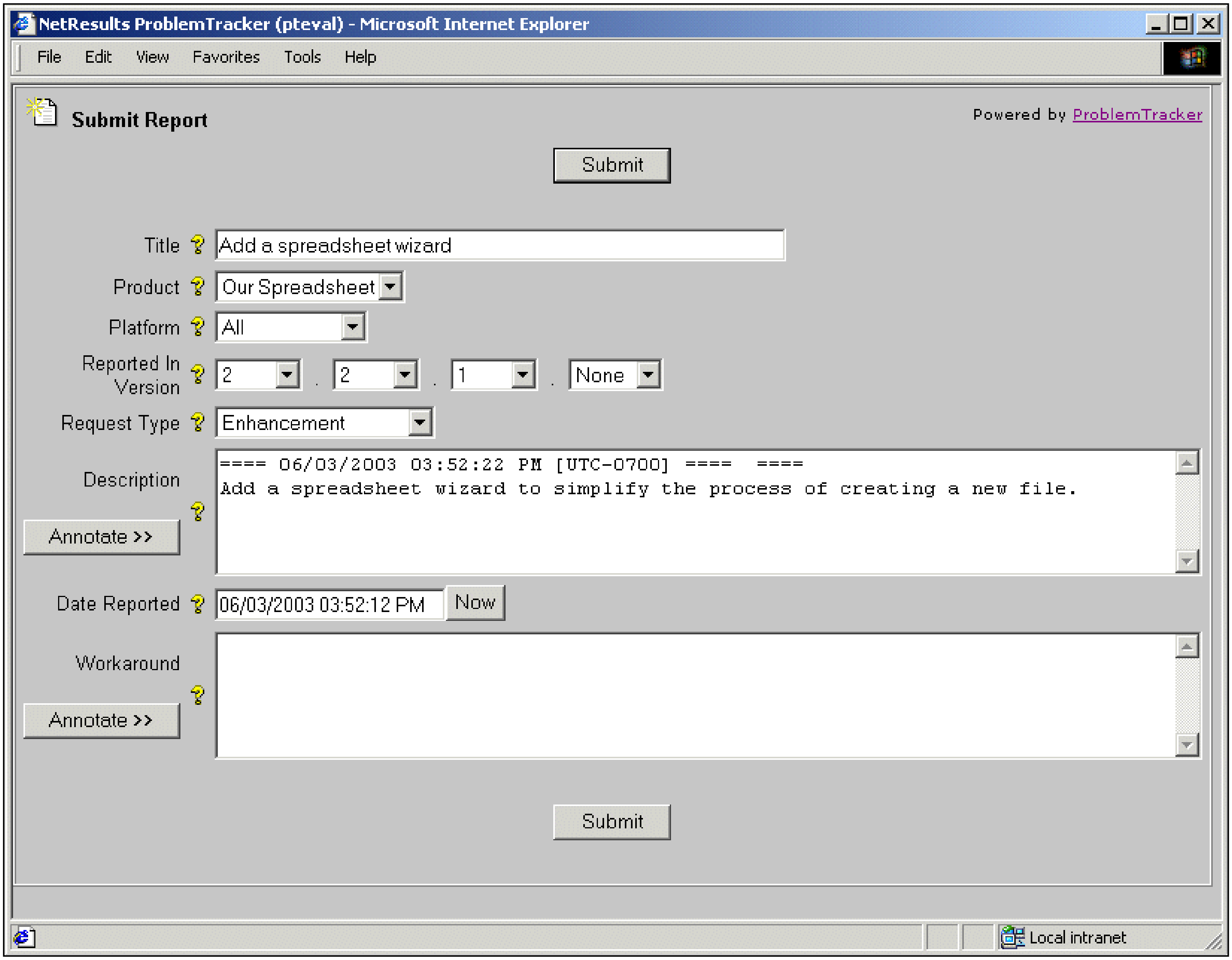
Help Topics | << | >>

**Note: This feature is included in ProblemTracker Enterprise Edition and as a separately purchased option for ProblemTracker. If you have not entered the Inet Page license key, this feature will not appear in your system.**

The Inet Page is a form used to anonymously submit records to ProblemTracker. After submitting a record, the user is provided with the record number of the newly added record by ProblemTracker. The Inet Page can be used, for example, as a web based suggestion box.

A user who submits a record through the Inet page is not required to login to ProblemTracker. However, since the user does not have a user account, they will not be identified in the record (Reporter field will be set to Internet User), will not receive email notifications from ProblemTracker, can not log in to ProblemTracker to view the status of the issue they reported, and can not have issues assigned back to them for verification (e.g. to sign off on the resolution of the issue). To have access to those features, the user must have a ProblemTracker user account, login to ProblemTracker, and submit the issue via the Add page.

A sample Inet Page is displayed below.




## Enabling the Inet Page

To set up the Inet Page for use by external users, perform the following steps:

**Enter the Inet Page license key into the License Manager**
You must enter a license key into the License Manager in order to use the Inet Page feature.

**Enable the Inet Page in the General Preferences section**

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **General Preferences** button
4. In the **General Options** section, set **Enable Inet Page** to "Yes"
5. Click on the **OK** button to save this change

**Customize the Inet Page Options**

1. Login to the workgroup as Admin
2. Click on the **Admin** icon
3. Click on the **Inet Page Options** button
4. If desired, set the **Background Color** field by entering the HTML color code for the desired background color. This field must be of the format #XXXXXX.
5. If desired, customize the top of the Inet Page by entering your own HTML code into the **Custom HTML (Top of Page)** field. Note that all file references must be fully qualified; relative paths will not work.
6. If desired, customize the bottom of the Inet Page by entering your own HTML code into the **Custom HTML (Bottom of Page)** field. Note that all file references must be fully qualified; relative paths will not work.
7. Check the box for the option **Enable File Attachment** if you wish to allow users that submit records via the Inet Page to upload file attachments when submitting a record.
8. If Record Visibility is enabled, select the user groups which should be able to access records submitted via the Inet page in the **Make Visible To These User Groups** field. The Admin user group is not available for selection in this field because the Admin user group can always access any record added via the Inet page.
9. Click on the **OK** button to save your changes

**Customize the fields displayed on the Inet Page**
Certain fields are displayed on the Inet Page by default. Browse to the Inet Page to see which fields are currently displayed by going to

**http://*servername*/*workgroupname*/internet/user_add.asp**

where ***servername*** is the TCP/IP host name of the machine where ProblemTracker is installed and ***workgroupname*** is the name the workgroup you are trying to access. For example, to reach the workgroup called pteval installed on the server called myServer, you would browse to

**http://myServer/pteval/internet/user_add.asp**

To change whether a field is displayed on the Inet Page:

1. Login to ProblemTracker as Admin
2. Click on the **Admin** icon
3. Click on the **Define Record** button
4. In the **In Use** column, click on the field you wish to add or remove from the Inet Page
5. Click on the **Edit** button
6. To add a field to be displayed on the Inet Page, set the option **Include in Inet Page** to "Yes". To remove a field from being displayed, set this option to "No".

   Check the value of the **Record Order** option for this field. This field determines the order in which the fields are displayed on the Add and Inet Pages.

   Check the setting of the option **Required for Add**. If this option is set to "Yes", this field will also be require a user to enter a value for this field when submitting a record via the Inet Page.

To create a new field to be displayed on the Inet Page, use the information in the Customizing the Data Record section.

**Customize the pulldown options displayed on the Inet Page**
For the pulldown fields displayed on the Inet Page, you can limit the option menu values available for selection. For example, if a pulldown field called Priority is displayed on the Inet Page and you do not want Inet Page users to select the value "1", you can set the value such that it is not displayed in the Priority field on the Inet Page.

To set whether a pulldown option menu item is displayed on the Inet Page:

1. Login to ProblemTracker as Admin
2. Click on the **Admin** icon
3. Click on the **Option Menus** button
4. Click on the **Edit Items** button to the left of the pulldown field you wish to modify
5. Click on the **Edit** button to the left of the option menu item you wish to modify. To remove an option menu item from being displayed on the Inet Page, uncheck the option **Value is Public**.
6. Click **OK** to save this change

**If desired, apply web security to your ProblemTracker installation**
You can use the user authentication provided by your web server to limit access to the rest of your ProblemTracker installation. Review the information in the Web Server Security section for information on applying standard web server security to your ProblemTracker installation.

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## Using the Inet Page

Once you have enabled the Inet Page using the steps above, your users can browse to this page by going to

**http://*servername*/*workgroupname*/internet/user_add.asp**

where ***servername*** is the TCP/IP host name of the machine where ProblemTracker is installed and ***workgroupname*** is the name the workgroup you are trying to access. For example, to reach the workgroup called pteval installed on the server called myServer, you would browse to

**http://myServer/pteval/internet/user_add.asp**

To submit a record using the Inet Page:

1. Browse to the URL of the Inet Page
2. When the Field Help icon ( ) is present, you can move the cursor over the icon to see a description of the field.
3. Enter information into the fields displayed
4. Click on the **Submit** button to save the new record
5. A confirmation page will be displayed with the record number assigned to the new record
6. Click **OK** to return to the Inet Page to submit another record

---

## Characteristics of Records submitted via the Inet Page

Records submitted via the Inet Page have a few differences when compared to records submitted via the Add Page:

**Reported By field**
All problems reported using the Inet Page are filed as having been reported by a special built-in user named **Inet** so that you can quickly identify (or search for) problems reported using the Inet Page.

**Transitions where New Assignee is the Reporter**
If a transition has New Assignee set to be the Reporter of a record, when this transition is selected for a record reported via the Inet page the record will be routed to the State Manager of the New State rather than the Reporter (since records cannot be assigned to the user called Inet listed as the Reporter). For more information about transitions, please review the Workflow Transitions section.

**NetResults ProblemTracker**

# Customizing the Log In Page



## The Log In Page

ProblemTracker requires that all users first log into the system via a log in page. This page presents the user with a form with a username and password field.

You can specify the format of the top and bottom of this page to your liking. Reasons for doing this may be to better visually integrate ProblemTracker with your company's Intranet look and feel, or to provide users with an information or instructional message before logging in.

## Customizing the Log In Page

There are two files located in the workgroup directory (ptdev, ptweb, etc.) of each installation of ProblemTracker that allow you to customize the log in page. Log in to the Workgroup Management System and find the workgroup you wish to modify on the list that appears on the Workgroup Management System Home Page. Note the path listed in the **Location** column for this workgroup. The files are located at

**<workgroup location path>/Include/logintop.inc**
**<workgroup location path>/Include/loginbottom.inc**

where **<workgroup location path>** is by default **C:\Inetpub\wwwroot\ProblemTracker\workgroup**

- **logintop.inc**
  The contents of this file are inserted just after the <body> tag on the log in page. You can include any HTML in this file, but do not edit below the last comment in the file.
- **loginbottom.inc**
  The contents of this file are inserted just before the </body> tag on the log in page. You can include any HTML in this file, but do not edit below the last comment in the file.

Do not include full HTML files (such as one created by Microsoft Front Page) in either logintop.inc or loginbottom.inc. You must only use HTML tags that are valid in the body of an HTML file. If you do not understand this restriction, please do not modify these files as you may eliminate access to the ProblemTracker login page.

**NetResults ProblemTracker**

# Permanently Deleting Multiple Records



## Overview

For various reasons you may wish to permanently remove records from the ProblemTracker database. There are two ways this can be done. First, you can remove all records. This is typically done when you finish an evaluation. Second, you can selectively delete some records that match certain criteria. This is done when you wish to remove records related to an old project or obsolete release. Both are described in detail below.

## Delete All Records

**Caution: This operation is permanent. It cannot be undone. Please make a backup of your database prior to performing this operation.**

While this operation will remove all problem records, attachments, and history, it will leave other ProblemTracker configuration unchanged (data record customization (fields in the data record), option menus, workflow, users, user groups, email configuration, etc.).

This operation is typically used at the end of an evaluation to remove all test records.

To delete all records as well as all attachments and all record history:

1. Login to the workgroup as Admin
2. Click the **Admin** icon in the button bar
3. Click on the **Maintenance** button
4. Click on the **Delete All Records** button. Once this operation is complete, newly added problem records will start with the **First Record Number** specified in the General Preferences section.

## Selectively Remove Records

**Caution: This operation is permanent. It cannot be undone. Please make a backup of your database prior to performing this operation.**

This operation will delete the records that match certain criteria as well as the attachments to those records. It will also delete all record history associated with those records, except for one history entry (per deleted record) which is created to indicate when (and by which user) the records were deleted. This operation can be used to remove all "closed" records or records from an old release or project that has been completed.

To selectively delete some records please follow the instructions below.

1. Login to the General Preferences page should be set to "Yes" (by default it is set to No). This will make the change permanent (data will be deleted from the database).
2. The user you are logged in as (e.g. Admin) must be a member of at least one User Group that has the "Edit Query Result Set" privilege. Verify that the Admins group has the Edit Query Result Set privilege (by default it does). This will allow you to perform an operation (in this case Delete) on all records that match a Query.
3. The user you are logged in as (e.g. Admin) must be a member of at least one User Group that has the "Delete" privilege. Verify that Admins group has the Delete privilege (by default it does). This will allow you to delete records.
4. Click the **Query** icon in the button bar.
5. Enter the criteria for the records you wish to delete and click on the **Run Query** button
6. On the query results page, click the **Delete Records** button.
7. Click **OK** for the confirmation dialog and ALL the records matching the current query will be deleted permanently from the database. Note: Even though only the first page of records is displayed, the Delete Records operation will delete all the records returned by the query. The total number of records returned by the current query will be displayed in the status area just below the button bar.
8. If you changed the **Remove Records from Database on 'Delete' Operation** to "Yes", you may wish to change it back to No so that any other Delete operations are not permanent.

**NetResults ProblemTracker**

# Windows 2003 / XP / 2000 Time Zone Selection Chart

Help Topics | << | >>

The following is a list of time zones that are supported by ProblemTracker when installed on a Windows 2003 / XP / 2000 system. Entries with (*) are only available in Windows 2003 and XP.

| **Time Zone Offset** (in Hours) | **Time Zone** | **System Time Zone** (as displayed in Date/Time Settings) |
|---|---|---|
| -12:00 | Dateline Standard Time | Eniwetok, Kwajalein |
| -11:00 | Samoa Standard Time | Midway Is, Samoa |
| -10:00 | Hawaiian Standard Time | Hawaii |
| -10:00 | Alaskan Standard Time | Alaska |
| -08:00 | Pacific Standard Time | Pacific Time (US & Canada); Tijuana |
| -07:00 | Mexican Standard Time[La Paz](*) | Chihuahua, La Paz, Mazatlan |
| -07:00 | Mountain Standard Time | Mountain Time (US & Canada) |
| -07:00 | Mountain Standard Time [Arizona] | Arizona |
| -06:00 | Central Standard Time | Central Time (US & Canada) |
| -06:00 | Mexico Standard Time | Mexico City, Tegucigalpa |
| -06:00 | Canada Central Standard Time | Saskatchewan |
| -06:00 | Central America Standard Time | Central America |
| -05:00 | Eastern Standard Time | Eastern Time (US & Canada) |

| | | |
|---|---|---|
| -05:00 | Eastern Standard Time [Indiana (East)] | Indiana (East) |
| -05:00 | SA Pacific Standard Time | Bogota, Lima, Quito |
| -04:00 | Atlantic Standard Time | Atlantic Time (Canada) |
| -04:00 | SA Western Standard Time | Caracas, La Paz |
| -04:00 | Pacific SA Standard Time | Santiago |
| -03:30 | Newfoundland Standard Time | Newfoundland |
| -03:00 | SA Eastern Standard Time | Buenos Aires, Georgetown |
| -03:00 | E. South America Standard Time | Brasilia |
| -03:00 | Greenland Standard Time | Greenland |
| -02:00 | Mid-Atlantic Standard Time | Mid-Atlantic |
| -01:00 | Azores Standard Time | Azores |
| -01:00 | Cape Verde Standard Time | Cape Verde Is |
| 00:00 | Universal Coordinated Time | Casablanca, Monrovia |
| 00:00 | Greenwich Mean Time | Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London |
| +01:00 | Romance Standard Time | Amsterdam, CopenHagen, Madrid, Paris, Vilnius |
| +01:00 | W. Central Africa Standard Time | West Central Africa |
| +01:00 | Central European Standard Time | Belgrade, Sarajevo, Skopje, Sofija, Zagreb |
| +01:00 | Central Europe Standard Time | Bratislava, Budapest, Ljubljana, Prague, Warsaw |
| +01:00 | W. Europe Standard Time | Brussels, Berlin, Bern, Rome, Stockholm, Vienna |

| | | |
|---|---|---|
| +02:00 | Egypt Standard Time | Cairo |
| +02:00 | South Africa Standard Time | Harare, Pretoria |
| +02:00 | Israel Standard Time | Israel |
| +02:00 | E. Europe Standard Time | Bucharest |
| +02:00 | FLE Standard Time | Helsinki, Riga, Tallinn |
| +02:00 | GTB Standard Time | Athens, Istanbul, Minsk |
| +03:00 | Arab Standard Time | Kuwait, Riyadh |
| +03:00 | E. Africa Standard Time | Nairobi |
| +03:00 | Arabic Standard Time | Baghdad |
| +03:00 | Russian Standard Time | Moscow, St. Petersburg, Volgograd |
| +03:30 | Iran Standard Time | Tehran |
| +04:00 | Arabian Standard Time | Abu Dhabi, Muscat |
| +04:00 | Caucasus Standard Time | Baku, Tbilisi |
| +04:00 | Afghanistan Standard Time | Kabul |
| +05:00 | West Asia Standard Time | Islamabad, Karachi, Tashkent |
| +05:00 | Ekaterinburg Standard Time | Ekaterinburg |
| +05:30 | India Standard Time | Bombay, Calcutta, Madras, New Delhi |
| +05:45 | Nepal Standard Time | Kathmandu |
| +06:00 | Central Asia Standard Time | Almaty, Dhaka |
| +06:00 | Sri Lanka Standard Time | Columbo |
| +06:00 | N. Central Asia Standard Time | Almaty, Novosibirsk |
| +06:30 | Myanmar Standard Time | Rangoon |
| +07:00 | SE Asia Standard Time | Bangkok, Hanoi, Jakarta |
| +07:00 | North Asia Standard Time | Krasnoyarsk |

| | | |
|---|---|---|
| +08:00 | China Standard Time | Beijing, Chongqing, Hong Kong, Urumqi |
| +08:00 | W. Australia Standard Time | Perth |
| +08:00 | Singapore Standard Time | Singapore |
| +08:00 | Taipei Standard Time | Taipei |
| +08:00 | North Asia East Standard Time | Irkutsk, Ulaan Bataar |
| +09:00 | Tokyo Standard Time | Osako, Sapporo, Tokyo |
| +09:00 | Korea Standard Time | Seoul |
| +09:00 | Yakutsk Standard Time | Yakutsk |
| +09:30 | AUS Central Standard Time | Darwin |
| +09:30 | Cen. Australia Standard Time | Adelaide |
| +10:00 | AUS Eastern Standard Time | Canberra, Melbourne, Sydney |
| +10:00 | E. Australia Standard Time | Brisbane |
| +10:00 | West Pacific Standard Time | Guam, Port Moresby |
| +10:00 | Tasmania Standard Time | Hobart |
| +10:00 | Vladivostok Standard Time | Vladivostok |
| +11:00 | Central Pacific Standard Time | Magadan, Solomon Is, New Caledonia |
| +12:00 | Fiji Standard Time | Fiji, Kamchatka, Marshall Is |
| +12:00 | New Zealand Standard Time | Auckland, Wellington |
| +13:00 | Tonga Standard Time | Nuku'alofa |

**NetResults ProblemTracker**

# Windows NT 4.0 Time Zone Selection Chart

Help Topics | << | >>

The following is a list of time zones that are supported by ProblemTracker when installed on a Windows NT 4.0 system.

| **Time Zone Offset** (in Hours) | **Time Zone** | **System Time Zone** (as displayed in Date/Time Settings) |
|---|---|---|
| -12:00 | Dateline Standard Time | Eniwetok, Kwajalein |
| -11:00 | Samoa Standard Time | Midway Is, Samoa |
| -10:00 | Hawaiian Standard Time | Hawaii |
| -10:00 | Alaskan Standard Time | Alaska |
| -08:00 | Pacific Standard Time | Pacific Time (US & Canada); Tijuana |
| -07:00 | Mountain Standard Time | Mountain Time (US & Canada) |
| -07:00 | Mountain Standard Time [Arizona] | Arizona |
| -06:00 | Central Standard Time | Central Time (US & Canada) |
| -06:00 | Mexico Standard Time | Mexico City, Tegucigalpa |
| -06:00 | Canada Central Standard Time | Saskatchewan |
| -05:00 | Eastern Standard Time | Eastern Time (US & Canada) |
| -05:00 | Eastern Standard Time [Indiana (East)] | Indiana (East) |
| -05:00 | SA Pacific Standard Time | Bogota, Lima, Quito |
| -04:00 | Atlantic Standard Time | Atlantic Time (Canada) |
| -04:00 | SA Western Standard Time | Caracas, La Paz |

| | | |
|---|---|---|
| -03:30 | Newfoundland Standard Time | Newfoundland |
| -03:00 | SA Eastern Standard Time | Buenos Aires, Georgetown |
| -03:00 | E. South America Standard Time | Brasilia |
| -02:00 | Mid-Atlantic Standard Time | Mid-Atlantic |
| -01:00 | Azores Standard Time | Azores |
| 00:00 | Universal Coordinated Time | Casablanca, Monrovia |
| 00:00 | Greenwich Mean Time | Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London |
| +01:00 | Romance Standard Time | Amsterdam, CopenHagen, Madrid, Paris, Vilnius |
| +01:00 | Central European Standard Time | Belgrade, Sarajevo, Skopje, Sofija, Zagreb |
| +01:00 | Central Europe Standard Time | Bratislava, Budapest, Ljubljana, Prague, Warsaw |
| +01:00 | W. Europe Standard Time | Brussels, Berlin, Bern, Rome, Stockholm, Vienna |
| +02:00 | Egypt Standard Time | Cairo |
| +02:00 | South Africa Standard Time | Harare, Pretoria |
| +02:00 | Israel Standard Time | Israel |
| +02:00 | E. Europe Standard Time | Bucharest |
| +02:00 | FLE Standard Time | Helsinki, Riga, Tallinn |
| +02:00 | GTB Standard Time | Athens, Istanbul, Minsk |
| +03:00 | Arab Standard Time | Kuwait, Riyadh |
| +03:00 | E. Africa Standard Time | Nairobi |
| +03:00 | Russian Standard Time | Moscow, St. Petersburg, Volgograd |

| | | |
|---|---|---|
| +03:30 | Iran Standard Time | Tehran |
| +04:00 | Arabian Standard Time | Abu Dhabi, Muscat |
| +04:00 | Caucasus Standard Time | Baku, Tbilisi |
| +04:00 | Afghanistan Standard Time | Kabul |
| +05:00 | West Asia Standard Time | Islamabad, Karachi, Tashkent |
| +05:00 | Ekaterinburg Standard Time | Ekaterinburg |
| +05:30 | India Standard Time | Bombay, Calcutta, Madras, New Delhi |
| +06:00 | Central Asia Standard Time | Almaty, Dhaka |
| +06:00 | Sri Lanka Standard Time | Columbo |
| +07:00 | SE Asia Standard Time | Bangkok, Hanoi, Jakarta |
| +08:00 | China Standard Time | Beijing, Chongqing, Hong Kong, Urumqi |
| +08:00 | W. Australia Standard Time | Perth |
| +08:00 | Singapore Standard Time | Singapore |
| +08:00 | Taipei Standard Time | Taipei |
| +09:00 | Tokyo Standard Time | Osako, Sapporo, Tokyo |
| +09:00 | Korea Standard Time | Seoul |
| +09:00 | Yakutsk Standard Time | Yakutsk |
| +09:30 | AUS Central Standard Time | Darwin |
| +09:30 | Cen. Australia Standard Time | Adelaide |
| +10:00 | AUS Eastern Standard Time | Canberra, Melbourne, Sydney |
| +10:00 | E. Australia Standard Time | Brisbane |
| +10:00 | West Pacific Standard Time | Guam, Port Moresby |
| +10:00 | Tasmania Standard Time | Hobart |
| +10:00 | Vladivostok Standard Time | Vladivostok |

| | | |
|---|---|---|
| +11:00 | Central Pacific Standard Time | Magadan, Solomon Is, New Caledonia |
| +12:00 | Fiji Standard Time | Fiji, Kamchatka, Marshall Is |
| +12:00 | New Zealand Standard Time | Auckland, Wellington |

**NetResults ProblemTracker**

# Frequently Asked Questions

Help Topics | << | >>

Our Frequently Asked Questions (FAQ) section is updated quite often. For the latest information, available 24 hours a day, 7 days a week, please browse to the Frequently Asked Questions in the ProblemTracker Support section of our web site. It has answers to many questions that are asked by our customers. It is likely that you will find the answer to your question or resolution (or workaround) to a problem in the FAQ.

**NetResults ProblemTracker**

# Contacting NetResults

Help Topics | << | >>

If you are unable to resolve a problem after searching the ProblemTracker Frequently Asked Questions section of our web site, and you are evaluating the product or have a current support agreement with NetResults, please contact us via email. Standard support is available via email on business days (Monday through Friday, excluding holidays). You should receive a response within one business day. Additional support options (e.g. phone support, extended hours) may be purchased from NetResults. Phone support is not included with the product, it must be purchased separately.

For the appropriate support email address, standard support hours, and a list of information to send us for fastest resolution to your problem, please click here. If for some reason you are unable to reach our site via the web, please send your support email to

pt_support@NetResultsCorp.com or pt_support@n2r6.com

In your email please be sure to include the following information (emails with this information are generally given priority over those without):

1. Version of ProblemTracker you are using (e.g. 5.5, 5.0, 4.0).
2. Web Server software being used (e.g. IIS 6, IIS 5, IIS 4).
3. Database being using (e.g. MS Access, MS SQL Server 7.0, Oracle 8i/9i).
4. Operating System of the server on which ProblemTracker is installed (e.g. Windows NT 4.0 Workstation/Server, Windows 2000 Server).
5. Web Browser software being used (e.g. IE 5/6, Netscape 6/7).
6. **The full text of any error message which is displayed.** In many cases if you get a generic database error message, you can scroll further down on the page to find more detailed error information.
7. **The steps required to reproduce the problem.**
8. Whether you are an evaluator or licensed user with support.
9. Attach the following files from your installation to your message:
   - All files present in the installation log folder where you installed ProblemTracker. By default, the files can be found in C:\NetResultsPTLog.
   - If your problem is related to the Workgroup Management System, attach the file called ptadminlog.txt that can be found in the "pttmp" folder of your web server directory. By default, this file can be found at C:\Inetpub\wwwroot\ProblemTracker\pttmp\ptadminlog.txt.
   - If your problem is related to email notification messages, attach the file called emaillog.txt that can be found in the "pttmp" folder of your web server directory. By default, this file can be found at C:\Inetpub\wwwroot\ProblemTracker\pttmp\emaillog.txt.
   - For all other problems, attach all the files that can be found in the "pttmp" folder of your web server directory. By default, this directory can be found at C:\Inetpub\wwwroot\ProblemTracker\pttmp.

Please be as specific as possible in your description of what is wrong. Including steps to reproduce the problem and the full text of all error messages is very helpful and can significantly reduce the amount of time it takes to resolve a problem.