

Blue Sky Project Tracker

version 1.5.2

Manual

Introduction

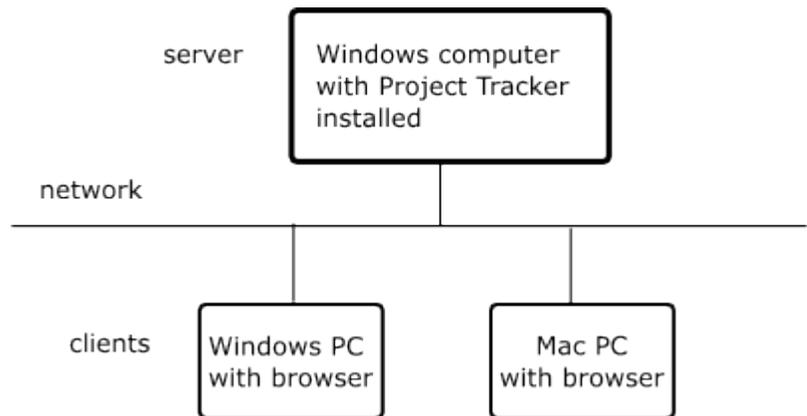
Project Tracker is a web-based time and cost tracking software.

Installation

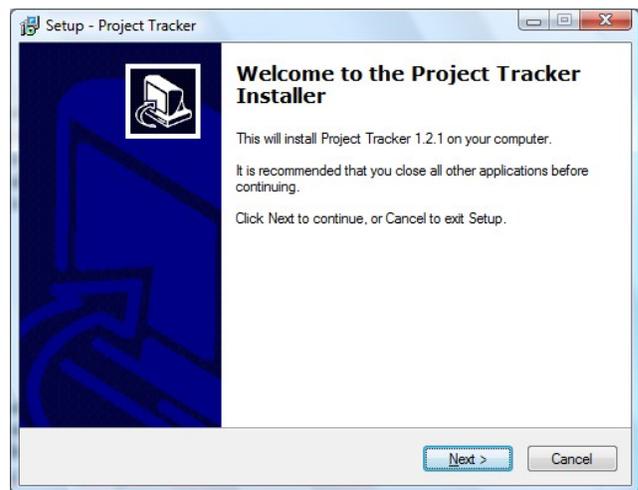
Project Tracker is a web-based application. This means that on the client-side only a web browser needs to be installed. Project Tracker is typically installed on a server, although it can also run on a PC with for example Windows XP or Vista.

Server side: Project Tracker must be installed on one computer running MS Windows (Server or PC).

Client side: On the client side, nothing has to be installed, except a compatible browser, such as Firefox, Safari or Internet Explorer. It does not matter which operation systems are used on the client side.



To install Project Tracker, start the installation program. During the installation, you will be asked to enter the installation (license) key. The installation program will install the software, and start the Project Tracker service.



Installation program

The installation program by default adds an exception to the Windows Firewall to allow the Project Tracker service to accept incoming connections. The full path and filename of the Project Tracker service is (by default):
C:\Program Files\ProjectTracker\bin\ProjectTrackerService.exe.

After installation and successful firewall configuration, you can access the web interface from other PCs. To open the web interface from another PC, you must know the IP address or IP name of the computer where Project Tracker has been installed. Suppose it is installed on a computer with IP address 192.168.0.50. In that case, the web interface can be accessed with a web browser on the following address: <http://192.168.0.50:9980/> (because **9980** is the default port that is used by Project Tracker).

The default administrator login is:

- Username: **admin**
- Password: **adminpw**

No time or expenses can be booked on the super administrator, but only on other user accounts. By default, an example user account is available. Its login details are:

- Username: **user1**
- Password: **userpw**

It is recommended to edit the username or password of these two user accounts. This can be done after login by the administrator on the Users page. In the web interface, there is a Help-link at the top of the screen. Click on this link to view the manual of the web interface.

Although most settings can be changed in the web interface, some settings can only be changed in the Project Tracker Control Panel. This application is always run on the computer where the Project Tracker is installed (the server). A link to this application is installed in the Start menu during installation.

In the Project Tracker Control Panel you can change the data directory, specify the web data port that is used, and import a SSL certificate for using a secured https web interface.

Backup

Include the database in your backup

It is recommended to include the Project Tracker database file in your backup scheme. Include the file `timelog_mirror.db` in the data directory (by default `C:\Program Files\ProjectTracker\data`). Although `timelog.db` is the main database file, `timelog_mirror.db` should be used for backup purposes, because `timelog.db` might be in an inconsistent transient state.

Manually backup

Instead of the procedure described in the previous section, it is also possible to manually backup the Project Tracker database at any moment. To do so, log in as administrator, open the System page, and click "Backup database".

Restore a backup

Using a backup file, it is possible to restore the database to a previous state. Warning: This will completely replace the current data in the database. To load a backup:

- Open the Project Tracker Control Panel
- Click "Stop service"
- Open the Tools menu, and select "Restore backup database"
You will be asked to select the backup file that must be restored.

Project Tracker Control Panel

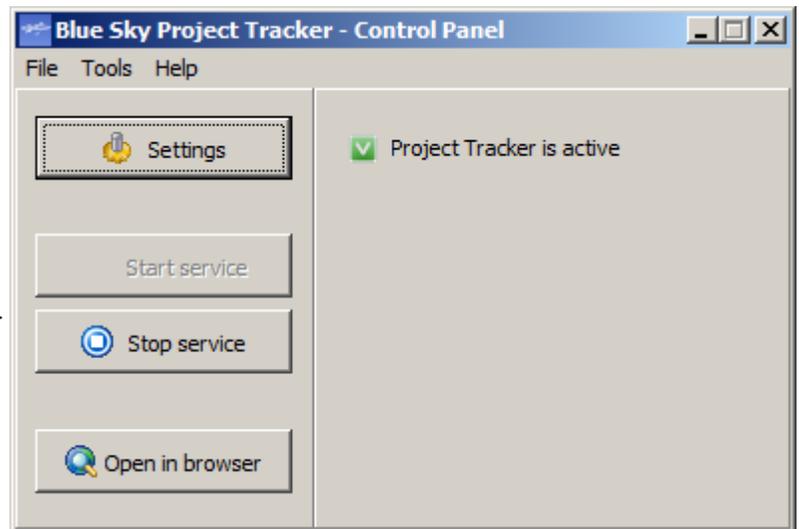
Project Tracker Control Panel - Introduction

The Project Tracker Control Panel is run on the computer where Project Tracker is installed (server side). It provides information about the current state of the Project Tracker application, and it allows the administrator to configure important settings, such as the data storage directory. Once the Project Tracker application is running, other settings can be configured in the web interface.

Project Tracker Control Panel Main screen

On the main screen of the Project Tracker Control Panel, you can see at once if Project Tracker is active or not.

When Project Tracker is active, it is active as a Windows Service. This service can be started or stopped in the Services screen of Windows. As a convenience, it can also be started and stopped from the Project Tracker Control Panel, using the Start service and Stop service buttons. When the service is inactive, Project Tracker is inactive, which means that the web interface and other functionality are not available.



To use Project Tracker, the Project Tracker service must be installed first. This is done by default by the installation program. It can also be done manually, by choosing "Install Project Tracker service" from the Tools menu. When the service is installed, it will be started by default automatically when Windows starts, even when no user is logged in. In the Windows Services screen, it is possible to change this to Manual, to prevent it from starting automatically. To open the Windows Services screen, choose "Open Windows Services screen" from the Tools menu. When the service is not started automatically, you can start it manually with the "Start service" button.

To check for an update of the software, open the Help menu, and choose Check for update. In the following screen, a description of the update is displayed. To download and install the update, press

the Install button.

To open the Settings screen, click the Settings button. After you have changed settings, it is necessary to stop and restart the Project Tracker service.

To open the web interface of Project Tracker, click the "Open in browser" button.

To go back to an empty project database (for example after you tried out the system using the example data): Stop the service, open the Tools menu, and select "Erase database". Please note that this will destroy all data in the database.

Using a backup file, it is possible to restore the database to a previous state. Warning: This will completely replace the current data in the database. To load a backup:

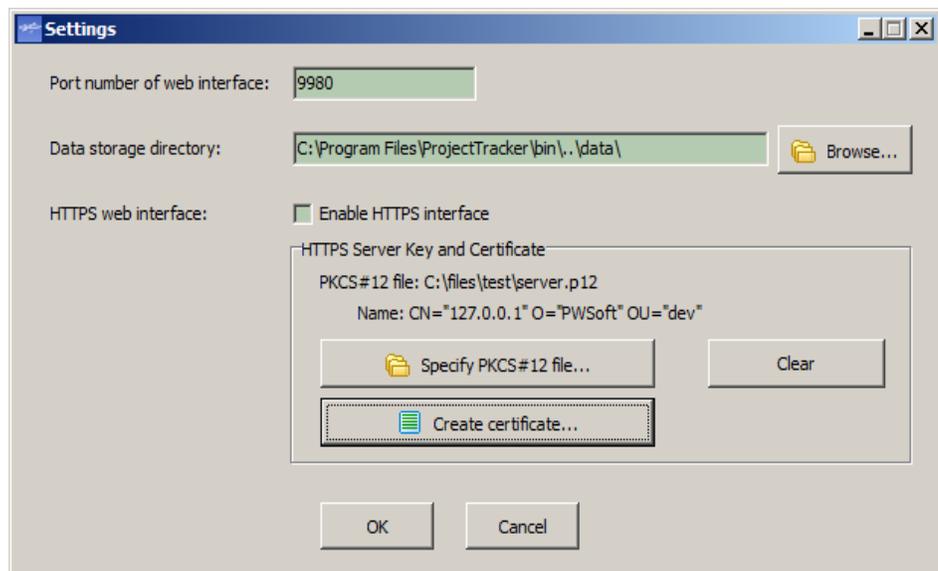
- Click "Stop service"
- Open the Tools menu, and select "Restore backup database"
You will be asked to select the backup file that must be restored.

Settings screen

To open the Settings screen, click the Settings button in the main screen of the Project Tracker Control Panel.

Port number of web interface

Project Tracker is a web-based application that is accessed using a browser. Project Tracker contains a web server that serves web pages on a configurable port number. By default, Project Tracker serves web pages on port 9980. The port number must be taken into account when accessing Project Tracker using the browser.



Data storage directory

The database and log files are stored in this directory. The database contains, for example, the projects and time entries that are entered into the system.

HTTPS web interface

HTTPS is a secure protocol that allows web browsers to verify the identity of a web server, and to prevent others from intercepting data that is sent between the web browser (such as Firefox) and the server (such as Project Tracker). In order to use this HTTPS web interface in Project Tracker, you need a signed digital certificate, either self-signed or signed by a trusted certificate authority. Project Tracker can read the relevant information for setting up a HTTPS server from a PKCS#12 file (.pfx or .p12). The specified PKCS#12 file must remain at the same location. The file is not copied but read each time at the start-up of the web server. If you have this information in other formats, it might be possible to convert it to PKCS#12 format (See next section). After specifying the PKCS#12 file, you will be prompted for the password. This password is cached for further use. The name that is found in the PKCS#12 file will be displayed, when the loading succeeded. You can then enable the secure web interface, by clicking the "Enable HTTPS interface" check-box. When HTTPS is enabled, the web interface must be accessed in the browser using https://.

You can create a self-signed certificate for Project Tracker by clicking on the Create Certificate button. The following information can be filled in:

- Common Name: This can be, for example, the IP name of computer where Project Tracker runs.
- Organization: Company name
- Organizational Unit: Department of the company
- Email address
- Validity: When the certificate has expired, the browser might display a warning.
- Country: Two letter code
- State or Province
- Locality: City name

When finished, click the Create Server Certificate button. The created certificate will be selected automatically. You can then enable the secure web interface, by clicking the "Enable HTTPS interface" check-box.

The Clear button removes the references to the PKCS#12 file. It does not remove the file itself.

After changing settings, the Project Tracker services must be restarted. To restart the service, click the Stop service button, and then the Start service button.

Converting to PKCS#12 format

These are instructions for converting private key and certificate information to PKCS#12 format, using OpenSSL (not a part of this software).

Certificates (.cer) can be in binary DER format or in base64 encoded PEM format. A certificate can be converted from DER to PEM format as follows:

```
openssl x509 -inform DER -in cert1.cer -out cert2.cer
```

where:

- cert1.cer is an input file in DER format
- cert2.cer is an output file in PEM format

The following command can be used to create a PKCS#12 file based on a private key file and a signed certificate file.

```
openssl pkcs12 -export -in cert2.cer -inkey privkey.pem -out server.p12 -name "Test"
```

where:

- cert2.cer is the certificate signed by the Certificate Authority (an input file in PEM format)
- privkey.pem is the private key data file (an input file in PEM format)
- server.p12 is the PKCS#12 file (an output file)

The PKCS#12 file can be used to enable the secure HTTPS web interface (See: Settings).

Data model and permissions system

Field

A field is a data column for time entries or cost entries. For each time entry, a value for the field can be entered. For example, there can be a Notes field, which can be filled in for each time entry, to describe what has been done during that time.

A field can have one the following data type:

- Text (for example: Notes)
- Numeric (for example: Number of miles driven)
- List/Tree (for example: Payment method, or Type of activity)

When the data type is List/Tree, a user select one of the possible values from a list when entering time or cost spending. The possible values that the user can choose from is customizable. In the case of the field Payment method, possible values could include: Cash, Credit card, Wire transfer.

A field applies to one spendings types (time or expenses).

Group

A Group is a set of user accounts. Permissions can be given to a Group, which means all users in the group will effectively have the permission. A User account can be part of more than one Group.

- Name: The name of the group.
- Manager: The user that has full write access to the group.

A group can have subgroups. All permissions of a group are also granted to the users in its subgroups.

Project

See also: Project list

- Name: The name of the project
- Parent project: If filled in, this project becomes a subproject of the specified project.
- Enabled: When a project is enabled, spendings can be added to this project. Spendings of disabled projects cannot be edited.
- Status: The status of the project: Paused, In progress, Cancelled, or Finished. It does not effect if a project can be edited or not.
- Due date: The date when the project must be finished.
- Priority: The importance of the project.
- Progress: The percentage of the project that has been completed

- Time spent: (calculated) The total amount of time spent on this project (including sub-projects).
- Project size: (estimated) The time that is estimated to be needed in total to complete the project. The estimation is based on Progress and Time spent.
- Expenses: (calculated) The total expenses for this project (including sub-projects).

Project permissions

Project permissions define which action a user may perform on a project.

If you have a permission at a certain level, you also have those at the lower levels. So if you have the 'Edit state' permission, you also have the 'Add comments' permission.

There are the following possible Project permissions:

- General: This permission type has the following 6 levels:
 1. Read: *The project can be viewed.*
 2. Add comments: *Comments can be added to the project page.*
 3. Add spendings: *Time spendings or expenses can be booked on the project.*
 4. Edit state: *The project status can be changed (e.g. set to Completed), the progress and the estimated work can be updated.*
 5. Write: *All properties of the project, such as its name, priority and due date, can be changed*
 6. Manage: *In addition to the write permission, this permission allows granting of permissions, and deleting.*
- Adding of subprojects
 1. Add a subproject, and get comments permission to it
 2. Add a subproject, and become its manager

Permission on the spendings of all users

In addition, there are also permissions related to the **spendings of all users** on the particular project.

1. View statistics: *Aggregate data based on data of all users*
2. Read all spendings: *All individual spendings of all users can be viewed*
3. Write all spendings: *All individual spendings of all users can be edited*

To grant these spendings related permissions, you must have, in addition to the Manage permission, the permission to grant these spending permissions, defined in the System part permissions (See next section).

Typical scenarios

The person to which a project is assigned is given the **Edit state** permission. Any additional coworkers are given the **Add spendings** permission. Optionally, the **Add a subproject** permission could be given, to allow the users to organize their work in sub-projects. The project manager is given **Manage** permission.

Someone who is only allowed to view statistics, is given the **Read** permission, combined with the **Read all spendings** permission.

Other people who need to know about the project are given the **Read** permission, or the **Add comments** permission if their input is appreciated.

System part permissions

The following system parts and system part permissions are defined:

- System: This is the complete system. The following permissions can be granted:
 1. Read: *Read permission on all parts of the system.*
 2. Manage: *Manage permission on all parts of the system. This is the maximum permission possible.*
- User and group list. The following permissions can be granted:
 - General
 1. Read: *The user and group list can be read*
 2. Manage: *The user and group list can be changed*
 - Add sub items
 1. Add a group or user account
- Field list
 1. Write: The field list can be edited, except that no field can be deleted. Categories of fields can be added, edited, and deleted.
 2. Manage: *The above, including the deletion of a field.*
- Spendings:

Note: These are permissions to grant a spendings related permission on a project. The user also needs Manage permission on the project to grant the permission.

1. Grant view statistics permission: *If you have this permission, you can grant the permission 'View aggregate statistics of the spendings of all users' on a project for which you have Manage access*
2. Grant read permission: *If you have this permission, you can grant the permission 'Read spendings of all users' on a project for which you have Manage access*
3. Grant write permission: *If you have this permission, you can grant the permission 'View aggregate statistics of the spendings of all users' on a project for which you have Manage access*

Web interface

Spending calendar

To reach this screen, select "Spending calendar" in the menu on the left.

This screen gives an overview of your time and expense entries. This screen is intended as the starting point for booking spent time or expenses. To start adding entries for a specific day, click on that day in the calendar. This will open the Spending (weekly) page (See next section) where you can add or edit time and expense entries.

The Spending Calendar shows how much time has been booked on each day of the past few weeks. Days for which no time has been booked are visible as gaps, which makes it easier to see where to continue booking time. To scroll to a different time period, use the Previous and Next buttons or press the calendar button next to it.

Spending Calendar							
02/07/2010 to 03/13/2010							
Previous		Next		- my data -			
Su	Mo	Tu	We	Th	Fr	Sa	Week
7 0 h.	8 8 h.	9 8 h.	10 8 h.	11 8 h.	12 8 h.	13 0 h.	40 h. ✔ timesheet accepted
14 0 h.	15 8 h.	16 8 h.	17 8 h.	18 8 h.	19 7 h.	20 0 h.	39 h. ☐ timesheet submitted Withdraw
21 0 h.	22 8 h.	23 8 h.	24 0 h.	25 0 h.	26 0 h.	27 0 h.	16 h. timesheet not submitted Submit
28 0 h.	1 Mar. 0 h.	2 0 h.	3 0 h.	4 0 h.	5 0 h.	6 0 h.	0 h. timesheet not submitted Submit
7 0 h.	8 0 h.	9 0 h.	10 0 h.	11 0 h.	12 0 h.	13 0 h.	0 h. timesheet not submitted Submit

Once a week has been fully entered, a user can submit the timesheet (including time and expenses). Submitted timesheets can be accepted or rejected by the manager of the user. Once the timesheet is accepted, the spendings cannot be edited, and no spendings can be added to that week anymore, unless the manager chooses to reopen it. Initially, the spendings of the user that is logged in, are displayed. As a manager, you can select a user from the drop-down box, to view the spendings of that user. At the right-hand side, you can see if a week has been submitted, and if so, you can choose to accept or reject it.

Spending (weekly)

To reach this screen, select "Spending calendar" in the menu on the left, and then select the week of

interest.

This screen shows your time and expense entries for one week. The time entries are displayed in the first table, and the expenses are displayed in the second table. In these tables you can add new entries, edit entries, or delete entries. You can select another day of the selected week, by clicking on that day, or the whole week, by click on the week cell at the right. To move to a different week, click on the Calendar button, or use the two arrow buttons next to the Calendar button.

Spending in week of 03/01/2010 by Andrew

Insert Time Insert Expense Edit Delete

Week	Su	Mo	Tu	We	Th	Fr	Sa	Week
	28 0,0 h.	1 8,0 h.	2 8,0 h.	3 8,0 h.	4 8,0 h.	5 8,0 h.	6 0,0 h.	40.0 h. \$ 0.0 timesheet accepted Reopen

Selected week

Time

Date	Project	Notes	Types of activity	Duration [h]
03/05/2010	Air conditioner C10 \ Revision 2		development	4.0
03/05/2010	Air conditioner C10 \ Revision 2	discussed new design	meetings	4.0
03/04/2010	Air conditioner C10 \ Revision 2		development	8.0
03/03/2010	Air conditioner C10 \ Revision 2	worked on suggesti..	development	8.0
03/02/2010	Air conditioner C10 \ Revision 2		development	8.0
03/01/2010	Air conditioner C10 \ Revision 2		development	8.0

Expenses

Date	Project	Notes	Spending [\$]
No records found.			

Time entries always have a date, a project, and a duration. Expense entries always have a date, a project, and an amount. Additional data Fields are available depending on the configuration. Time and expense entries of disabled projects cannot be edited. Time and expense entries in weeks that have been submitted and accepted by the manager cannot be changed, deleted or added to.

Time spent

The page shows the time you spent on projects ordered by date, starting with the most recent one. This page provides a full searchable list, an alternative to the weekly view that was described earlier.

The complete list can be exported to CSV or XLS format for import in spreadsheet software.

When you have the "Read all spendings" [project permission](#), then you can view the spendings of all users, by choosing "Data of all users" in the drop-down box.

Expenses

The Expenses page shows your expenses ordered by date, starting with the most recent one. This view is very similar in functionality compared to the Time spent page.

Add Time Entry

Date: 09/13/2010

Project: Air conditioner C10 Revision 1

Notes: finished chapter 4

Types of activity: documentation

Mileage: 0

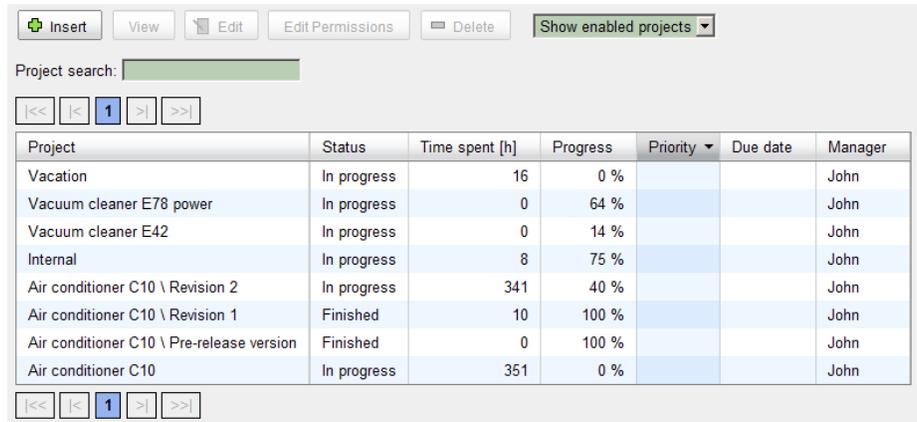
Duration: 8 h

Add & Next entry Add Close

Project list

To view the project list, select "Project list" in the main menu on the left.

By default, the projects are sorted on their priority and due date. The projects in the list can be sorted by clicking on a column header. Projects for which you have no access permission, are not visible in the list. Disabled projects are initially hidden, but can be displayed by choosing "Change view", "Show all projects".



The screenshot shows a web interface for a project list. At the top, there are buttons for "Insert", "View", "Edit", "Edit Permissions", and "Delete". A dropdown menu is set to "Show enabled projects". Below this is a "Project search:" input field. A navigation bar contains buttons for "Previous", "First", "1", "Last", and "Next". The main content is a table with the following data:

Project	Status	Time spent [h]	Progress	Priority	Due date	Manager
Vacation	In progress	16	0 %			John
Vacuum cleaner E78 power	In progress	0	64 %			John
Vacuum cleaner E42	In progress	0	14 %			John
Internal	In progress	8	75 %			John
Air conditioner C10 \ Revision 2	In progress	341	40 %			John
Air conditioner C10 \ Revision 1	Finished	10	100 %			John
Air conditioner C10 \ Pre-release version	Finished	0	100 %			John
Air conditioner C10	In progress	351	0 %			John

At the bottom, there is another navigation bar with buttons for "Previous", "First", "1", "Last", and "Next".

To view the permission related columns, choose "Change view", and select "Show permission related columns". To view the permission related columns, choose "Change view", and select "Show permission related columns". Then, the name of the manager of each project is shown, and whether the option "Remove inherited permissions" is on or not.

Projects can be added, deleted, edited, or its permission can be edited, provided that you have sufficient permissions to do so.

Project browser

See also: Project

The Project Browser initially displays all root-level projects. Below the project name, its description is displayed. Clicking on the project name leads to the list of its sub projects, or to the project page when the project has no sub projects.

Editing project permissions

See also: Project permissions

To change permissions for projects, open the Project list, select a project, and click "Edit Permissions", "for this project". To view the permissions for all projects in one page, select "Edit Permissions", "of all projects", and it can also be reached from the System page.

To edit the permissions on the root project, go to the System screen.

User accounts

To view the user account list, select "Users" in the menu on the left. You need read permission for the "User and group list" (See: System part permissions), in order to view the user account list.

Disabled user accounts are initially hidden, but can be displayed by choosing "Show all user accounts" at the top right.

Name	Username	Email	Manager
The super administrator	admin		The super administrator
Andrew	andrew		John
Ben	ben		John
John	john		John
Mike	mike		John
Robert	robert		John
Simon	simon		John

User accounts can be added, deleted, and edited, provided that you have sufficient permissions to do so.

Group list

To view the group list, select "Groups" in the menu on the left. You need read permission for the "User and group list" (See: System part permissions), in order to view the group list.

Groups can be added, deleted, and edited, provided that you have sufficient permissions to do so.

Reports

The following reports are available:

- **Your Timesheet Status**
This report shows if your timesheets of the last weeks are all filled in and submitted, or if there is a week for which you need to fill in the timesheet.
- **User's Timesheet Status**
This report shows how much time your users have booked in the last weeks, and if the data for these weeks have been submitted by the user and accepted by you or by another manager.
- **Project Report**
This report shows how much time has been spent on all tasks (sub-projects) of a specified project during a time span.

Statistics

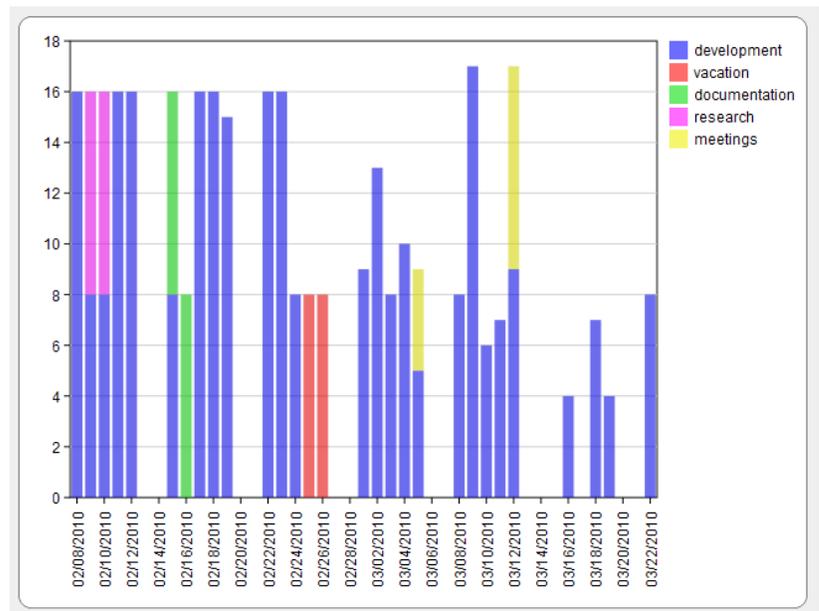
The left side of the statistics screen provides a sort of preview of the table that will be generated. In this preview, you can select what must be in the table columns, the table rows, and what which data values will be in the table cells. The table rows can be grouped on date, user or project. A multi-level grouping can be specified (for example, first group on date, then on project).

On the right side are the filtering options:

- User: Choose whether only the data of the current user is displayed, or of all users. To view statistics of all users, permission to "Read all spendings" is needed on the applicable projects. Projects for which you have not sufficient permissions are filtered out.
- Time range: Data outside the time range is not taken into account.
- Verification: Choose whether to use all spending entries or only those entries which have been accepted by the manager of the user.
- Project filter: By default all projects are taken into account, but you can choose here to see the statistics of only one project or sub project.
- Category filter: In the same way you can specify a filter on a category of a List/Tree type field.
- Split on: When this option is enabled, a separate column is used for each sub project (or sub category), when the output format is table-based. For graphs, this options enables stacked bar graphs.

Statistics are available in several output formats.

- To show the statistics in a table on the web page, click the 'Show table' button.
- To export to a CSV file, click the 'Export table' button, and select Export to CSV. CSV means Comma Separated Values. CSV is a text-based format that can be imported in spreadsheet software.
- To export to an Excel file, click the 'Export table' button, and select Export XLS (Excel).
- To show the statistics in a graph on the web page, click the 'Show graph' button. A bar chart or a stacked bar chart will



be generated. Multiple grouping levels are not supported in the bar chart view. To save the graph, use the functionality provided by the web browser, for example: Right-click on the graph, and select "Save image as...".

System

On the System page, the following items can be managed.

- Configuration
 - Settings
 - Fields
 - License Keys
- System permissions
 - System part permissions
 - Root project permissions (*Project permissions are applied recursively, so permissions on the root automatically apply to all projects, unless overruled*)
 - Project permissions
- Email
 - Email Queue
- Data management
 - Back-up database

Settings

Email

External IP address: Specify the IP address that is used by users to access the computer where Project Tracker is installed. This setting is used by Project Tracker to generate links in reminder emails.

Regional settings

In the regional settings, you can specify the number format, currency symbol, and date format. The regional settings are applied for all users in Project Tracker.

Cost calculation

Here, the cost of 1 hour can be specified. This number is used for converting the time that was spent to a cost value. This is needed when time and expenses are combined in one graph or table in Statistics. The cost factor is multiplied by the cost factors of the categories of the time spending.

Email

Project Tracker can send reminders to users to fill in their timesheet, by email using SMTP. On this page, you can specify the SMTP login settings.

Email Send Time: Reminder emails are sent at this time of the day.

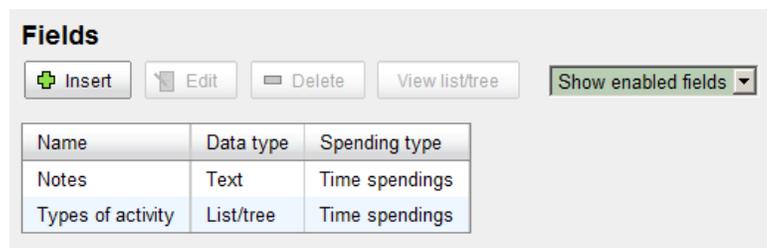
Reminder Subject: The subject line of the reminder email.
Reminder Text: The content of the reminder email. The following tags are replaced:

- %NAME% the name of the user
- %DATE% the date of the relevant timesheet
- %LINK% a link to the relevant page in the Project Tracker web interface

Field list

To view the field list, select "System" in the menu on the left, and then click on the Custom Fields button. You need read permission for the "Field list" (See: System part permissions), in order to view the field list.

Fields can be added, deleted, and edited, provided that you have sufficient permissions to do so. Deleting a field is dangerous because it will destroy all data stored in that field. Only disabled fields can be deleted.



Name	Data type	Spending type
Notes	Text	Time spendings
Types of activity	List/tree	Time spendings

Disabled fields are initially hidden, but can be displayed by choosing "Show all fields" at the top right.

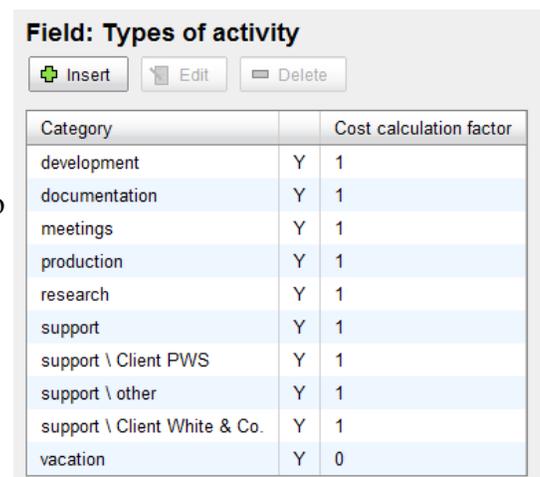
To edit the possible values for a field with the List/Tree data type, select the Field, and press the View list/tree button. This leads to the Categories screen.

Categories

Categories are possible values for List/Tree fields. This screen can be reached from the Field List.

Categories can be organized in a hierarchical tree.

A cost calculation factor can be specified, which is applied to time spent in this category. In that case, this factor is used to calculate the estimated cost of the time spent. For example, overtime could be assigned a factor of 1.2, and holidays, a factor of 0.



Category	Cost calculation factor
development	Y 1
documentation	Y 1
meetings	Y 1
production	Y 1
research	Y 1
support	Y 1
support \ Client PWS	Y 1
support \ other	Y 1
support \ Client White & Co.	Y 1
vacation	Y 0

License Keys

To reach this page, select System in the menu on the left, and then click the License Keys button.

This page shows the license keys that are installed and how many user accounts are available because

of each license key. This is compared to the actual number of *enabled* user accounts. The Super Administrator account and disabled user accounts are not counted.

On this page, you can enter additional license keys you have purchased.

Email Queue

To reach this page, select System in the menu on the left, and then click the Email Queue button.

To test if the email server configuration of Project Tracker is correct, you might want to send a test email. To do so, click the button Send Test Email. The email queue page displays a list of the emails that Project Tracker is trying to send. If emails stay in the email queue, this might indicate a problem with the email settings.

