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Chapter 1. About MantisBT

What is MantisBT?

MantisBT is a web based bug tracking system that was first made available to the public in November 2000. Over time it has matured and gained a lot of popularity, and now it has become one of the most popular open source bug/issue tracking systems. MantisBT is developed in PHP, with support to multiple database backends including MySQL, MS SQL, PostgreSQL and DB2.

MantisBT, as a PHP script, can run on any operating system that is supported by PHP and has support for one of the DBMSes that are supported. MantisBT is known to run fine on Windows, Linux, OS/2, Mac OS X, System i and a variety of Unix operating systems.

Who should read this manual?

This manual is targeted for the person responsible for evaluating, installing and maintaining MantisBT in a company. Typically we refer to this person as the MantisBT administrator.

License

MantisBT is released under the terms of GNU General Public License (GPL). MantisBT is free to use and modify. It is free to redistribute as long as you abide by the distribution terms of the GPL.

How to get it?

MantisBT is available in several Linux distributions including: Debian, Ubuntu, Fedora, Gentoo, Frugalware and others. Hence, if you are running Linux, start by checking if your distribution has a package for MantisBT. If not, or if the package is not up-to-date with the latest MantisBT version, then you may want to download it directly from here.

For Windows, Mac OS X and other operating systems, use the link provided above to download MantisBT. The download is compressed in tar.gz or zip format. Both formats can be unpacked using tools like 7-Zip (in case of Windows).

Note that at any point in time there are typically two "latest" MantisBT releases that are available for download. The latest production release (stable), and the latest development release which can be an alpha or a release candidate. It is not recommended to use development releases in production specially if it is still in the alpha stage unless the administrator is familiar with PHP and is able to troubleshoot and fix any issues that may arise.

About the Name

When initially seeking to name this project Ken ran into a problem every programmer encounters. What is a good name? It has to be descriptive, unique, and not too verbose. Additionally having multiple meanings would be a nice touch. Quickly ruled out were php*Something* names which, incidentally, although popular, do not seem to be condoned by the PHP Group developers. Drawing inspiration from Open Source projects like Apache, Mozilla, Gnome, and so forth resulted in two eventual choices: Dragonfly and Mantis. Dragonfly was already the name of a webmail package. So the name became Mantis.

Praying Mantis are insects that feed primarily on other insects and bugs. They are extremely desirable in agriculture as they devour insects that feed on crops. They are also
Chapter 1. About MantisBT

extremely elegant looking creatures. So, we have a name that is fairly distinctive and descriptive in multiple ways. The BT suffix stands for "Bug Tracker" and distinguishes this project from general usage of the word Mantis. However, over time the project was typically referred to as Mantis.

History

Kenzaburo Ito and a friend originally created a bug tracker as an internal tool for their pet project. A search for good, free packages came up with nothing suitable so they wrote their own. After a rewrite and cleanup it was made available to the public via the GNU General Public License (GPL). The GPL was chosen partly because of his belief that development tools should be cheap or free. In 2002, Ken was joined by Jeroen Latour, Victor Boctor and Julian Fitzell to be the administrators and the core development team of MantisBT. This marks a new era in MantisBT lifetime where it is now a team project.

Support

There are plenty of resources to help answer support queries. Following are the main ones:

- **Forums** - The forums are one of the most popular destinations for getting MantisBT support. Start off by searching the forums for your questions, if not found, then go ahead and submit a question.

- **Mailing lists** - Available mailing lists are "mantisbt-announce" for announcements, "mantisbt-dev" for development issues, mantisbt-lang for localization and "mantisbt-help" for general help/support questions. There are public archives for such mailing lists. Note that only members of the mailing lists can post to them, hence, subscribe to the lists before you attempt to email them.

- **IRC** - The IRC channel is mainly used by developers to engage in in-person discussion. The recommended tool for IRC is XChat (for Linux), XChat 2 (for Windows). However, you can also use Web Chat to connect to IRC via your web browser. This is also useful when your work firewall blocks the IRC port (although there are other workarounds involving tunneling to fix this issue). Many people prefer to use IRC to ask questions to the developers and other users who are in the IRC channel. The IRC channel logs are archived and made available on the web. (TODO: add irc logs link)

- **Wiki** - The MantisBT Wiki has information related to "How To (recipes)", FAQ, feature requirements, etc.

- **Search** - A good way for locating an answer for your question or finding more information about a topic is to search across all MantisBT website and the Internet via Google or Bing.

It is important to note that support questions should not be sent directly to MantisBT developers or through the MantisBT contact us pages. Use of "Contact Us" page or emailing the developer directly is available if you are after a paid support or consulting service.

MantisBT News

There are several ways to keep up to date with MantisBT news. These include:

- We send release announcements and important updates to users registered on our official bugtracker. To get onto our mailing list, users will have to signup there and verify their email address. This same account can also be used to report, monitor, and comment on issues relating to MantisBT.
Chapter 1. About MantisBT

- MantisBT Blog\(^3\) is used to communicate announcements about new releases, topics relating to MantisBT, etc. Users are encouraged to subscribe to the RSS feed to know when new posts are posted there.

- Twitter\(^4\) is used to notify users about up-to-date details about what is happening with MantisBT development. For example, a Twitter update is automatically posted by the official bug tracker whenever an issue is resolved. Twitter users are encouraged to follow “mantisbt”.

**Versioning**

The release numbering convention we use is major.minor.micro (eg. 1.2.0rc1).

- Major - Indicates a very large change in the core package. Rewrites or major milestones.
- Minor - Significant amount of feature addition/modification.
- Micro - Mostly bug fixes and maintenance releases.
- Suffix - rc1 for first release candidate, a1 for alpha 1, etc.

**Notes**

11. http://www.bing.com
Chapter 2. Installation

This chapter explains how to install or upgrade MantisBT.

Overview

The table below contains a high-level overview of the processes. Refer to the corresponding sections for details.

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<tr>
<td>5. Execute post-installation common tasks</td>
<td>5. Execute post-installation common tasks</td>
</tr>
</tbody>
</table>

System Requirements

Server Hardware Requirements

MantisBT has modest hardware requirements. It requires a computer that is able to run the server software.

- Server type
  The server can be a shared public web server or a dedicated co-located box.
- CPU and Memory
  As for any web application, you should size your server based on the traffic on the site.
- Disk
  The application code is less than 20 MB
  The amount of disk space required for the database will vary depending on the RDBMS and the volume of data, the main driving factor being the expected number and size of attachments.

Server Software Requirements

All of the required software is free for commercial and non-commercial use (open source). Please refer to the table below for minimum and recommended versions.

- Operating System
MantisBT runs on Windows, MacOS, OS/2, Linux, Solaris, the BSDs, and just about anything that supports the required server software.

- **Web Server**
  
  MantisBT is mainly tested with Microsoft IIS\(^1\) and Apache\(^2\). However, it is expected to work with any recent web server software.

  File Extensions: MantisBT uses only `.php` files. If your webserver is configured for other extensions (e.g. `.PHP3`, `.PHTML`) then you will have to request the administrator to add support for `.PHP` files. This should be a trivial modification. Further details can be found in the PHP documentation\(^3\)

- **PHP\(^4\)**
  
  The web server must support PHP. It can be installed as CGI or any other integration technology.

- **PHP extensions**
  
  MantisBT is designed to work in as many environments as possible. Hence the required extensions are minimal and many of them are optional affecting only one feature.

  - *mandatory:* the extension for the RDBMS being used ( `mysql/mysqli`, `pgsql`, `oci8`, `sqlsrv`, `ibm-db2` )
  - *Curl* - required for the Twitter integration feature
  - *GD* - required for the graphs feature
  - *fileinfo* - Guesses the MIME type of attachments

  Without this extension, file attachment previews and downloads may not work correctly as MantisBT won’t be able to send the Content-Type header to a browser requesting an attachment.

  This extension is included by default from PHP version 5.3.x and above. For older versions you will need to install the fileinfo PECL extension (this requires root access to the server you’re using).

  - *mbstring* - Recommended for best performance with multibyte (UTF8) strings processing. Required if the admin needs to list the SQL queries generated by MantisBT (see `$g_show_queries_list` in the Section called Misc in Chapter 5).

- **Database**
  
  MantisBT requires a database to store its data. The supported RDBMS are: MySQL (recommended), PostgreSQL, DB2, Microsoft SQL Server and Oracle (experimental).

  Note: There are known issues with all of the above platforms except MySQL, and to a lesser extent PostgreSQL; moreover, you should be aware that support for DB2, SQL server and Oracle is limited.

### Versions compatibility table

<table>
<thead>
<tr>
<th>Category</th>
<th>Package</th>
<th>Minimum Version</th>
<th>Recommended</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDBMS</td>
<td>MySQL</td>
<td>4.1.x</td>
<td>5.0.x or above</td>
<td>PHP extension: mysql/mysqli</td>
</tr>
<tr>
<td></td>
<td>PostgreSQL</td>
<td>7.0</td>
<td>8.0 or above</td>
<td>PHP extension: pgsql</td>
</tr>
<tr>
<td></td>
<td>IBM DB2</td>
<td></td>
<td></td>
<td>PHP extension: ibm-db2</td>
</tr>
</tbody>
</table>
## Client Requirements

MantisBT should run on most recent browsers in the market, including but not limited to:

- Firefox 3 and above
- Internet Explorer 6 and above
- Chrome
- Safari
- Opera

## Pre-installation / upgrade tasks

These tasks cover the download and deployment of MantisBT, and should be performed prior to any new installation or upgrade.

1. Download MantisBT

2. Transfer the downloaded file to your webserver

   This can be done using whatever method you like best (ftp, scp, etc). You will need to telnet/ssh into the server machine for the next steps.

3. Extract the release

   It is highly recommended to maintain a separate directory for each release. This not only avoids mismatch between versions, (files may have been added or removed) but also provides an easy path to downgrade your installation, should you need to.

   The usual command is (1 step):

   ```
tar -xfz filename.tar.gz
```

   OR (2 steps):

   ```
gunzip filename.tar.gz
tar -xf filename.tar
```

   Other file archiving tools such as 7-Zip should also be able to handle decompression of the archive.

   The extraction process should create a new directory like `mantisbt-1.2.x`

4. Rename the directory

---

<table>
<thead>
<tr>
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<th>Package</th>
<th>Minimum Version</th>
<th>Recommended</th>
<th>Comments</th>
</tr>
</thead>
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<td>2005</td>
<td>2005 or above</td>
<td></td>
<td>PHP extension: mssql or sqlsrv</td>
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<tr>
<td>Oracle</td>
<td>8i</td>
<td>11gR2</td>
<td></td>
<td>PHP extension: oci8</td>
</tr>
<tr>
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<td>Apache</td>
<td>1.3.x</td>
<td>2.2.x</td>
<td></td>
</tr>
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<td></td>
<td>lighttpd</td>
<td>1.4.x</td>
<td>1.4.x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IIS</td>
<td>6.0</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>PHP</td>
<td>PHP</td>
<td>5.1.x</td>
<td>5.2.x or above</td>
<td>See above for PHP extensions</td>
</tr>
</tbody>
</table>
Chapter 2. Installation

For new installations, you may want to rename the directory just created to something simpler, e.g. `mantisbt`

```
mv mantisbt-1.2.x mantisbt
```

New Installation

This chapter explains how to perform a new installation of MantisBT.

Start by checking the system requirements and installing the appropriate version of required software.

Once that is done, execute the installation script. From your web browser, access

http://yoursite/mantisbt/admin/install.php

The installation procedure will go through the following steps:

1. The script checks basic parameters for the web server
2. Provide required information for the installation
   - database type
   - database server hostname
   - user and password
     Required privileges: SELECT, INSERT, UPDATE, and DELETE
   - high-privileged database account
     Additional privileges required: INDEX, CREATE, ALTER, and DROP
     If this account is not specified, the database user will be used.

3. Click the Install/Upgrade Database button
4. The script creates the database and tables.
   The default Administrator user account is created at this stage, to allow the initial login and setup of MantisBT.
5. The script attempts to write a basic `config_inc.php` file to define the database connection parameters.
   This operation may fail if the web server’s user account does not have write permissions to the directory (which is recommended for obvious security reasons). In this case, you will have to manually create the file and copy/paste the contents from the page.
6. The script perform post installation checks on the system.
   Review and correct any errors.

Upgrading

This chapter explains how to upgrade an existing MantisBT installation.

Start by Performing the steps described in Pre-installation tasks above.

1. Put the site down for maintenance
   
   `cp mantis_offline.php.sample mantis_offline.php`
   This will prevent users from using the system while the upgrade is in progress.
2. Always Backup your code, data and config files before upgrading!
Chapter 2. Installation

This includes your Mantis directory, your attachments, and your database. Refer to the Backups section for details.

3. Copy the configuration files

To preserve your system settings, you should copy the files listed below to the new directory, as well as any other custom files such as logo, favicon, css, etc.

```
config_inc.php    custom_strings_inc.php    custom_constants_inc.php
custom_functions_inc.php
```

4. Execute the upgrade script. From your web browser, access

http://yoursite/mantisbt-NEW/admin/install.php

where `mantisbt-NEW` is the name of the directory where the new release was extracted

5. Provide required information for the upgrade

   - high-privileged database account
     Additional privileges required: INDEX, CREATE, ALTER, and DROP
     If this account is not specified, the database user will be used.

6. Click the Install/Upgrade Database button
7. At the end of the upgrade, review and correct any warnings or errors.

   **Upgrading large databases:** When processing large databases from versions older than 1.2, the upgrade script may fail during the conversion of date fields, leaving the system in an inconsistent (i.e. partially updated) state.

   In this case, you should simply restart the upgrade process, which will resume where it left off. Note that you may have to repeat this several times, until normal completion.

   Reference: MantisBT issue 12735.

Configure your installation

There are many settings that you can adjust to configure and customize MantisBT. Refer to the Configuration section, as well as the `config_defaults_inc.php` file for in depth explanations of the available options. Check out also the Customizing MantisBT section for further options to personalize your installation.

This step is normally only required for new installations, but when upgrading you may want to review and possibly customize any new configuration options.

Open or create the file `config_inc.php` in an editor and add or modify any values as required. These will override the default values.

You may want to use the provided `config_inc.php.sample` file as a starting point.

WARNING: you should never edit the `config_defaults_inc.php` file directly, as it could cause issues with future upgrades.

Post-installation and upgrade tasks

Instructions in this section are common to both new installations and upgrades, and should be applied after completing either process.

1. Test your configuration

   Load up `admin/check.php` to validate if everything is setup correctly.
Chapter 2. Installation

NOTE (for PHP 5.2 only): check.php sometimes reports the value of `register_globals` incorrectly. To confirm the correct value, Create a page with this line in it:

```php
<?php phpinfo(); ?>
```
save it with a .php extension and load it up in your web browser.

2. Delete the `admin` folder

   For security reasons, the scripts within this directory should not be accessible on a live MantisBT site or on any installation that is accessible via the Internet.

   Once you have confirmed that the install/upgrade was successful, you should delete this directory

   ```
   rm -r admin
   ```

Post-installation tasks

Instructions in this section should only be applied after a new installation

1. Login to your bugtracker
   Use the default Administrator account. The id and password are `administrator / root`.

2. Create a new Administrator account
   Go to Manage > Manage Users and create a new account with 'administrator' access level.

3. Disable or delete the default Administrator account

4. Create a new Project
   Go to Manage > Manage Projects and create a new project

Post-upgrade tasks

Instructions in this section should only be applied after upgrading an existing installation.

1. Test the new release
   Perform any additional testing as appropriate to ensure the new version does not introduce any regressions.

2. Switch the site to the new version
   The commands below should be executed from the web root (or wherever the mantisbt scripts are installed) and assume that the "live" directory (old version) is named `mantisbt` and the new release directory is `mantisbt-1.2.x`.

   ```
   mv mantisbt mantisbt-old
   mv mantisbt-1.2.x mantisbt
   ```

3. Put the site back on line
   ```
   rm mantis_offline.php
   ```
   This should be the final step in the upgrade process, as it will let users login again.

Backups

It is strongly recommended to backup your MantisBT database on a regular basis. The method to perform this operation depends on which RDBMS you use.
Chapter 2. Installation

Backups are a complex subject, and the specificities of implementing and handling them for each RDBMS are beyond the scope of this document. For your convenience, the section below provides a simple method to backup MySQL databases.

You should also consider implementing backups of your MantisBT code (which includes your configs and possibly customization), as well as issue attachments (if stored on disk) and project documents.

!!! Backups should always be performed before an upgrade !!!

MySQL Backups
MySQL databases are easy to backup using the `mysqldump` command:

```
mysqldump -u<username> -p<password> <database name> > <output file>
```

To restore a backup you will need to have a clean database. Then run:

```
mysql -u<username> -p<password> <database name> < <input file>
```

You can also perform both of these tasks using phpMyAdmin7

A good idea is to make a backup script and run it regularly through cron or a task scheduler (for Windows see WinCron8). Using the current date in the filename can prevent overwriting and make cataloguing easier.

References and useful links:

- `mysqlhotcopy` documentation 9
- `automysqlbackup` script 10

Uninstall

It is recommended that you make a backup in case you wish to use your data in the future. See the Backups page for details.

To uninstall MantisBT:

- Delete the MantisBT directory and all files and subdirectories.
- Drop all MantisBT tables from the database, these can be identified by the configured prefix for the installation. The default prefix is 'mantis'.
- Remove any customizations or additions that you may have made.

If you have the permissions to create/drop databases and you have a specific database for MantisBT that does not contain any other data, you can drop the whole database.

Notes

Chapter 3. User Management

Creating User Accounts

In MantisBT, there is no limit on the number of user accounts that can be created. Typically, installations with thousands of users tend to have a limited number of users that have access level above REPORTER.

By default users with ADMINISTRATOR access level have access to create new user accounts. The steps to do that are:

- Click "Manage" on Main Menu.
- Click "Manage Users" (if not selected by default).
- Click "Create New Account" button just below the alphabet key.
- Enter user name, email address, global access level (more details about access levels later). Other fields are optional.
- Click "Create Users".

Creating a user triggers the following actions:

- Creating a user in the database.
- If email notifications ($g_enable_email_notification) is set to ON, then the user will receive an email allowing them to activate their account and set their password. Otherwise, the account will be created with a blank password.
- If email notifications ($g_enable_email_notification) is set to ON, users with access level about $g_notify_new_user_created_threshold_min will get a notification that a user account has been created. Information about the user like user name and email address are provided. The IP of the user that created the account is also included.

When the ‘Protected’ flag is set on a user account, it indicates that the account is a shared account (e.g. demo account) and hence users logged using such account will not be allowed to change account preferences and profile information.

The anonymous user account specified with the $g_anonymous_account option will always be treated as a protected user account. When you are creating the anonymous user account, the ‘Protected’ flag is essentially ignored because the anonymous user is always treated as a protected user.

Enabling/Disabling User Accounts

The recommended way of retiring user accounts is to disable them. Scenarios where this is useful is when a person leaves the team and it is necessary to retire their account.

Once an account is disabled the following will be enforced:

- All currently active sessions for the account will be invalidated (i.e. automatically logged out).
- It will no longer be possible login using this account.
- No further email notifications will be sent to the account once it is disabled.
- The user account will not show anymore in lists like "assign to", "send reminder to", etc.
Chapter 3. User Management

The disabling process is totally reversible. Hence, the account can be re-enabled and all the account history will remain intact. For example, the user will still have issues reported by them, assigned to them, monitored by them, etc.

Deleting User Accounts

Another way to retire user accounts is by deleting them. This approach is only recommended for accounts that have not been active (i.e. haven’t reported issues). Once the account is deleted, any issues or actions associated with such account, will be associated with user123 (where 123 is the code of the account that was deleted). Note that associated issues or actions are not deleted.

As far as the underlying database, after the deletion of a user, records with the user id as a foreign key will have a value that no longer exists in the users table. Hence, any tools that operate directly on the database must take this into consideration.

By default administrators are the only users who can delete user accounts. They can delete accounts by clicking Manage, Manage Users, locating the user to be deleted and opening it details page, then clicking on the “Delete User” button which deletes the user.

Note that “Deleting Users” is not a reversible process. Hence, if it is required to re-add the user account, it is not possible to recreate the user account so that it gets the same ID and hence retains its history. However, manually creating a record in the users table with the same id, can possibly do that. However, this approach is not recommended or supported.

User Signup

For open source and freeware projects, it is very common to setup MantisBT so that users can signup for an account and get a REPORTER access by default (configurable by the $g_default_new_account_access_level configuration option). The signup process can be enabled / disabled using the $g_allow_signup configuration option, which is enabled by default.

If user signup is enabled, then it is required that $g_send_reset_password is ON as well, and the e-mail settings properly configured (see Email Configuration).

If email notifications ($g_enable_email_notification) is set to ON, users with access level about $g_notify_new_user_created_threshold_min will get a notification that a user account has been created. Information about the user like user name, email address, IP address are included in the email notification.

Forgot Password and Reset Password

It is pretty common for users to forget their password. MantisBT provides two ways to handle such scenario: “Forgot Password” and “Reset Password”.

"Forgot Password” is a self service scenario where users go to the login page, figure out they don’t remember their password, and then click the ”Lost your password?” link. Users are then asked for their user name and email address. If correct, then they are sent an email with a link which allows them to login to MantisBT and change their password.

"Reset Password” scenario is where a user reports to the administrator that they are not able to login into MantisBT anymore. This can be due to forgetting their password and possibly user name or email address that they used when signing up. The administrator then goes to Manage, Manage Users, locates the user account and opens its details. Under the user account details, there is a ”Reset Password” button which the administrator can click to reset the password and trigger an email to the user to allow them to get into MantisBT and set their password. In the case where email notifications are disabled, resetting password will set the password to an empty string.
Chapter 3. User Management

Changing Password

Users are able to change their own passwords (unless their account is "protected"). This can be done by clicking on "My Account", and then typing the new password in the "Password" and "Confirm Password" fields, then clicking "Update User". Changing the password automatically invalidates all logged in sessions and hence the user will be required to re-login. Invalidating existing sessions is very useful in the case where a user going onto a computer, logs into MantisBT and leaves the computer without logging out. By changing the password from another computer, the session on the original computer automatically becomes invalidated.

Pruning User Accounts

The pruning function allows deleting of user accounts for accounts that have been created more than a week ago, and they never logged in. This is particularly useful for users who signed up with an invalid email or with a typo in their email address address.

The account pruning can be done by administrators by going to "Manage", "Manage Users", and clicking the "Prune Accounts" button inside the "Never Logged In" box.

Authorization and Access Levels

MantisBT uses access levels to define what a user can do. Each user account has a global or default access level that is associated with it. This access level is used as the access level for such users for all actions associated with public projects as well as actions that are not related to a specific project. Users with global access level less than $g_private_project_threshold will not have access to private projects by default.

The default access levels shipped with MantisBT out of the box are VIEWER, REPORTER, UPDATER, DEVELOPER, MANAGER and ADMINISTRATOR. Each features has several configuration options associated with it and identifies the required access level to do certain actions. For example, viewing an issue, reporting an issue, updating an issue, adding a note, etc.

For example, in the case of reporting issues, the required access level is configurable using the $g_report_bug_threshold configuration option (which is defaulted to REPORTER). So for a user to be able to report an issue against a public project, the user must have a project-specific or a global access level that is greater than or equal to REPORTER. However, in the case of reporting an issue against a private project, the user must have project specific access level (that is explicitly granted against the project) that is higher than REPORTER or have a global access level that is higher than both $g_private_project_threshold and $g_report_bug_threshold.

Note that project specific access levels override the global access levels. For example, a user may have REPORTER as the global access level, but have a MANAGER access level to a specific project. Or a user may have MANAGER as the global access level by VIEWER access to a specific project. Access levels can be overridden for both public and private projects. However, overriding access level is not allowed for users with global access ADMINISTRATOR.

Each feature typically has multiple access control configuration options to defines what access level can do certain operations. For example, adding a note may require REPORTER access level, updating a note my require DEVELOPER access level, unless the own was owned by the same user and in this case REPORTER access level. Such threshold configuration options can be set to a single access level, which means users with such threshold and above are authorized to do such action. The other option is to specify an array of access level which indicates that users with the explicitly specific thresholds are allowed to do such actions.

It is also worth mentioning that the access levels are defined by the $g_access_levels_enum_string configuration option, and it is possible to customize such
Chapter 3. User Management

list. The default value for the available access levels is ‘10:viewer, 25:reporter, 40:updater, 55:developer, 70:manager, 90:administrator’. The instructions about how to customize the list of access levels will be covered in the customization section.

Auto Creation of Accounts on Login
In some cases MantisBT is setup in a way, where it allows users that already exists in a directory or another application to be automatically authenticated and added to MantisBT. For example, a company may setup their MantisBT installation in a way, where its staff members that are already registered in their LDAP directory, should be allowed to login into MantisBT with the same user name and password. Another example, is where MantisBT is integrated into some content management system, where it is desired to have a single registration and single sign-on experience. In such scenarios, once a user logs in for the first time, a user account is automatically created for them, although the password verification is still done against LDAP or the main users repository.

User Preferences
Users can fine tune they way MantisBT interacts with them via modifying their user preferences. User preferences can only be managed by users and are not available for the administrators to tweak. The administrators can only tweak the default value for such preferences. However, once a user account is created, it is then the responsibility of the user to manage their own preferences. The user preferences include the following:

- Default Project: A user can choose the default project that is selected when the user first logs in. This can be a specific project or "All Projects". For users that only work on one project, it would make sense to set such project as the default project (rather than "All Projects"). The active project is part of the filter applied on the issues listed in the "View Issues" page. Also any newly reported issues will be associated with the active project.
- Refresh Delay: The refresh delay is used to specify the number of seconds between auto refreshes of the View Issues page.
- Redirect Delay: The redirect delay is the number of seconds to wait after displaying flash messages like "Issue created successfully", and before the user gets redirected to the next page.
- Notes Sort Order: The preference relating to how notes should be ordered on an issue is viewed or in email notifications. The ascending order is where notes are ordered so that ordered notes appear before newer notes, the descending order is the reverse.
- Email on New: If unticked, then email notifications relating to creation of a new issue would be disabled. Note that the preference is only used to disabled notifications that as per the administrator’s configuration, this user would have qualified to receive them.
- Email on Change of Handler: TODO - is this preference used?
- Email on Feedback: TODO - is this preference used?
- Email on Resolved: TODO
- Email on Closed: TODO
- Email on Reopened: TODO
- Email on Note Added: TODO
- Email on Status Change: TODO
- Email on Priority Change: TODO - is this preference used?
- Email Notes Limit: This preference can be used to limit the number of issue notes to view or to be included in an email notifications. Specifying N here means that the latest N notes will be included. The value 0 causes all notes to be included.

- Language: The preferred language of the user. This language is used by the GUI and in email notifications. Note that MantisBT uses UTF8 for encoding the data, and hence, the user can be interacting with MantisBT user interface in Chinese while logging issue data in German.

**User Profiles**

A user profile describes an environment that the user uses to run the software for which issues are being tracked. The profile information include "Platform", "Operating System", "OS Version", and "Additional Description". Each user has access to profiles that they create (can be multiple), in addition to global ones that are shared created by other users. When reporting issues, users can elect to enter information like platform, operating system, version manually, or they can choose from the list of profiles that are already defined.

Global profiles are typically used by the administrator to define a set of standard profiles that are typically used by the MantisBT users. This makes it easier for the users to use such profiles without having to define create them. The access level required for users to be able to create global profiles is configured by the $g_manage_global_profile_threshold configuration option and it is defaulted to MANAGER.
Chapter 4. Issue Lifecycle and Workflow

Issue Creation

The life cycle of an issue starts with its creation. An issue can be created via one of the following channels:

- MantisBT Web Interface - This is where a user logs into MantisBT and reports a new issue.
- SOAP API - Where an application automatically reports an issue into MantisBT using the SOAP API web services interfaces. For example, the nightly build script can automatically report an issue if the build fails.
- Email - This is not supported out of the box, but there are existing MantisBT patches that would listen to emails on pre-configured email addresses and adds them to the MantisBT database.
- Others - There can be several other ways to report issues. For example, applications / scripts that directly injects issues into MantisBT database (not recommended, except for one-off migration scripts), or PHP scripts that use the core MantisBT API to create new issues.

Issue Statuses

An important part of issue tracking is to classify issues as per their status. Each team may decide to have a different set of categorization for the status of the issues, and hence, MantisBT provides the ability to customize the list of statuses. MantisBT assumes that an issue can be in one of three stages: opened, resolved and closed. Hence, the customized statuses list will be mapped to these three stages. For example, MantisBT comes out of the box with the following statuses: new, feedback, acknowledged, confirmed, assigned, resolved and closed. In this case "new" -> "assigned" map to opened, "resolved" means resolved and "closed" means closed.

Following is the explanation of what the standard statuses that are shipped with MantisBT means.

- New - This is the landing status for new issues. Issues stay in this status until they are assigned, acknowledged, confirmed or resolved. The next status can be "acknowledged", "confirmed", "assigned" or "resolved".
- Acknowledged - This status is used by the development team to reflect their agreement to the suggested feature request. Or to agree with what the reporter is suggesting in an issue report, although they didn’t yet attempt to reproduce what the reporter is referring to. The next status is typically "assigned" or "confirmed".
- Confirmed - This status is typically used by the development team to mention that they agree with what the reporter is suggesting in the issue and that they have confirmed and reproduced the issue. The next status is typically "assigned".
- Assigned - This status is used to reflect that the issue has been assigned to one of the team members and that such team member is actively working on the issue. The next status is typically "resolved".
- Resolved - This status is used to reflect that the issue has been resolved. An issue can be resolved with one of many resolutions (customizable). For example, an issue can be resolved as "fixed", "duplicate", "won’t fix", "no change required", etc. The next statuses are typically "closed" or in case of the issue being re-opened, then it would be "feedback".
Chapter 4. Issue Lifecycle and Workflow

• Closed - This status reflects that the issue is completely closed and no further actions are required on it. It also typically hides the issue from the View Issues page. Some teams use "closed" to reflect sign-off by the reporter and others use it to reflect the fact that the fix has been released to customers.

Workflow

Now that we have covered how an issue gets created, and what are the different statuses during the life cycle of such issues, the next step is to define the workflow. The workflow dictates the valid transitions between statuses and the user access level required of the user who triggers such transitions; in other words, how issues move from one status to another and who is authorized to trigger such transitions.

MantisBT provides the ability for teams to define their own custom workflow which works on top of their custom status.

Workflow Transitions

By default, there is no workflow defined, which means that all states are accessible from any other, by anyone.

The "Manage > Manage Configuration > Workflow Transitions" page allows users with ADMINISTRATOR access level to do the following tasks:

• Define the valid next statuses for each status.
• Define the default next status for each status.
• Define the minimum access level required for a user to transition to each status.
• Define the default status for newly created issues.
• Define the status at which the issue is considered resolved. Any issues a status code greater than or equal to the specified status will be considered resolved.
• Define the status which is assigned to issues that are re-opened.
• Define the required access level to change the workflow.

Note that the scope of the applied change is dependent on the selected project. If "All Projects" is selected, then the configuration is to be used as the default for all projects, unless overridden by a specific project. To configure for a specific project, switch to it via the combobox at the top right corner of the screen.

The Global ("All Projects") workflow can also be defined in the config_inc.php file, as per the following example.

```php
$g_status_enum_workflow[NEW_] = '30:acknowledged,20:feedback,40:confirmed,50:assigned,80:resolved';
$g_status_enum_workflow[FEEDBACK] = '30:acknowledged,40:confirmed,50:assigned,80:resolved';
$g_status_enum_workflow[ACKNOWLEDGED] = '40:confirmed,20:feedback,50:assigned,80:resolved';
$g_status_enum_workflow[CONFIRMED] = '50:assigned,20:feedback,30:acknowledged,80:resolved';
$g_status_enum_workflow[ASSIGNED] = '80:resolved,20:feedback,30:acknowledged,40:confirmed';
$g_status_enum_workflow[RESOLVED] = '90:closed,20:feedback,50:assigned';
$g_status_enum_workflow[CLOSED] = '20:feedback,50:assigned';
```

Notes:
• The workflow needs to have a path from the statuses greater than or equal to the ‘re-
solved’ state (see $g_bug_resolved_status_threshold) back to the ‘feedback’ state (see
$g_bug_feedback_status), otherwise, the re-open operation won’t work.
• The first item in each list denotes the default value for this status, which will be pre-
selected in the Change Status combobox in the View Issues page.

Workflow Thresholds
This “Manage > Manage Configuration > Workflow Thresholds” page allows users with
ADMINISTRATOR access level to define the thresholds required to do certain actions.
Following is a list of such actions and what they mean:

• Report an issue - The access levels that are allowed to report an issue.
• Update an issue - The access levels that are allowed to update the header information of
an issue.
• Allow issue to be closed on resolved - The access levels that are allow to resolve and
close an issue in one step.
• Allow reporter to close issue - Indicates if reporters should be allowed to close issues
reported by them.
• Monitor an issue - The access levels required for a user to be able to monitor an issue.
Once a user monitors an issue, the user will be included in all future email notifications
relating to changes in the issue.
• Handle an issue - The access levels required for a user to be able to change the handler
(i.e. assign / unassign) an issue.
• Move an issue - The access levels required for a user to be able to move an issue from one
project to another. (TODO: are these access levels evaluated against source or destination
project?).
• Delete an issue - The access levels required for a user to be able to delete an issue.
• Reopen an issue - The access levels required for a user to be able to re-open a resolved
or closed issue.
• Allow Reporter to re-open Issue - Whether the reporter of an issue can re-open a resolved
or closed issue, independent of their access level.
• Status to which a reopened issue is set - This is the status to which an issue is set after it
is re-opened.
• Resolution to which a reopen issue is set - The resolution to set on issues that are re-
opened.
• Status where an issue is considered resolved - The status at which an issue is considered
resolved.
• Status where an issue becomes readonly - Issues with such status and above are consid-
ered read-only. Read-only issues can only be modified by users with a configured access
level. Read-only applies to the issue header information as well as other issue related
information like relationships, attachments, notes, etc.
• Update readonly issues - The access levels required for a user to be able to modify a
readonly issue.
• Update issue status - The access levels required for a user to be able to modify the status
of an issue.
• View private issues - The access levels for a user to be able to view a private issue.

• Set view status (public vs. private) - The access level for a user to be able to set whether an issue is private or public, when reporting the issue. If the user reporting the issues doesn’t have the required access, then the issue will be created with the default view state.

• Update view status (public vs private) - The access level required for a user to be able to update the view status (i.e. public vs. private).

• Show list of users monitoring issue - The access level required for a user to be able to view the list of users monitoring an issue.

• Set status on assignment of handler - The access levels required for a user to be able to re-assign an issue when changing its status.

• Status to set auto-assigned issues to - The status - This is the status that is set on issues that are auto assigned to users that are associated with the category that the issuer is reported under.

• Limit reporter’s access to their own issues - When set, reporters are only allow to view issues that they have reported.

• Add notes - The access levels required for users to be able to add notes.

• Update notes - The access levels required for users to be able to update issue notes.

• Allow user to edit their own issue notes - A flag that indicates the ability for users to edit issue notes report by them.

• Delete note - The access levels required for a user to delete a note that they may or may not have reported themselves.

• View private notes - The access levels required for a user to be able to view private notes associated with an issue that they have access to view.

• View Change Log - The access levels required for a user to be able to view the change log.

• View Assigned To - The access levels required for a user to be able to know the handler of an issue that they have access to.

• View Issue History - The access levels required for a user to be able to view the history of changes of an issue.

• Send reminders - The access levels required for a user to be able to send reminders to other users relating to an issue that they have access to.
Chapter 5. Configuration

Database

The database settings must be set in order for the package to work properly. These settings should be provided to you by your system administrator or your hosting company.

$g_hostname

Host name or connection string for Database server. The default value is localhost. For MySql, this should be hostname or hostname:port (e.g. localhost:3306).

$g_db_username

User name to use for connecting to the database. The user needs to have read/write access to the MantisBT database. The default user name is "root".

$g_db_password

Password for the specified user name. The default password is empty.

$g_database_name

Name of database that contains MantisBT tables. The default name is 'bugtracker'.

$g_db_schema

The database schema (used in case of DB2), otherwise should be left blank.

$g_db_type

The supported database types are listed in the table below.

The PHP extension corresponding to the selected type must be enabled.

<table>
<thead>
<tr>
<th>RDBMS</th>
<th>db_type</th>
<th>PHP extension</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MySQL</td>
<td>mysql</td>
<td>mysql</td>
<td>default</td>
</tr>
<tr>
<td></td>
<td>mysqli</td>
<td>mysqli</td>
<td></td>
</tr>
<tr>
<td>PostgreSQL</td>
<td>pgsql</td>
<td>pgsql</td>
<td></td>
</tr>
<tr>
<td>IBM DB2</td>
<td>db2</td>
<td>db2</td>
<td>experimental</td>
</tr>
<tr>
<td>MSSQL Server</td>
<td>mssqlnative</td>
<td>sqlsrv</td>
<td>experimental</td>
</tr>
<tr>
<td>Oracle</td>
<td>oci8</td>
<td>oci8</td>
<td>experimental</td>
</tr>
</tbody>
</table>

Path

These path settings are important for proper linking within MantisBT. In most scenarios the default values should work fine, and you should not need to override them.

$g_path

URL to your installation as seen from the web browser; this is what you type into the URL field. Requires trailing ‘/’ character. eg. 'http://www.example.com/mantisbt/'. In the following example https protocol is used: eg. 'https://www.example.com/mantisbt/'. MantisBT will default this to the correct value. However, in some cases it might be necessary to override the default.
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This is typically needed when an installation can be accessed by multiple URLs (internal vs external).

$g_icon_path
This is the URL to the icons (images) directory as seen from the web browser. All MantisBT images/icons are loaded from this URL. The default value for this URL is based on $g_path (i.e. '%path%images/'). Note that a trailing '/' is required.

$g_short_path
Short web path without the domain name. This requires the trailing '/'.

$g_absolute_path
This is the absolute file system path to the MantisBT installation, it is defaulted to the directory where config_defaults_inc.php resides. Requires trailing '/' character (eg. '/usr/apache/htdocs/mantisbt/').

$g_core_path
This is the path to the core directory of your installation. The default value is usually OK, unless you move the 'core' directory out of your webroot. Requires trailing DIRECTORY_SEPARATOR character.

$g_class_path
This is the path to the classes directory which is a sub-directory of core by default. The default value is typically OK. Requires trailing DIRECTORY_SEPARATOR character.

$g_manual_url
This is the url to the MantisBT online manual. Requires trailing '/' character.

Webserver

$g_use_iis
Indicates that IIS (Microsoft Internet Information Server) is the web server on which MantisBT is hosted.
   Default value is normally determined automatically by the system.

$g_session_handler
Session handler. Possible values are as per the list below; the default is php.
   • php: PHP filesystem sessions
   • adodb: Database storage sessions
   • memcached: Memcached storage sessions

$g_session_key
A string to uniquely identify the MantisBT sessions. This should be unique between multiple installations to prevent conflicts. Defaults to MantisBT.

$g_session_save_path
Location where session files are stored. The default is false, meaning the session handler's default location will be used.
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$g_session_validation
Use Session validation (defaults to ON)

WARNING: Disabling this could be a potential security risk

$g_form_security_validation
Form security validation, defaults to ON. This protects against Cross-Site Request Forgery. Some proxy servers may not correctly work with this option enabled because they cache pages incorrectly.

WARNING: Disabling this option is a security risk, it is strongly recommended to leave it ON

Configuration Settings

$g_global_settings
This option contains the list of configuration options that are used to determine if it is allowed for a specific configuration option to be saved to or loaded from the database. Configuration options that are in the list are considered global only and hence are only configurable via the config_inc.php file and defaulted by config_defaults_inc.php file.

Signup and Lost Password

$g_allow_signup
Allow users to signup for their own accounts.

If ON (default), then $g_send_reset_password must be ON as well, and mail settings must be correctly configured (see Email Configuration).

$g_max_failed_login_count
Maximum failing login attempts before the account is locked. Once locked, it’s required to reset the password (lost password). Value resets to zero at each successfully login. Default is OFF.

$g_notify_new_user_created_threshold_min
The minimum global access level required to be notified when a new user registers via the 'signup form'. To pick specific access levels that are not necessarily at the higher end of access levels, use an array of access levels. Default is ADMINISTRATOR.

$g_send_reset_password
If ON (default), users will be sent their password when their account is created or password reset (this requires mail settings to be correctly configured).

If OFF, then the Administrator will have to provide a password when creating new accounts, and the password will be set to blank when reset.

$g_password_confirm_hash_magic_string
TODO

$g_signup_use_captcha
TODO

$g_system_font_folder
TODO
Chapter 5. Configuration

\$g\_font\_per\_captcha

TODO

\$g\_lost\_password\_feature

TODO

\$g\_max\_lost\_password\_in\_progress\_count

TODO

Email

\$g\_administrator\_email

The administrator’s e-mail address. This is mainly prompted to the user in case of errors that might require the intervention of the system administrator. For example, SQL errors. sysadmin@example.com

\$g\_webmaster\_email

The webmaster’s e-mail address. This address is displayed in the bottom of all MantisBT pages. webmaster@example.com

\$g\_from\_email

The email address to be used as the source of all emails sent by MantisBT. noreply@example.com

\$g\_return\_path\_email

Email address to receive bounced emails.

\$g\_enable\_email\_notification

Set to ON to enable email notifications, OFF to disable them. Default is ON. Note that disabling email notifications has no effect on emails generated as part of the user signup process. When set to OFF, the password reset feature is disabled. Additionally, notifications of administrators updating accounts are not sent to users.

\$g\_default\_notify\_flags

Associated with each action a list of flags to control who should be notified. The default will be used if the action is not included in \$g\_notify\_flags or if the flag is not included in the specific action definition. The list of actions include: new, assigned, resolved, bugnote, reopened, closed, deleted, feedback. The default is: \$g\_default\_notify\_flags = array(‘reporter’ => ON, ‘handler’ => ON, ‘monitor’ => ON, ‘bugnotes’ => ON, ‘explicit’ => ON, ‘threshold\_min’ => NOBODY, ‘threshold\_max’ => NOBODY); threshold\_min and threshold\_max are used to send messages to all members of the project whose status is greater than or equal to “threshold\_min” and less than or equal to “threshold\_max”. Sending messages to everyone would set “threshold\_min” to ANYBODY and “threshold\_max” to "NOBODY". To send to all DEVELOPERS and above (as 0.17.5), use DEVELOPER and NOBODY respectively.

\$g\_notify\_flags

Defines the notification flags that are different from the defaults that are defined in \$g\_default\_notify\_flags. The following code overrides the default by disabling notifications to bugnote authors and users monitoring the bug on submitting a new bug: \$g\_notify\_flags[‘new’] = array(‘bugnotes’ => OFF, ‘monitor’ => OFF); Available actions include:

- ‘new’: a new bug has been added
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- 'reopened': the bug has been reopened
- 'deleted': a bug has been deleted
- 'owner': the bug has been assigned a new owner
- 'bugnote': a bugnote has been added to a bug
- 'sponsor': the sponsorship for the bug has changed (added, deleted or updated)
- 'relation': a relationship for the bug has changed (added, deleted or updated)
- 'monitor': a user is added to the monitor list.

In addition, an action can match the bug status in $g_status_enum_string. Note that spaces in the string are replaced with underscores ("_") in creating the action. Thus, using the defaults, 'feedback' would be a valid action.

$g_email_receive_own

This defines whether users should receive emails for their own actions. This option is defaulted to OFF, hence, users do not receive email notification for their own actions. This can be a source for confusions for users upgrading from MantisBT 0.17.x versions, since in these versions users used to get notified of their own actions.

$g_validate_email

Set to OFF to disable email checking. Default is ON.

$g_check_mx_record

Set to OFF to disable email checking. Default is OFF.

$g_allow_blank_email

If ON, allows the user to omit an email address field. If you allow users to create their own accounts, they must specify an email at that point, no matter what the value of this option is. Otherwise they wouldn’t get their passwords.

$g_limit_email_domain

Only allow and send email to addresses in the given domain. This is useful as a security feature and it is also useful in cases like Sourceforge where its servers are only limited to send emails to SourceForge email addresses in order to avoid spam. $g_limit_email_domain = 'users.sourceforge.net';

$g_show_user_email_threshold

This specifies the access level that is needed to have user names hyperlinked with mailto: links. The default value is NOBODY, hence, even administrators won’t have this feature enabled.

$g_mail_priority

If use_x_priority is set to ON, what should the value be? Urgent = 1, Not Urgent = 5, Disable = 0. Default is 3 Some MTAs interpret X-Priority = 0 to mean ‘Very Urgent’

$g_phpMailer_method

Select the method to send mail:
- PHPMAILER_METHOD_MAIL for use of mail() function,
- PHPMAILER_METHOD_SENDMAIL for sendmail (or postfix),
- PHPMAILER_METHOD_SMTP for SMTP,
Default is PHPMAILER_METHOD_MAIL.
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$g_smtp_host

This option specifies the SMTP server to submit messages to. The SMTP server (MTA) then takes on the responsibility of delivering messages to their final destinations.

To use the local SMTP (if available) set this to 'localhost', otherwise use the fully qualified domain name of the remote SMTP server.

It can be either a single hostname, or multiple semicolon-delimited hostnames. You can specify for each host a port other than the default, using format: hostname:port (e.g. "smtp1.example.com:25;smtp2.example.com").

Hosts will be tried in the given order.

Note: This is only used with PHPMAILER_METHOD_SMTP (see $g_phpmailer_method).

The default is 'localhost'.

$g_smtp_port

The default SMTP port to use. This can be overridden individually for specific hosts. (see $g_smtp_host).

Typical SMTP ports are 25 and 587.

The default is 25.

$g_smtp_connection_mode

Allow secure connection to the SMTP server. Valid values are:

- " (empty string): No encryption. This is the default.
- ssl
- tls

$g_smtp_username

SMTP Server Authentication user

Allows the use of SMTP Authentication when using a remote SMTP host.

Note: must be set to " (empty string) if the SMTP host does not require authentication.

Default is ".

$g_smtp_password

This is the password that is used in SMTP Authentication. Not used when $g_smtp_username = "

Default is ".

$g_email_send_using_cronjob

Disables sending of emails as soon as an action is performed. Emails are instead queued and must be sent by running scripts/send_emails.php periodically. This script can only be executed from the CLI, not from the web interface, for security reasons.

Enabling this option can help with performance problems if large numbers of emails are generated or mail delivery is slow by not delaying page execution when sending emails.
Specify whether e-mails should be sent with the category set or not. This is tested with Microsoft Outlook. More testing for this feature + other formats will be added in the future. OFF, EMAILCATEGORYPROJECTCATEGORY (format: [Project] Category). Default is OFF.

Default is str_pad(“, 70, ‘=’); This means 70 equal signs.

Default is str_pad(“, 70, ‘-’); This means 70 minus signs.

Default is 28.

MantisBT uses flags and a threshold system to generate emails on events. For each new event, email is sent to:

- the reporter, qualified by the notify flag ‘reporter’ below
- the handler (or Assigned to), qualified by the notify flag ‘handler’ below
- anyone monitoring the bug, qualified by the notify flag ‘monitor’ below
- anyone who has ever added a bugnote the bug, qualified by the notify flag ‘bugnotes’ below
- anyone assigned to the project whose access level is greater than or equal to the notify flag ‘threshold_min’ and less than or equal to the notify flag ‘threshold_max’ below

From this list, those recipients who meet the following criteria are eliminated:

- the originator of the change, if $g_email_receive_own is OFF
- the recipient either no longer exists, or is disabled
- the recipient has turned their email_on_<new status> preference OFF
- the recipient has no email address entered

Whether to show the MantisBT version at the bottom of each page or not. Default is ON.

This is the language used by default in MantisBT. This may be set to ‘auto’ where MantisBT will try to determine the language from the browser.
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$g_language_choices_arr
This is to be set to an array of languages that are available for users to choose from. The default value includes all languages supported by MantisBT. The administrator can limit the languages available for users to choose from by overriding this value. For example, to support English, French and German include the following code: array( 'english', 'french', 'german' ); Of course, administrators can also add their own languages by translating the strings and creating their own language files. You are encouraged to share any translation work that you do with the MantisBT team. This will ensure that the newly created language file is maintained with future MantisBT releases. All language files reside in the lang/ folder. They are all named according to the following pattern: strings_<language>.txt.

$g_fallback_language
This is the language used if MantisBT cannot determine the language from the browser. It defaults to ‘english’. As of 0.19.0, this may be set to ‘auto’ where MantisBT will try to determine the language from the browser.

Note: If a string does not exist in the active language, the English string is used instead.

Display

$g_window_title
This is the browser window title (<TITLE> tag).

$g_page_title
This is a heading that is displayed in the viewing area of the page.

$g_favicon_image
Path to the favorites icon relative to MantisBT root folder (default 'images/favicon.ico').

$g_logo_image
Path to the logo image relative to MantisBT root folder (default 'images/mantis_logo.gif').

$g_logo_url
The default URL to be associated with the logo. By default this is set to $g_default_home_page (which defaults to My View page). Clicking on the logo from any page in the bug tracker will navigate to the URL specified in this configuration option.

$g_show_footer_menu
Show the menu at the bottom of the page as well as at the top. Default value is OFF.

$g_show_project_menu_bar
This option specifies whether to add menu at the top of the page which includes links to all the projects. The default value is OFF.

$g_show_assigned_names
When a bug is assigned then replace the word "assigned" with the name of the developer in parenthesis. Default is ON.
$g\_show\_priority\_text

Specifies whether to show priority as text (ON) or icon (OFF) in the view all bugs page. Default is OFF (icon).

$g\_priority\_significant\_threshold

Define the priority level at which a bug becomes significant. Significant bugs are displayed with emphasis. Set this value to -1 to disable the feature. The default value is HIGH.

$g\_severity\_significant\_threshold

Define the severity level at which a bug becomes significant. Significant bugs are displayed with emphasis. Set this value to -1 to disable the feature. The default value is MAJOR.

$g\_view\_issues\_page\_columns

This configuration option is used to select the columns to be included in the View Issues page and in which order. If one of the column is not accessible to the logged in user, or corresponds to a disabled feature, then it will be automatically removed from the list at runtime. Hence, the same column list may show a different set of columns based on the logged in user, the currently selected project and enabled features (e.g. sponsorship_total is only shown if the sponsorship feature is enabled).

The supported columns are: selection, edit, id, project_id, reporter_id, handler_id, priority, reproducibility, projection, eta, resolution, fixed_in_version, view_state, os, os_build, build (for product build), platform, version, date_submitted, attachment_count, category, sponsorship_total, severity, status, last_updated, summary, bugnotes_count, description, steps_to_reproduce, additional_info. As for custom fields they can be referenced by adding a 'custom_' to their name (e.g. xyz would be custom_xyz).

By default the following columns are selected: selection, edit, priority, id, sponsorship_total, bugnotes_count, attachment_count, category_id, severity, status, last_updated, summary.

$g\_print\_issues\_page\_columns

This configuration option is used to select the columns to be included in the Print Issues page and in which order. See $g\_view\_issues\_page\_columns for more details about the supported fields.

By default the following columns are selected: selection, priority, id, sponsorship_total, bugnotes_count, attachment_count, category_id, severity, status, last_updated, summary.

$g\_csv\_columns

This configuration option is used to select the columns to be included in the CSV export and in which order. See $g\_view\_issues\_page\_columns for more details about the supported fields.

By default the following columns are selected: id, project_id, reporter_id, handler_id, priority, severity, reproducibility, version, build, projection, category_id, date_submitted, eta, os, os_build, platform, view_state, last_updated, summary, status, resolution, fixed_in_version, duplicate_id.

$g\_excel\_columns

This configuration option is used to select the columns to be included in the CSV export and in which order. See $g\_view\_issues\_page\_columns for more details about the supported fields.

By default the following columns are selected: id, project_id, reporter_id, handler_id, priority, severity, reproducibility, version, build, projection, category_id,
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date_submitted, eta, os, os_build, platform, view_state, last_updated, summary, status, resolution, fixed_in_version, duplicate_id.

$g\_show\_bug\_project\_links

Show project links when in All Projects mode. Default is ON.

$g\_status\_legend\_position

Specifies the position of the status colour legend, can be: STATUS\_LEGEND\_POSITION\_TOP or STATUS\_LEGEND\_POSITION\_BOTTOM. Default is STATUS\_LEGEND\_POSITION\_BOTTOM.

$g\_show\_product\_version

This controls display of the product version in the report, view, update and print issue pages. This flag also applies to other product version related fields like product build, fixed in version, and target version. Valid values are ON, OFF, and AUTO. ON for always displayed, AUTO for displayed when project has versions defined, and OFF for always OFF. The default value is AUTO.

$g\_show\_version\_dates\_threshold

The access level threshold at which users will see the date of release for product versions. Dates will be shown next to the product version, target version and fixed in version fields. Set this threshold to NOBODY to disable the feature. Default value is NOBODY.

$g\_show\_realname

This control will replace the user’s userid with their realname. If it is set to ON, and the real name field has been populated, the replacement will occur. It defaults to OFF.

$g\_show\_avatar

Show the user’s avatar

The current implementation is based on Gravatar²; Users will need to register there the same email address used in this MantisBT installation to have their avatar shown. Please note: upon registration or avatar change, it may take some time for the updated gravatar images to show on sites

The config can be either set to OFF (avatars disabled), or to a string defining the default avatar to be used when none is associated with the user’s email. Valid values are:

- OFF (default)
- ON (equivalent to ‘identicon’)
- One of Gravatar’s defaults (mm, identicon, monsterid, wavator, retro); refer to Image Requests documentation for further details.
- An URL to the default image to be used (for example, “http:/path/to/unknown.jpg” or “%path%images/no_avatar.png”).

$g\_show\_avatar\_threshold

The threshold of users for which MantisBT should attempt to show the avatar (default DEVELOPER). Note that the threshold is related to the user for whom the avatar is being shown, rather than the user who is currently logged in.
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Time

$g_cookie_time_length
Time for ‘permanent’ cookie to live in seconds. This is what is used when a user selects
“save login”. Default is the equivalent of 1 year (30000000).

$g_allow_permanent_cookie
Allow users to opt for a ‘permanent’ cookie when logging in. Controls the display
of the ‘Remember my login in this browser’ checkbox on the login page. See
$g_cookie_time_length.

$g_wait_time
Time to delay between page redirects (in seconds). Users can override this setting in
their user preferences. Default is 2 seconds.

$g_content_expire
Time to wait before document is stale (in minutes). This is used in meta_inc.php. De-
default is 0 (expires right away).

$g_long_process_timeout
This timeout is used by pages which does time consuming operations like upgrad-
ing the database. The default value of 0 disables timeout. Note that this timeout is
specified in seconds.

Date

These variables control how the date is displayed (default is ‘US’ formatting). Go to the
date() function in PHP online manual for detailed instructions on date formatting.

$g_short_date_format
This format is used in the bug listing pages (eg: View Bugs). Default is ‘m-d-y’.

$g_normal_date_format
This format is used in the view/update bug pages, bug notes, manage section, and
news section. Default is ‘m-d-y H:i’.

$g_complete_date_format
This format is used on the top of each page (current time) and the emails that are sent
out. Default is ‘m-d-y H:i T’.

Time Zone

$g_default_timezone
Default timezone to use in MantisBT. This must be set to one of the values specified in
the List of Supported Timezones.

If this config is left blank (default), it will be initialized by calling function
date_default_timezone_get() to determine the default timezone. With PHP >= 5.3,
this will result in a system warning if the timezone has not been defined in php.ini.
Note that this function’s behavior was modified in PHP 5.4.0.
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News

These options are used to control the query that selects the news entries to be displayed.

$g_news_enabled
Indicates whether the news feature should be enabled or disabled. The default is OFF.
The news feature is deprecated in favor of being moved to a plugin.

$g_news_limit_method
Limit the news entry that are displayed by number of entries (BY_LIMIT) or by date
(BY_DATE). The default is BY_LIMIT.

$g_news_view_limit
The limit for the number of news entries to be displayed. This option is only used if
$g_news_limit_method is set to BY_LIMIT.

$g_news_view_limit_days
Specifies the number of dates after which the news are not displayed. This option is
only used if $g_news_limit_method is set to BY_DATE.

$g_private_news_threshold
Specifies the access level required to view private news. The default is DEVELOPER.

Default Preferences

$g_default_new_account_access_level
This is the default access level users are given when their account is created by email.
The default access level is REPORTER. Look in constant_inc.php for other values.

$g_default_bug_view_status
The default viewing status for the new bug (VS_PUBLIC or VS_PRIVATE). The default
is VS_PUBLIC.

$g_default_bugnote_view_status
The default viewing status for the new bugnote (VS_PUBLIC or VS_PRIVATE). The
default is VS_PUBLIC.

$g_default_reminder_view_status
The default viewing status for the new reminders (VS_PUBLIC or VS_PRIVATE). The
default is VS_PUBLIC.

$g_reminder_receive_threshold
The minimum access level for a user to show up in the reminder user picker. Note
that this is the access level for the project for which the issue belongs. The default is
DEVELOPER.

$g_default_bug_resolution
The resolution for a newly created issue. The default is OPEN. Look in
constant_inc.php for other values.

$g_default_bug_severity
The severity for a newly created issue. The default is MINOR. Look in
constant_inc.php for other values.
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$g_default_bug_priority
The priority for a newly created issue. The default is NORMAL. Look in constant_inc.php for other values.

$g_default_bug_reproducibility
The reproducibility for a newly created issue. The default is REPRODUCIBILITY_HAVENOTTRIED. Look in constant_inc.php for other values.

$g_default_bug_projection
The projection for a newly created issue. The default is PROJECTION_NONE. Look in constant_inc.php for other values.

$g_default_bug_eta
The ETA for a newly created issue. The default is ETA_NONE. Look in constant_inc.php for other values.

$g_default_category_for_moves
Default global category to be used when an issue is moved from a project to another that doesn’t have a category with a matching name. The default is 1 which is the "General" category that is created in the default database.

$g_default_limit_view
Number of bugs to show in the View Bugs page. The default value is 50.

$g_default_show_changed
Highlight bugs that have changed during the last N hours. The default value is 6.

$g_hide_status_default
Controls which issues will be displayed in the View Issues page. Default value is CLOSED, implying that all issues at "closed" or higher state will not be shown.

$g_min_refresh_delay
This is the delay between automatic refreshes of the View Issues page in minutes. Make sure refresh delay in user preferences isn’t too short. If a users set their preferences to be lower then it is bumped back up to this minimum value. The default value is 10 minutes.

These settings are used as the default values for preferences for new users. Each user can override these settings through the user preferences form. Default language is set to default site language ($g_default_language).

$g_default_refresh_delay
Default page refresh delay (in minutes). This is for the bug listing pages. Default value is 30 minutes.

$g_default_redirect_delay
Default delay before a user is redirected to a page after being prompted by a message (eg: operational successful). Default value is 2 seconds.

$g_default_bugnote_order
This controls the time order in which bug notes are displayed. It can be either ASC (oldest first, the default) or DESC (newest first).
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$g_default_email_on_new$g_default_email_on_assigned$g_default_email_on_feedback$g_default_email_on_resolved$g_default_email_on_closed

Default user preferences to enable receiving emails when a bug is set to the corresponding status. This option only has an effect if users have the required access level to receive such emails. Default value is ON.

$g_default_email_on_reopened

Default user preferences to enable receiving emails when bugs are re-opened. Default value is ON.

$g_default_email_on_bugnote

Default user preferences to enable receiving emails when bugnotes are added to bugs. Default value is ON.

$g_default_email_on_status$g_default_email_on_priority

Default user preferences to enable receiving emails when status or priority is changed. Default is ON. Note that this option is not implemented.

$g_default_email_on_new_minimum_severity$g_default_email_on_assigned_minimum_severity$g_default_email_on_feedback_minimum_severity$g_default_email_on_resolved_minimum_severity$g_default_email_on_closed_minimum_severity$g_default_email_on_reopened_minimum_severity

Default user preferences to enable filtering based on issue severity. These correspond to the email_on_<status> settings. Default is 'any'.

$g_default_email_on_bugnote_minimum_severity

Default user preference to enable filtering based on issue severity. These correspond to the email_on_bugnote setting. Default is 'any'.

$g_default_email_on_status_minimum_severity$g_default_email_on_priority_minimum_severity

Default user preferences to enable filtering based on issue severity. These correspond to the email_on_status and email_on_priority settings. Default is 'any'. Note that this option is not yet implemented.

See also: Email Notifications

Summary

These are the settings that are used to configuration options related to the Summary page. This page contains statistics about the bugs in MantisBT.

$g_reporter_summary_limit

Limit how many reporters to show in the summary page. This is useful when there are dozens or hundreds of reporters. The default value is 10.

$g_date_partitions

An array of date lengths to count bugs by (in days) for the summary by date. The default is to count for 1, 2, 3, 7, 30, 60, 90, 180, and 365.

$g_summary_category_include_project

Specifies whether category names should be preceded by project names (eg: [Project] Category) when the summary page is viewed for all projects. This is useful in the case where category names are common across projects. The default is OFF.

$g_view_summary_threshold

Specifies the access level required to view the summary page. Default is MANAGER.
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$g\_severity\_multipliers

An array of multipliers which are used to determine the effectiveness of reporters based on the severity of bugs. Higher multipliers will result in an increase in reporter effectiveness. The default multipliers are:

```
$g\_severity\_multipliers = array ( FEATURE => 1,
                               TRIVIAL => 2,
                               TEXT => 3,
                               TWEAK => 2,
                               MINOR => 5,
                               MAJOR => 8,
                               CRASH => 8,
                               BLOCK => 10 );
```

The keys of the array are severity constants from constant_inc.php or from custom_constants_inc.php if you have custom severities defined. The values are integers, typically in the range of 0 to 10. If you would like for a severity to not count towards effectiveness, set the value to 0 for that severity.

$g\_resolution\_multipliers

An array of multipliers which are used to determine the effectiveness of reporters based on the resolution of bugs. Higher multipliers will result in a decrease in reporter effectiveness. The only resolutions that need to be defined here are those which match or exceed $g\_bug\_resolution\_not\_fixed\_threshold. The default multipliers are:

```
$g\_resolution\_multipliers = array( UNABLE\_TO\_DUPLICATE => 2,
                                    NOT\_FIXABLE =>
                                    DUPLICATE =>
                                    NOT\_A\_BUG =>
                                    SUSPENDED =>
                                    WONT\_FIX =>
```

The keys of the array are resolution constants from constant_inc.php or from custom_constants_inc.php if you have custom resolutions defined. Resolutions not included here will be assumed to have a multiplier value of 0. The values are integers, typically in the range of 0 to 10. If you would like for a resolution to not count towards effectiveness, set the value to 0 for that resolution or remove it from the array completely. Note that these resolution multipliers are stacked on top of the severity multipliers. Therefore by default, a user reporting many duplicate bugs at severity level BLOCK will be far worse off than a user reporting many duplicate bugs at severity level FEATURE.

Bugnote

$g\_bugnote\_order

Order to use for sorting bugnotes by submit date. Possible values include ASC for ascending and DESC for descending order. The default value is ASC.

File Upload

MantisBT allows users to upload file attachments and associate them with bugs as well as projects. Bug attachments / project documents can be uploaded to the webserver, database or an FTP server. When bugs are uploaded to the webserver they are uploaded to the path that is configured in the project properties. In case of problems getting the file upload feature to work, check the following resources: PHP Manual.
$g_allow_file_upload
Whether to allow/disallow uploading of attachments. Default value is ON.

$g_file_upload_method
Specify the location for uploading attachments. This can be DISK, DATABASE, or FTP. In case of FTP, the files are saved on the webserver (same as disk) as well as on the specified FTP server. Default value is DATABASE. In case of DISK / FTP upload methods you need to provide the webserver with write access rights to the configured upload path (configured in the project) and temporary upload path (used by PHP).

$g_file_upload_max_num
Maximum number of files that can be uploaded simultaneously.

$g_max_file_size
The maximum file size to allow as an attachment. You may also have to configure your php.ini file to increase the execution time, memory limit, max post size, and max upload size.

$g_file_upload_ftp_server
Address of the FTP server to write to (eg: ftp.example.com). This option is only effective if upload method is FTP.

$g_file_upload_ftp_user
FTP user name for account to be used in uploading files to the FTP server. This account must have read/write access to the FTP server. The default path for the account is used for uploading the files.

$g_file_upload_ftp_pass
Password to use when logging in to the FTP server.

$g_max_file_size
Maximum file size that can be uploaded. Default value is about 5MB. The max file upload size is also affected by the value specified in php.ini. The PHP value is usually defaulted to 2MB.

$g_allowed_files
Files that are allowed. Separate items by commas. eg. "zip,bmp,gif,jpg,txt" If $g_allowed_files is filled in NO other file types will be allowed. If empty it will assume any files are accepted that pass the $g_disallowed_files list.

$g_disallowed_files
Files that are not allowed. Separate items by commas. eg. "php,php3,phtml,html,class,java,exe,pl" $g_disallowed_files takes precedence over $g_allowed_files. It is recommended to disable all extensions that can be executed by your server.

$g_document_files_prefix
Prefix to give to uploaded files when saved to the upload directory. This is used for documents that are attached to projects in order to be able to differentiate them from files that are attached to bugs. The name of the file has the following format prefix-projectcode-filename. The default value is ‘doc’.

$g_preview_attachments_inline_max_size
This limit applies to previewing of image / text attachments. If the attachment size is smaller than the specified value, the attachment is previewed with the issue details.
The previewing can be disabled by setting this configuration to 0. The default value is $256 \times 1024$ (256KB).

$g\_fileinfo\_magic\_db\_file$

Specify the filename of the magic database file. This is used by PHP 5.3.0 (or earlier versions with the fileinfo PECL extension) to guess what the MIME type of a file is. Usually it is safe to leave this setting as the default (blank) as PHP is usually able to find this file by itself.

**HTML**

$g\_html\_valid\_tags$

This is the list of HTML tags that are allowed. Do NOT include href or img tags here. Do NOT include tags that have parameters (eg. ) The HTML code is allowed to enter the database as is. The $g\_allow\_href\_tags$ does not have to be enabled to make URL links. The package will automatically hyperlink properly formatted URLs eg. http://blah.blah/ or mailto://me@more.com/

$g\_hr\_size$

hr size.

$g\_hr\_width$

hr width. Leave off the percentage (%) symbol.

$g\_bottom\_include\_page$

If this page exists it will be displayed at the bottom of every page. It makes a good company branding include page.

$g\_top\_include\_page$

If this page exists it will be displayed at the top of every page. It makes a good company branding include page.

$g\_css\_include\_file$

Set this to point to the CSS file of your choice.

$g\_css\_rtl\_include\_file$

Set this to point to the RTL CSS file of your choice.

$g\_meta\_include\_file$

Set this to point to the META tag file of your choice.

$g\_main\_menu\_custom\_options$

This option will add custom options to the main menu. It is an array of arrays listing the caption, access level required, and the link to be executed. For example: $g\_main\_menu\_custom\_options = array( array( "My Link", MANAGER, 'my_link.php' ), array( "My Link2", ADMINISTRATOR, 'my_link2.php' ) );$ Note that if the caption is found in custom_strings_inc.php, then it will be replaced by the translated string. Options will only be added to the menu if the current logged in user has the appropriate access level.
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Authentication

Global authentication parameters

$g_login_method
Specifies which method will be used to authenticate. It should be one of the following values (defaults to MD5):

• MD5 - user’s password is stored as a hash in the database
• LDAP - authenticates against an LDAP (or Active Directory) server
• BASIC_AUTH
• HTTP_AUTH

In addition, the following deprecated values are supported for backwards-compatibility, and should no longer be used:

• PLAIN - password is stored in plain, unencrypted text in the database
• CRYPT
• CRYPT_FULL_SALT

Note: you may not be able to easily switch encryption methods, so this should be carefully chosen at install time. However, MantisBT will attempt to “fall back” to older methods if possible.

$g_reauthentication
Determines whether MantisBT will require the user to re-authenticate before granting access to the Admin areas after timeout expiration. Defaults to ON

$g_reauthentication_expiry
Duration of the reauthentication timeout, in seconds. Defaults to 5 minutes.

LDAP authentication method parameters

The parameters below are only used if $g_login_method (see above) is set to LDAP.

$g_ldap_server
Specifies the LDAP or Active Directory server to connect to, and must be provided as an URI

   The protocol is optional, can be one of ldap or ldaps, and defaults to ldap.

   The port number is optional, and defaults to 389. If this doesn’t work, try using one of the following standard port numbers: 636 (ldaps); for Active Directory Global Catalog forest-wide search, use 3268 (ldap) or 3269 (ldaps)

   Examples of valid URI:
   ldap.example.com
   ldap.example.com:3268
   ldap://ldap.example.com/
   ldaps://ldap.example.com:3269/

$g_ldap_root_dn
The root distinguished name for LDAP searches. For example, “dc=example, dc=com”.

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$g_ldap_organization

LDAP search filter for the organization, for example, "(organizationname=*Traffic)". Defaults to ".

$g_ldap_protocol_version

The LDAP Protocol Version. If 0, then the protocol version is not set. Defaults to 0.

For Active Directory use protocol version 3.

$g_ldap_follow_referrals

Determines whether the LDAP library automatically follows referrals returned by LDAP servers or not. This maps to LDAP_OPT_REFERRALS ldap library option. Defaults to ON.

For Active Directory, this should be set to OFF.

$g_ldap_bind_dn

The distinguished name of the service account to use for binding to the LDAP server. For example, 'CN=ldap,OU=Administrators,DC=example,DC=com'.

$g_ldap_bind_passwd

The password for the service account used to establish the connection to the LDAP server.

$g_ldap_uid_field

The LDAP field for username. Defaults to uid.

For Active Directory, set to sAMAccountName.

$g_ldap_realname_field

The LDAP field for the user’s real name (i.e. common name). Defaults to cn.

$g_use_ldap_realname

Use the realname specified in LDAP (ON) rather than the one stored in the database (OFF). Defaults to OFF.

Note that MantisBT will update the database with the data retrieved from LDAP when ON.

$g_use_ldap_email

Use the email address specified in LDAP (ON) rather than the one stored in the database (OFF). Defaults to OFF.

Note that MantisBT will update the database with the data retrieved from LDAP when ON.

$g_ldap_simulation_file_path

This configuration option allows replacing the ldap server with a comma-delimited text file for development or testing purposes.

The LDAP simulation file format is as follows:

One line per user
Each line has 4 comma-delimited fields
- username,
- realname,
- e-mail,
- password
Any extra fields are ignored
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On production systems, this option should be set to ". This is the default.

$g_ldap_port

Deprecated since MantisBT release 1.2.0a1.

The LDAP server port number should be defined as part of the URI in $g_ldap_server instead (see above).

Status Settings

$g_bug_submit_status

Status to assign to the bug when submitted. Default value is NEW_.

$g_bug_assigned_status

Status to assign to the bug when assigned. Default value is ASSIGNED.

$g_bug_reopen_status

Status to assign to the bug when reopened. Default value is FEEDBACK.

$g_bug_feedback_status

Status to assign to the bug when feedback is required from the issue reporter. Once the reporter adds a note the status moves back from feedback to $g_bug_assigned_status or $g_bug_submit_status based on whether the bug assigned or not.

$g_reassign_on_feedback

When a note is added to a bug currently in $g_bug_feedback_status, and the note author is the bug’s reporter, this option will automatically set the bug status to $g_bug_submit_status or $g_bug_assigned_status if the bug is assigned to a developer. Defaults to enabled.

$g_bug_reopen_resolution

Resolution to assign to the bug when reopened. Default value is REOPENED.

$g_auto_set_status_to_assigned

Automatically set status to $g_bug_assigned_status whenever a bug is assigned to a person. Installations where assigned status is to be used when the defect is in progress, rather than just put in a person’s queue should set it to OFF. Default is ON.

$g_bug_resolved_status_threshold

Bug is resolved, ready to be closed or reopened. In some custom installations a bug maybe considered as resolved when it is moved to a custom (FIXED OR TESTED) status.

$g_bug_resolution_fixed_threshold

Threshold resolution which denotes that a bug has been resolved and successfully fixed by developers. Resolutions above this threshold and below $g_bug_resolution_not_fixed_threshold are considered to be resolved successfully. Default value is FIXED.
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$g\_bug\_resolution\_not\_fixed\_threshold

Threshold resolution which denotes that a bug has been resolved without being successfully fixed by developers. Resolutions above this threshold are considered to be resolved in an unsuccessful way. Default value is UNABLE\_TO\_DUPLICATE.

$g\_bug\_readonly\_status\_threshold$g\_update\_readonly\_bug\_threshold

Bug becomes readonly if its status is \( \geq \) $g\_bug\_readonly\_status\_threshold$. The bug becomes read/write again if re-opened and its status becomes less than this threshold. The default is RESOLVED. Once the bug becomes readonly, a user with an access level greater than or equal to $g\_update\_readonly\_bug\_threshold$ can still edit the bug.

$g\_status\_enum\_workflow

'\texttt{status_enum\_workflow}' defines the workflow, and reflects a simple 2-dimensional matrix. For each existing status, you define which statuses you can go to from that status, e.g. from NEW, you might list statuses '10:new,20:feedback,30:acknowledged' but not higher ones. The default is no workflow, where all states are accessible from any others.

$g\_report\_bug\_threshold

This is the access level required to open a bug. The default is REPORTER.

$g\_update\_bug\_threshold

This is the access level generally required to update the content of a bug. The default is UPDATER.

$g\_handle\_bug\_threshold

This is the access level generally required to be access level needed to be listed in the assign to field. The default is DEVELOPER. If a more restrictive setting can be determined from $g\_set\_status\_threshold$, it will be used.

$g\_update\_bug\_status\_threshold$g\_set\_status\_threshold

These settings control the access level required to promote a bug to a new status once the bug is opened.$g\_set\_status\_threshold$ is an array indexed by the status value that allows a distinct setting for each status. It defaults to blank. If the appropriate status is not defined above, $g\_update\_bug\_status\_threshold$ is used instead. The default is DEVELOPER.

$g\_allow\_close\_immediately

If set, bugs are allowed to be resolved and closed in one action. The default is OFF.

$g\_allow\_reporter\_close

If set, the bug reporter is allowed to close their own bugs, regardless of their access level. The default is OFF.

$g\_allow\_reporter\_reopen

If set, the bug reporter is allowed to reopen their own bugs once resolved, regardless of their access level. This allows the reporter to disagree with the resolution. The default is ON.

See also: Customizing Status Values
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Filters

$g_filter_by_custom_fields
Show custom fields in the filter dialog and use these in filtering. Defaults to ON.

$g_filter_custom_fields_per_row
The number of custom fields to display per row. The default is 7. The value should be greater than or equal to 7.

$g_view_filters = SIMPLE_DEFAULT;
Controls the display of the filter pages. Possible values are:
• SIMPLE_ONLY - only simple view
• ADVANCED_ONLY - only advanced view (allows multiple value selections)
• SIMPLE_DEFAULT - defaults to simple view, but shows a link for advanced
• ADVANCED_DEFAULT - defaults to advanced view, but shows a link for simple

$g_dhtml_filters = OFF;
Controls the use of DHTML filters that will display the filter in view page using DHTML and javascript. Default is OFF. This requires $g_use_javascript to be set to ON. This may not work in all browsers as it requires xmlhttprequest functionality.

$g_create_permalink_threshold
The threshold required for users to be able to create permalinks (default DEVELOPER). To turn this feature off use NOBODY.

$g_create_short_url
The service to use to create a short URL. The %s will be replaced by the long URL. By default http://www.tinyurl service is used to shorten URLs.

Misc

$g_user_login_valid_regex
The regular expression to use when validating new user login names. The default regular expression allows a-z, A-Z, 0-9, +, -, dot, space and underscore. If you change this, you may want to update the ERROR_USER_NAME_INVALID string in the language files to explain the rules you are using on your site.

See Wikipedia\textsuperscript{9} for more details about regular expressions. For testing regular expressions, use Rubular\textsuperscript{10}.

$g_monitor_bug_threshold
Access level needed to monitor bugs. The default value is REPORTER.

$g_monitor_add_others_bug_threshold
Access level needed to add other users to the list of users monitoring a bug. The default value is DEVELOPER.

$g_monitor_delete_others_bug_threshold
Access level needed to delete other users from the list of users monitoring a bug. The default value is DEVELOPER.
$g\_limit\_reporters
Limit reporters to only viewing bugs that they report.

$g\_allow\_reporter\_close
Allow reporters to close the bugs they reported.

$g\_allow\_close\_immediately
Allow developers and above to close bugs immediately when resolving bugs.

$g\_delete\_bug\_threshold
Allow the specified access level and above to delete bugs.

$g\_bug\_move\_access\_level
Allow the specified access level and above to move bugs between projects.

$g\_allow\_account\_delete
Allow users to delete their own accounts.

$g\_allow\_anonymous\_login
Enable anonymous access to Mantis. You must also specify $g\_anonymous\_account as the account which anonymous users will browse Mantis with. The default setting is OFF.

$g\_anonymous\_account
Define the account which anonymous users will assume when using Mantis. This account is considered by Mantis to be protected from modification. In other words, this account can only be modified by users with an access level equal to or higher than $g\_manage\_user\_threshold. Anonymous users will not be able to adjust preferences or change account settings like normal users can.

You will need to create a new account to use for this $g\_anonymous\_account setting. When creating the account you should specify a password, email address and so forth in the same way you’d create any other account. It is suggested that the access level for this account be set to VIEWER or some other read only level.

The anonymous user account will not receive standard notifications and can not monitor issues.

The default setting is blank/undefined. You only need to define this setting when $g\_allow\_anonymous\_login is set to ON.

$g\_cvs\_web
This allows for quick linking to CVS files via CVSweb or ViewCVS.

$g\_bug\_link\_tag
If a number follows this tag it will create a link to a bug. Default is ‘#’.

- ‘#’: a link would be #45
- ‘bug:’ a link would be bug:98

$g\_bugnote\_link\_tag
If a number follows this tag it will create a link to a bug note. Default is ‘~’.

- ‘~’: a link would be ~45
- ‘bugnote:’ a link would be bugnote:98
$g\_show\_timer

Time page loads. Shows at the bottom of the page.

$g\_show\_queries\_count

Shows the total number/unique number of queries executed to serve the page. Default is ON.

$g\_show\_queries\_list

Shows the list of all queries that are executed in chronological order from top to bottom. This option is only effective when $g\_show\_queries\_count is ON. Default is OFF. WARNING: Potential security hazard. Only turn this on when you really need it (for debugging or profiling)

$g\_register\_globals

If your register_globals is Off then set this to OFF. Check your register_globals setting in php.ini or phpinfo().

$g\_enable\_project\_documentation

Specifies whether to enable support for project documents or not. Default is OFF. This feature is deprecated and is expected to be moved to a plugin in the future.

$g\_admin\_site\_threshold

Threshold at which a user is considered to be a site administrator. These users have the highest level of access to your Mantis installation. This access level is required to change key Mantis settings (such as server paths) and perform other administrative duties. You may need to change this value from the default of ADMINISTRATOR if you have defined a new access level to replace the default ADMINISTRATOR level in constant_inc.php.

```
Warning

This is a potentially dangerous configuration option. Users at or above this threshold value will have permission to all aspects of Mantis including the admin/ directory. With this access level, users can damage your installation of Mantis, destroy your database or have elevated access to your server.

DO NOT CHANGE THIS VALUE UNLESS YOU ABSOLUTELY KNOW WHAT YOU'RE DOING. BE VERY CAREFUL WITH CHANGING THIS CONFIGURATION VALUE FROM THE DEFAULT SETTING.
```

$g\_view\_configuration\_threshold

Threshold for users to view the raw system configurations as stored in the database. The default value is ADMINISTRATOR.

$g\_set\_configuration\_threshold

Threshold for users to set the system configurations generically via MantisBT web interface. WARNING: Users who have access to set configuration via the interface MUST be trusted. This is due to the fact that such users can set configurations to PHP code and hence there can be a security risk if such users are not trusted. The default value is ADMINISTRATOR.

$g\_csv\_add\_bom

Add Byte Order Mark (BOM) at the beginning of the file as it helps Excel display the file in UTF-8. The default value is OFF;
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Cookies

$g_cookie_path
Specifies the path under which a cookie is visible.

All scripts in this directory and its sub-directories will be able to access MantisBT cookies.

Default value is ‘/’. It is recommended to set this to the actual MantisBT path.

$g_cookie_domain
The domain that the MantisBT cookies are available to.

$g_cookie_version
Version of the view_all_page cookie.

This is used as a prefix for cookies that should be expired when the code is changed in a certain way. The developers would increase this version when necessary, which in effect will cause the creation of new cookies that are compatible with the new code.

It is not expected for the user to need to change this setting.

$g_cookie_prefix
Prefix for all MantisBT cookies

This should be an identifier which does not include spaces or periods, and should be unique per MantisBT installation, especially if $g_cookie_path is not restricting the cookies’ scope to the actual MantisBT directory.

It applies to the cookies listed below. Their actual names are calculated by prepending the prefix, and it is not expected for the user to need to change these.

• $g_string_cookie
• $g_project_cookie
• $g_view_all_cookie
• $g_manage_users_cookie
  Stores the filter criteria for the Manage Users page
• $g_manage_config_cookie
  Stores the filter criteria for the Manage Config Report page
• $g_logout_cookie
• $g_bug_list_cookie

Database Tables

MantisBT enables users to configure a table prefix for all its tables. This is useful to be able to have multiple MantisBT installation in the same database. The advantage of that is for users who are limited by their ISP to have one database.

$g_db_table_prefix
Specifies the prefix to be use for all table names. The default value is ‘mantis’. If you override the default prefix, make sure to update doc/db_generate.sql file before generating your database. The other option is to import db_generate.sql as is, then rename the tables to match the new prefix.
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The prefix is used to help make sure table names are unique. This is useful for users who are limited to one database.

Note: The table name for each of the tables is stored in a variable which is calculated based on this configuration option. If you change the prefix you have to make sure these variables are re-calculated (by adding these calculation statements to config_inc.php after assigning the new prefix). An example of these variables is: $g_mantis_bug_file_table

Speed Optimisation

$g_compress_html
This option is used to enable buffering/compression of HTML output if the user’s browser supports it. Default value is ON. This option will be ignored in the following scenarios:

- If php.ini has zlib.output_compression enabled.
- If php.ini has output_handler set to a handler.
- If PHP does not include the zlib extension (PHP 4.3.0 and later include zlib extension by default).

You can check the loaded modules in your PHP by running "php -m" on the command line, or by using php_info() command in a php script.

$g_usePersistentConnections
Use persistent database connections, setting this to ON will open the database once per connection, rather than once per page. There might be some scalability issues here and that is why it is defaulted to OFF.

Reminders

Sending reminders is a feature where a user can notify / remind other users about a bug. In the past, only selected users like the managers, or developers would get notified about bugs. However, these people can not invite other people (through MantisBT) to look at or monitor these bugs.

This feature is useful if the Manager needs to get feedback from testers / requirements team about a certain bug. It avoid needing this person to do this manual outside MantisBT. It also records the history of such reminders.

$g_store_reminders
Specifies if reminders should be stored as bugnotes. The bugnote will still reflect that it is a reminder and list the names of users that got it. Default is ON.

$g_reminder_recipients_monitor_bug
Specifies if users who receive reminders about a bug, should be automatically added to the monitor list of that bug. Default is ON.
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**Bug History**

Bug history is a feature where MantisBT tracks all modifications that are made to bugs. These include everything starting from its creation, till it is closed. For each change, the bug history will record the time stamp, user who made the change, field that changed, old value, and new value.

Independent of these settings, MantisBT will always track the changes to a bug and add them to its history.

$g\_history\_default\_visible
Make the bug history visible by default. If this option is not enabled, then the user will have to click on the Bug History link to see the bug history. Default is ON.

$g\_history\_order
Show bug history entries in ascending or descending order. Default value is ‘ASC’.

**Sponsorship**

$g\_enable\_sponsorship
enable/disable the whole issue sponsorship feature. The default os OFF.

$g\_sponsorship\_currency
The currency string used for all sponsorships. The default is ‘US$’.

$g\_minimum\_sponsorship\_amount
The minimum sponsorship amount that can be entered. If the user enters a value less than this, an error will be flagged. The default is 5.

$g\_view\_sponsorship\_total\_threshold
The access level threshold needed to view the total sponsorship for an issue by all users. The default is VIEWER.

$g\_view\_sponsorship\_details\_threshold
The access level threshold needed to view the details of the sponsorship (i.e., who will donate what) for an issue by all users. The default is VIEWER.

$g\_sponsor\_threshold
The access level threshold needed to allow user to sponsor issues. The default is REPORTER. Note that sponsoring user must have their email set in their profile.

$g\_handle\_sponsored\_bugs\_threshold
The access level required to be able to handle sponsored issues. The default is DEVELOPER.

$g\_assign\_sponsored\_bugs\_threshold
The access level required to be able to assign a sponsored issue to a user with access level greater or equal to ‘handle_sponsored_bugs_threshold’. The default is MANAGER.
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Source Control Integration

Note that the script expects to be invoked with UTF-8 input. If you have a program which outputs text in a different encoding the results may be incorrect.

$g_source_control_account

Account to be used by the source control script. The account must be enabled and must have the appropriate access level to add notes to all issues even private ones (DEVELOPER access recommended). The default is “” (not set).

$g_source_control_notes_view_status

This sets whether the note added will be public or private (VS_PUBLIC or VS_PRIVATE). For open source projects it is expected that the notes be public, however, for non-open source it will probably be VS_PRIVATE. The default is VS_PRIVATE.

$g_source_control_set_status_to

If set to a status, then after a checkin, the issue status is set to the specified status, otherwise if set to OFF, the issue status is not affected. The default is OFF.

$g_source_control_regexp

Regular expression used to detect issue ids within checkin comments. See preg_match_all() documentation for more details on setting a pattern. The default is "/\bissue \[#\]{0,1}(\d+)\b/i" (e.g., issue #745).

Custom Fields

$g_manage_custom_fields_threshold

Access level needed to manage custom fields. The default is ADMINISTRATOR.

$g_custom_field_link_threshold

Access level needed to link a custom field to a project. The default is MANAGER.

$g_custom_field_edit_after_create

This flag determines whether to start editing a custom field immediately after creating it, or return to the definition list. The default is ON (edit the custom field after creating).

My View Settings

$g_my_view_boxes

This is an array of values defining the order that the boxes to be shown. A box that is not to be shown can have its value set to 0. The default is:

$g_my_view_boxes = array (‘assigned’ => ‘1’,
               ‘unassigned’ => ‘2’,
               ‘reported’ => ‘3’,
               ‘resolved’ => ‘4’,
               ‘recent_mod’ => ‘5’,
               ‘monitored’ => ‘6’
             );

If you want to change the definition, copy the default value and apply the changes.
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$g_my_view_bug_count
Number of bugs shown in each box. The default is 10.

$g_default_home_page
Default page to transfer to after Login or Set Project. The default is 'my_view_page.php'. An alternative would be 'view_all_bugs_page.php' or 'main_page.php'.

Relationship Graphs

$g_relationship_graph_enable
This enables the relationship graphs feature where issues are represented by nodes and relationships as links between such nodes. Possible values are ON or OFF. Default is OFF.

This feature requires installing GraphViz\textsuperscript{12} (all OSes except Windows) or WinGraphviz\textsuperscript{13} (only Windows). Refer to the notes near the top of core/graphviz_api.php and core/relationship_graph_api.php for more information.

$g_relationship_graph_fontname
Font name and size, as required by Graphviz. If Graphviz fails to run for you, you are probably using a font name that gd PHP extension can't find. On Linux, try the name of the font file without the extension. The default value is 'Arial'.

$g_relationship_graph_fontsize
Font size, default is 8.

$g_relationship_graph_orientation
Default dependency orientation. If you have issues with lots of children or parents, leave as 'horizontal', otherwise, if you have lots of "chained" issue dependencies, change to 'vertical'. Default is 'horizontal'.

$g_relationship_graph_max_depth
Max depth for relation graphs. This only affects relationship graphs, dependency graphs are drawn to the full depth. The default value is 2.

$g_relationship_graph_view_on_click
If set to ON, clicking on an issue on the relationship graph will open the bug view page for that issue, otherwise, will navigate to the relationship graph for that issue.

$g_dot_tool
The full path for the dot tool. The webserver must have execute permission to this program in order to generate relationship graphs. This configuration option is not relevant for Windows. The default value is '/usr/bin/dot'.

$g_neato_tool
The full path for the neato tool. The webserver must have execute permission to this program in order to generate relationship graphs. This configuration option is not relevant for Windows. The default value is '/usr/bin/neato'.
Sub-Projects

$g_show_extended_project_browser
Whether to use the extended project selector, where top level projects have their separate selector, and sub-projects have another. If OFF, there will be one combo box at the top right to select the project/sub-project. If ON, there will be two. The default is OFF.

$g_subprojects_inherit_versions
Whether sub-projects should inherit versions from parent projects. For project X which is a sub-project of A and B, it will have versions from X, A and B. The default value is ON.

$g_subprojects_inherit_categories
Whether sub-projects should inherit categories from parent projects. For project X which is a sub-project of A and B, it will have categories from X, A and B. The default value is ON.

Field Visibility

$g_enable_eta
Enable or disable usage of 'ETA' field. Default value is OFF.

$g_enable_projection
Enable or disable usage of 'Projection' field. Default value is OFF.

$g_show_product_build
Enable or disable usage of 'Product Build' field. Default is OFF.

$g_bug_report_page_fields
An array of fields to show on the issue view page. Some of these fields may be filtered out if their features are disabled or if the user doesn’t have access to view them. See BUG_FIELD_* in constant_inc.php for all possible values.

The following fields cannot be included: BUG_FIELD_ID, BUG_FIELD_PROJECT, BUG_FIELD_DATE_SUBMITTED, BUG_FIELD_LAST_UPDATED, BUG_FIELD_TAGS, BUG_FIELD_FIXED_IN_VERSION, BUG_FIELD_PROJECTION, BUG_FIELD_ETA, BUG_FIELD_REPORTER.

The following fields must be included: BUG_FIELD_CATEGORY, BUG_FIELD_SUMMARY, BUG_FIELD_DESCRIPTION.

To overload these settings per project, then the settings must be included in the database through the generic configuration form. Note that the array in the database should consistent of the values of the constants below. For example, replace BUG_FIELD_CATEGORY with 'category_id'. See constant_inc.php for the values of the constants.

$g_bug_view_page_fields
An array of fields to show on the issue view page. Some of these fields may be filtered out if their features are disabled or if the user doesn’t have access to view them. See BUG_FIELD_* in constant_inc.php for all possible values.

To overload this setting per project, then the setting must be included in the database through the generic configuration form. Note that the array in the database should consistent of the values of the constants. For example, replace
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BUG_FIELD_CATEGORY with ‘category_id’. See constant_inc.php for the values of the constants.

$g_bug_print_page_fields
An array of fields to show on the issue print page. Some of these fields may be filtered out if their features are disabled or if the user doesn’t have access to view them. See BUG_FIELD_* in constant_inc.php for all possible values.

$g_bug_update_page_fields
An array of fields to show on the issue update page. Some of these fields may be filtered out if their features are disabled or if the user doesn’t have access to view them. See BUG_FIELD_* in constant_inc.php for all possible values.

To overload this setting per project, then the setting must be included in the database through the generic configuration form. Note that the array in the database should consistent of the values of the constants. For example, replace BUG_FIELD_CATEGORY with ‘category_id’. See constant_inc.php for the values of the constants.

$g_bug_change_status_page_fields
An array of fields to show on the issue change status page. Some of these fields may be filtered out if their features are disabled or if the user doesn’t have access to view them. See BUG_FIELD_* in constant_inc.php for all possible values.

To overload this setting per project, then the setting must be included in the database through the generic configuration form. Note that the array in the database should consistent of the values of the constants. For example, replace BUG_FIELD_CATEGORY with ‘category_id’. See constant_inc.php for the values of the constants.

System Logging

The system logging interface is used to extract detailed debugging information for the MantisBT system. It can also serve as an audit trail for user actions.

$g_log_level
This controls the type of logging information recorded. Possible values include:

LOG_AJAX
logs AJAX events

LOG_DATABASE
logs database events and executed queries

LOG_EMAIL
logs issue id, message type and recipients for all emails sent

LOG_EMAIL_RECIPIENT
logs the details of email recipient determination. Each user id is listed as well as why they are added, or deleted from the recipient list

LOG_FILTERING
logs filter operations
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LOG_LDAP
logs the details of LDAP operations

Multiple logging levels can be combined by using an inclusive or operator, e.g.
LOG_EMAIL | LOG_EMAIL_RECIPIENT

$g_log_destination
specifies the file where the log data goes. This file must be writable by the web server
userid running MantisBT. Right now, only "file:<file path>" is supported. For exam-
ple, $g_log_destination = 'file:/tmp/mantis_log'; See http://www.php.net/error_log
for details.

Time Tracking

$g_time_tracking_enabled
Turns Time Tracking features ON or OFF - Default is OFF

$g_time_tracking_without_note
Allow time tracking to be recorded without writing some text in the associated bug-
note - Default is ON

$g_time_tracking_with_billing
Adds calculation links to workout how much time has been spent between a particular
time frame. Currently it will allow you to enter a cost/hour and will work out some
billing information. This will become more extensive in the future. Currently it is more
of a proof of concept.

$g_time_tracking_stopwatch
Instead of a text field turning this option on places a stopwatch on the page with
Start/Stop and Reset buttons next to it. You must have $g_use_javascript switched on
for this to take effect. A bit gimmicky, but who cares.

$g_time_tracking_view_threshold
Access level required to view time tracking information - Default DEVELOPER.

$g_time_tracking_edit_threshold
Access level required to add/edit time tracking information (If you
give a user $g_time_tracking_edit_threshold you must give them
$g_time_tracking_view_threshold aswell) - Default DEVELOPER.

$g_time_tracking_reporting_threshold
Access level required to run reports (not completed yet) - Default MANAGER.

SOAP API

MantisBT exposes a SOAP API which allows remote clients to interact with MantisBT
and perform many of the usual tasks, such as reporting issues, running filtered searches
and retrieving attachments. The SOAP API is enabled by default and available at
/api/soap/mantisconnect.php below your installation root.

A WSDL file which describes the web service is available at
/api/soap/mantisconnect.php?wsdl below your installation root.
Chapter 5. Configuration

The following options are used to control the behaviour of the MantisBT SOAP API and are usually configured in api/soap/mc_config_inc.php.

$g_mc_use_nusoap
Flag controlling the library to use for SOAP communication. When the native PHP extension is available this flag default to OFF, which means that nusoap will not used. The native extension has the advantage of being faster, more memory efficient and maintained to work with recent versions on PHP. When the extension is not available MantisBT falls back to using nusoap.

$g_mc_readonly_access_level_threshold
Minimum global access level required to access webservice for readonly operations.

$g_mc_readwrite_access_level_threshold
Minimum global access level required to access webservice for read/write operations.

$g_mc_admin_access_level_threshold
Minimum global access level required to access the administrator webservices.

Disabling the SOAP API
If you wish to temporarily disable the SOAP API it is sufficient to set the specific access thresholds to NOBODY in api/soap/mc_config_inc.php:

```
    $g_mc_readonly_access_level_threshold = NOBODY;
    $g_mc_readwrite_access_level_threshold = NOBODY;
    $g_mc_admin_access_level_threshold = NOBODY;
```

While the SOAP API will still be accessible, it will not allow users to retrieve or modify data.

MantisTouch
These options are used to integrate with MantisTouch (http://www.mantistouch.org) to provide experience targeted to mobile devices.

$g_mantistouch_url
The MantisTouch URL to direct to. The %s will be replaced by the contents of $g_path configuration option. A blank value will disable redirection. The %s is not required when redirecting to MantisTouch instances that point to a single MantisBT instance and hence have a hard-coded URL. Examples include: ” (default), ‘http://mantisbt.mobi?url=%s’, and ‘http://MyOwnMantisTouch.com/’.

Notes
5. http://php.net/timezones
7. http://php.net/date.timezone
Chapter 5. Configuration

Chapter 6. Page descriptions

Login page

Just enter your username and password and hit the login button. There is also a Save Login checkbox to have the package remember that you are logged in between browser sessions. You will have to have cookies enabled to login. If the account doesn’t exist, the account is disabled, or the password is incorrect then you will remain at the login page. An error message will be displayed. The administrator may allow users to sign up for their own accounts. If so, a link to Signup for your own account will be available. The administrator may also have anonymous login allowed. Anonymous users will be logged in under a common account. You will be allowed to select a project to work in after logging in. You can make a project your default selection from the Select Project screen or from your Account Options. Signup. Here you can signup for a new account. You must supply a valid email address and select a unique username. Your randomly generated password will be emailed to your email account. If MantisBT is setup so that the email password is not to be emailed, newly generated accounts will have an empty password.

Main page

This is the first page you see upon logging in. It shows you the latest news updates for the bugtracker. This is a simple news module (based off of work by Scott Roberts) and is to keep users abreast of changes in the bugtracker or project. Some news postings are specific to projects and others are global across the entire bugtracker. This is set at the time of posting in the Edit News section. The number of news posts is controlled by a global variable. When the number of posts is more than the limit, a link to show "older news" is displayed at the bottom. Similarly a "newer news" is displayed when you have clicked on "older news". There is an Archives option at the bottom of the page to view all listings. Archives. A title/date/poster listing of ALL past news articles will be listed here. Clicking on the link will bring up the specified article. This listing will also only display items that are either global or specific to the selected project.

View Issues page

Here we can view the issue listings. The page has a set of viewing filters at the top and the issues are listed below. Filters. The filters control the behavior of the issues list. The filters are saved between browsing sessions but do not currently save sort order or direction. If the number of issues exceeds the "Show" count in the filter a set of navigation to go to "First", "Last", "Previous", "Next" and specific page numbers are added. The Search field will look for simple keyword matches in the summary, description, steps to reproduce, additional information, issue id, or issue text id fields. It does not search through issue notes. Issue List - The issues are listed in a table and the attributes are listed in the following order: priority, id, number of issue notes, category, severity, status, last updated, and summary. Each (except for number of issue notes) can be clicked on to sort by that column. Clicking again will reverse the direction of the sort. The default is to sort by last modification time, where the last modified issue appears at the top. The issue id is a link that leads to a more detailed report about the issue. You can also add issue notes here. The number in the issue note count column will be bold if an issue note has been added in the specified time frame. The addition of an issue note will make the issue note link of the issue appear in the unvisited state. The text in the "Severity" column will be bold if the severity is major, crash, or block and the issue not resolved. The text in the "Updated" column will be bold if the issue has changed in the last "Changed(hrs)" field which is specified in the viewing filters. Each table row is color coded according to the issue status. The colors can be customised through MantisBT Configuration Severities block - prevents further work/progress from being made crash - crashes the application or blocking, major - major issue, minor - minor issue, tweak - needs tweaking, text - error in the text, trivial - being nit picky, feature - re-
questing new feature - Status new - new issue, feedback - issue requires more information from reporter, acknowledged - issue has been looked at but not confirmed or assigned, confirmed - confirmed and reproducible (typically set by an Updater or other Developer), assigned - assigned to a Developer, resolved - issue should be fixed, waiting on confirmation of fix, closed - issue is closed, Moving the mouse over the status text will show the resolution as a title. This is rendered by some browsers as a bubble and in others as a status line text.

**Issue View page**

Here is the simple listing of the issue report. Most of the fields are self-explanatory. "Assigned To" will contain the developer assigned to handle the issue. Priority is fully functional but currently does nothing of importance. Duplicate ID is used when an issue is a duplicate of another. It links to the duplicate issue which allows users to read up on the original issue report. Below the issue report is a set of buttons that a user can select to work on the issue.

- Update Issue - brings up a page to edit all aspects of the issue
- Assign to - in conjunction with the dropdown list next top the button, this is a shortcut to change the assignment of an issue
- Change Status to - in conjunction with the dropdown list next top the button, this is a shortcut to change the status of an issue. Another page (Change Status) will be presented to allow the user to add notes or change relevant information
- Monitor / Unmonitor Issue - allows the user to monitor any additions to the issue by email
- Create Clone - create a copy of the current issue. This presents the user with a new issue reporting form with all of the information in the current issue filled in. Upon submission, a new issue, related to the current issue, will be created.
- Reopen Issue - Allows the user to re-open a resolved issue
- Move Issue - allows the user to move the issue to another project
- Delete Issue - Allows the user to delete the issue permanently. It is recommended against deleting issues unless the entry is frivolous. Instead issues should be set to resolved and an appropriate resolution category chosen.

A panel is provided to view and update the sponsorship of an issue. Another panel is provided to view, delete and add relationships for an issue. Issues can have a parent/child relationship, where the user is warned about resolving a parent issue before all of the children are resolved. A peer relationship is also possible. Below this, there may be a form for uploading file attachments. The Administrator needs to configure the bugtracker to handle file uploads. If uploading to disk is selected, each project needs to set its own upload path. Issue notes are shown at the bottom of the issue report. A panel to add issue notes is also shown.

**Issue Change Status page**

This page is used to change the status of an issue. A user can add an issue note to describe the reason for change. In addition, the following fields may be displayed for update:

- Resolution and Duplicate ID - for issues being resolved or closed
- Issue Handler (Assigned to)
- any Custom Fields that are to be visible on update or resolution
- Fixed in Version - for issues being resolved
• Close Immediately - to immediately close a resolved issue

**Issue Edit page**

The layout of this page resembles the Simple Issue View page, but here you can update various issue fields. The Reporter, Category, Severity, and Reproducibility fields are editable but shouldn’t be unless there is a gross mis-categorization. Also modifiable are the Assigned To, Priority, Projection, ETA, Resolution, and Duplicate ID fields. As per version 0.18.0, the user can also add an issue note as part of an issue update.

**My Account Page**

This page changes user alterable parameters for the system. These selections are user specific. My Account allows the user to change their password, screen name, and email address. It also reports the user’s access levels on the current and other projects.

**Preferences**

This sets the following information:

• Default project
• whether the pages used for reporting, viewing, and updating are the simple or advanced views
• the delay in minutes between refreshes of the view all issues page
• the delay in seconds when redirecting from a confirmation page to the display page
• the time order in which notes will be sorted
• whether to filter email messages based on type of message and severity
• the number of notes to append to notification emails
• the default language for the system. The additional setting of "auto" will use the browser’s default language for the system.

**Profiles**

Profiles are shortcuts to define the values for Platform, OS, and version. This page allows you to define and edit personal shortcuts.

**System Management Pages**

A number of pages exist under the "Manage" link. These will only be visible to those who have an appropriate access level.

**Manage Users**

This page allow an administrator to manage the users in the system. It essentially supplies a list of users defined in the system. The user names are linked to a page where you can change the user’s name, access level, and projects to which they are assigned. You can
also reset their passwords through this page. At the top, there is also a list of new users
(who have created an account in the last week), and accounts where the user has yet to log
in. New users are created using the "Create User" link above the list of existing users. Note
that the username must be unique in the system. Further, note that the user’s real name (as
displayed on the screen) cannot match another user’s user name.

Manage Projects Page
This page allows the user to manage the projects listed in the system. Each project is listed
along with a link to manage that specific project. The specific project pages allow the user
to change:

- the project name
- the project description
- its status
- whether the project is public or private. Private projects are only visible to users who are
  assigned to it or users who have the access level to automatically have access to private
  projects (eg: administrators).
- a file directory used to store attachments for issues and documents associated with the
  project. This folder is located on the webserver, it can be absolute path or path relative
to the main MantisBT folder. Note that this is only used if the files are stored on disk or
  via FTP. In case of FTP, the cached version that is saved on the webserver, is stored in the
  specified path.
- common subprojects. These are other projects who can be considered a sub-project of
  this one. They can be shared amongst multiple projects. For example, a "documentation"
  project may be shared amongst several development projects.
- project categories. These are used to sub-divide the issues stored in the system.
- project versions. These are used to create ChangeLog reports and can be used to filter
  issues. They are used for both the Found In and Fixed In versions.
- Custom Fields linked to this project
- Users linked to this project. Here is the place where a user’s access level may be up-
graded or downgraded depending on their particular role in the project.

Manage Custom Fields
This page is the base point for managing custom fields. It lists the custom fields defined
in the system. There is also a place to enter a new field name to create a new field. The
"Edit" links take you to a page where you can define the details of a custom field. These
include it’s name, type, value, and display information. On the edit page, the following
information is defined to control the custom field:

- name
- type. Possible values are listed below.
- Value constraints (Possible values, default value, regular expression, minimum length,
  maximum length).
- Access (who can read and write the field based on their access level).
- Display control (where the field will show up and must be filled in
All fields are compared in length to be greater than or equal to the minimum length, and less than or equal to the minimum length, unless these values are 0. If the values are 0, the check is skipped. All fields are also compared against the regular expression. If the value matches the expression, then the value is stored. For example, the expression "/^\-?([0-9])*$/" can be used to constrain an integer. The table below describes the field types and the value constraints.

<table>
<thead>
<tr>
<th>Type</th>
<th>Field Contents</th>
<th>Value Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>String</td>
<td>text string up to 255 characters</td>
<td></td>
</tr>
<tr>
<td>Numeric</td>
<td>an integer</td>
<td></td>
</tr>
<tr>
<td>Float</td>
<td>a floating point number</td>
<td></td>
</tr>
<tr>
<td>Enumeration</td>
<td>one of a list of text strings</td>
<td>Enter the list of text strings separated by &quot;|&quot; (pipe character) in the Possible Values field. The Default value should match one of these strings as well. This will be displayed as a dropdown menu.</td>
</tr>
<tr>
<td>Email</td>
<td>an email address string up to 255 characters</td>
<td>When displayed, the value will also be encapsulated in a mailto: reference.</td>
</tr>
<tr>
<td>Checkbox</td>
<td>zero or more of a list of text strings</td>
<td>Enter the list of text strings separated by &quot;|&quot; (pipe character) in the Possible Values field. The Default value should match one of these strings as well. This will be displayed as a list of text strings with a checkbox beside them.</td>
</tr>
<tr>
<td>List</td>
<td>one of a list of text strings</td>
<td>Enter the list of text strings separated by &quot;|&quot; (pipe character) in the Possible Values field. The Default value should match one of these strings as well. This will be displayed as a multi-line dropdown menu.</td>
</tr>
<tr>
<td>Multiselection List</td>
<td>zero or more of a list of text strings</td>
<td>Enter the list of text strings separated by &quot;|&quot; (pipe character) in the Possible Values field. The Default value should match one of these strings as well. This will be displayed as a multi-line dropdown menu.</td>
</tr>
<tr>
<td>Date</td>
<td>text string defining a date</td>
<td>This is displayed as a set of dropdown menus for day, month, and year. Defaults should be defined in yyyy-mm-dd format.</td>
</tr>
</tbody>
</table>
Chapter 6. Page descriptions

The display entries are used as follows:

<table>
<thead>
<tr>
<th>Entry</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Only On Advanced Page</td>
<td>If checked, the field will NOT be shown on the simple issue displays</td>
</tr>
<tr>
<td>Display When Reporting Issues</td>
<td>If checked, the field will be shown on the report issues displays</td>
</tr>
<tr>
<td>Display When Updating Issues</td>
<td>If checked, the field will NOT be shown on the update issue and change status displays</td>
</tr>
<tr>
<td>Display When Resolving Issues</td>
<td>If checked, the field will NOT be shown on the update issue displays and change status displays, if the new status is resolved.</td>
</tr>
<tr>
<td>Display When Closing Issues</td>
<td>If checked, the field will NOT be shown on the update issue displays and change status displays, if the new status is closed.</td>
</tr>
<tr>
<td>Required On Report</td>
<td>If checked, the field must be filled in on the issue reports.</td>
</tr>
<tr>
<td>Required On Update</td>
<td>If checked, the field must be filled in on the update issue and change status displays.</td>
</tr>
<tr>
<td>Required On Resolve</td>
<td>If checked, the field must be filled in on the update issue and change status displays, if the new status is resolved.</td>
</tr>
<tr>
<td>Required On Close</td>
<td>If checked, the field must be filled in on the update issue and change status displays, if the new status is closed.</td>
</tr>
</tbody>
</table>

Notes on Display

• Be careful not to set both a required attribute and show only on advanced display. It may be possible to trigger a validation error that the user cannot recover from (i.e., field is not filled in).

Manage Global Profiles

This page allows the definition of global profiles accessible to all users of the system. It is similar to the user definition of a profile consisting of Platform, OS and Version.

Manage Configuration

This set of pages control the configuration of the MantisBT system. Note that the configuration items displayed may be on a project by project basis. These pages serve two purposes. First, they will display the settings for the particular aspects of the system. If authorized, they will allow a user to change the parameters. They also have settings for what access level is required to change these settings ON A PROJECT basis. In general, this should be left alone, but administrators may want to delegate some of these settings to managers.
Workflow Thresholds

This page covers the adjustment of the settings for many of the workflow related parameters. For most of these, the fields are self explanatory and relate to a similarly named setting in the configuration file. At the right of each row is a selector that allows the administrator to lower the access level required to change the particular parameter. The values changeable on this page are:

<table>
<thead>
<tr>
<th>Title</th>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report an Issue</td>
<td>$g_report_bug_threshold</td>
<td>threshold to report an issue</td>
</tr>
<tr>
<td>Status to which a new issue is set</td>
<td>$g_bug_submit_status</td>
<td>status is set to when submitted</td>
</tr>
<tr>
<td>Update an Issue</td>
<td>$g_update_bug_threshold</td>
<td>threshold to update an issue</td>
</tr>
<tr>
<td>Allow Issue to be closed on Resolve</td>
<td>$g_allow_close_immediately</td>
<td>allow close immediately on resolve</td>
</tr>
<tr>
<td>Allow Reporter to close an issue</td>
<td>$g_allow_reporter_close</td>
<td>allow reporter to close issues they reported</td>
</tr>
<tr>
<td>Monitor an issue</td>
<td>$g_monitor_bug_threshold</td>
<td>threshold to monitor an issue</td>
</tr>
<tr>
<td>Handle Issue</td>
<td>$g_handle_bug_threshold</td>
<td>threshold to handle (be assigned) an issue</td>
</tr>
<tr>
<td>Assign Issue</td>
<td>$g_update_bug_assign_threshold</td>
<td>threshold to be in the assign to list</td>
</tr>
<tr>
<td>Move Issue</td>
<td>$g_move_bug_threshold</td>
<td>threshold to move an issue to another project. This setting is for all projects.</td>
</tr>
<tr>
<td>Delete Issue</td>
<td>$g_delete_bug_threshold</td>
<td>threshold to delete an issue</td>
</tr>
<tr>
<td>Reopen Issue</td>
<td>$g_reopen_bug_threshold</td>
<td>threshold to reopen an issue</td>
</tr>
<tr>
<td>Allow reporter to reopen Issue</td>
<td>$g_allow_reporter_reopen</td>
<td>allow reporter to reopen issues they reported</td>
</tr>
<tr>
<td>Status to which a reopened Issue is set</td>
<td>$g_bug_resolved_status</td>
<td>status is set to when reopened</td>
</tr>
<tr>
<td>Resolution to which a reopened Issue is set</td>
<td>$g_bug_resolved_resolution</td>
<td>resolution is set to when reopened</td>
</tr>
<tr>
<td>Status where an issue is considered resolved</td>
<td>$g_bug_readonly_status_threshold</td>
<td>status where bug is read-only (see update_readonly_bug_threshold)</td>
</tr>
<tr>
<td>Update readonly issue</td>
<td>$g_update_readonly_bug_threshold</td>
<td>threshold to update an issue marked as read-only</td>
</tr>
<tr>
<td>Update Issue Status</td>
<td>$g_update_bug_status_threshold</td>
<td>threshold to update an issue's status</td>
</tr>
<tr>
<td>View Private Issues</td>
<td>$g_private_bug_threshold</td>
<td>threshold to view a private issue</td>
</tr>
</tbody>
</table>
Chapter 6. Page descriptions

<table>
<thead>
<tr>
<th>Set View Status</th>
<th>$g_set_view_status_threshold</th>
<th>threshold to set an issue to Private/Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update View Status</td>
<td>$g_change_view_status_threshold</td>
<td>threshold needed to update the view status while updating an issue or an issue note</td>
</tr>
<tr>
<td>Show list of users monitoring issue</td>
<td>$g_show_monitor_list_threshold</td>
<td>threshold to see who is monitoring an issue</td>
</tr>
<tr>
<td>Set status on assignment of handler</td>
<td>$g_auto_set_status_to_assigned</td>
<td>change status when an issue is assigned</td>
</tr>
<tr>
<td>Status to set auto-assigned issues to</td>
<td>$g_bug_assigned_status</td>
<td>status issue is set to when assigned</td>
</tr>
<tr>
<td>Limit reporter’s access to their own issues</td>
<td>$g_limit_reporters</td>
<td>reporters can see only issues they reported. This setting is for all projects.</td>
</tr>
</tbody>
</table>

### Notes

<table>
<thead>
<tr>
<th>Title</th>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Notes</td>
<td>$g_add_bugnote_threshold</td>
<td>threshold to add an issue note</td>
</tr>
<tr>
<td>Update Notes</td>
<td>$g_update_bugnote_threshold</td>
<td>threshold to edit an issue note</td>
</tr>
<tr>
<td>Allow users to edit their own bugnotes</td>
<td>$g_bugnote_allow_user_edit</td>
<td>can a user edit/delete their own issue notes</td>
</tr>
<tr>
<td>Delete Note</td>
<td>$g_delete_bugnote_threshold</td>
<td>threshold to delete an issue note</td>
</tr>
<tr>
<td>View private notes</td>
<td>$g_private_bugnote_threshold</td>
<td>threshold to view a private issue note</td>
</tr>
</tbody>
</table>

### Others

<table>
<thead>
<tr>
<th>Title</th>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>View Change Log</td>
<td>$g_view_changelog_threshold</td>
<td>threshold to view the changelog</td>
</tr>
<tr>
<td>View Assigned To</td>
<td>$g_view_handler_threshold</td>
<td>threshold to see who is handling an issue</td>
</tr>
<tr>
<td>View Issue History</td>
<td>$g_view_history_threshold</td>
<td>threshold to view the issue history</td>
</tr>
<tr>
<td>Send Reminders</td>
<td>$g_bug_reminder_threshold</td>
<td>threshold to send a reminder</td>
</tr>
</tbody>
</table>

### Workflow Transitions
This page covers the status workflow. For most of these, the fields are self explanatory.
and relate to a similarly named setting in the configuration file. At the right of each row is a selector that allows the administrator to lower the access level required to change the particular parameter. The values changeable on this page are:

<table>
<thead>
<tr>
<th>Title</th>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status to which a new issue is set</td>
<td>$g_bug_submit_status</td>
<td>status issue is set to when submitted</td>
</tr>
<tr>
<td>Status where an issue is considered resolved</td>
<td>$g_bug_resolved_status_threshold</td>
<td>status issue is resolved</td>
</tr>
<tr>
<td>Status to which a reopened Issue is set</td>
<td>$g_bug_reopen_status</td>
<td>status issue is set to when reopened</td>
</tr>
</tbody>
</table>

The matrix that follows has checkmarks where the transitions are allowed from the status on the left edge to the status listed across the top. This corresponds to the $g\_enum\_workflow array. At the bottom, there is a list of access levels that are required to change the status to the value listed across the top. This can be used, for instance, to restrict those who can close an issue to a specific level, say a manager. This corresponds to the $g\_set\_status\_threshold array and the $g\_report\_bug\_threshold setting.

**Email Notifications**

This page sets the system defaults for sending emails on issue related events. MantisBT uses flags and a threshold system to generate emails on events. For each new event, email is sent to:

- the reporter
- the handler (or Assigned to)
- anyone monitoring the issue
- anyone who has ever added a issue note the issue
- anyone assigned to the project whose access level matches a range

From this list, those recipients who meet the following criteria are eliminated:

- the originator of the change, if $g\_email\_receive\_own is OFF
- the recipient either no longer exists, or is disabled
- the recipient has turned their email_on_<new status> preference OFF
- the recipient has no email address entered

The matrix on this page selects who will receive messages for each of the events listed down the left hand side. The first four columns correspond to the first four points listed above. The next columns correspond to the access levels defined. Note that because a minimum and maximum threshold are used, a discontinuous selection is not allowed.

**Monitor Issue**

The monitor issues feature allows users to subscribe to certain issues and hence get copied on all notification emails that are sent for these issues. Depending on the configuration, sending a reminder to a user about an issue can add this issue to the user’s list of monitored issues. Users who reported the issue or are assigned the issue typically don’t need
to monitor the issue to get the notifications. This is because by default they get notified on changes related to the issue anyway. However, administrators can change the configuration to disable notifications to reporters or handlers in specific scenarios.

Reopen Issue
Re-open issue button is visible in the issue view pages if the user has the appropriate access level and the issue is resolved/closed. Re-opening a issue will allow users to enter issue notes for the re-opening reason. The issue will automatically be put into the Feedback status.

Delete Issue
The delete issues button appears on the issue view pages for the users who have the appropriate access level. This allows you to delete an existing issue. This should only be used on frivolous or test issues. A confirmation screen will prompt you if you really want to delete the issue. Updaters, Developers, Managers, and Administrators can remove issues (you can also configure this).

Close Issue
This is a button that appears on the issue view pages for users that are authorized to close issues. Depending on the configuration, users may be able to close issues without having to resolve them first, or may be able to only close resolved issues. After the button is clicked, the user is redirected to a page where an issue note maybe added.

Assign to Me
This button appears in the issue view pages in case of users with access level that is equal to handle_bug_threshold or higher. When this button is clicked the issue is assigned to the user.

Resolve Issue
This option on the View Issues page allows you to resolve the issue. It will lead you to a page where you can set the resolution state and a duplicate id (if applicable). After choosing that the user can choose to enter an issue note detailing the reason for the closure. The issue is then set to the Resolved state. The reporter should check off on the issue by using the Close Issue button.

News Syndication
MantisBT supports news syndication using RSS v2.0 protocol. MantisBT also supports authenticated news feeds for private projects or installations where anonymous access is not enabled.Authenticated feeds takes a user name and a key token that are used to authenticate the user and generate the feed results in the context of the user’s access rights (i.e. the same as what the user would see if they were to logged into MantisBT). To get access to the News RSS as anonymous user, visit the following page: http://www.example.com/mantisbt/news_rss.php While a user is logged in, the RSS links provided in the UI will always provide links to the authenticated feeds, if no user is logged in (i.e. anonymous), then anonymous links will be provided.
Chapter 7. Customizing MantisBT

Custom Fields

Overview

Different teams typically like to capture different information as users report issues, in some cases, the data required is even different from one project to another. Hence, MantisBT provides the ability for managers and administrators to define custom fields as way to extend MantisBT to deal with information that is specific to their teams or their projects. The aim is for this to keep MantisBT native fields to a minimum. Following are some facts about the implementation of custom fields in MantisBT:

- Custom fields are defined system wide.
- Custom fields can be linked to multiple projects.
- The sequence of displaying custom fields can be different per project.
- Custom fields must be defined by users with access level ADMINISTRATOR.
- Custom fields can be linked to projects by users with access level MANAGER or above (by default, this can be configurable).
- Number of custom fields is not restricted.
- Users can define filters that include custom fields.
- Custom fields can be included in View Issues, Print Issues, and CSV exports.
- Enumeration custom fields can have a set of static values or values that are calculated dynamically based on a custom function.

Custom Field Definition

The definition of a custom field includes the following logical attributes:

- Caption variable name. This value is supplied to the lang_get() API; it is therefore mandatory to set this to a valid PHP identifier (i.e. only letters, numbers and underscores; no spaces) if you intend to translate the field label (see the Section called Localizing Custom Field Names).

  Note: If the specified variable is not found in the language files or in custom strings, then it will be displayed as-is.

- Custom field type (string, numeric, float, enumeration, email, checkbox, radio, list, multi-selection list, date).
  
  Type ‘string’ is used for strings of up to 255 characters.
  
  Type ‘numeric’ is used for numerical integer values.
  
  Type ‘float’ is used for real (float / double) numbers.
  
  Type ‘enumeration’ is used when a user selects one entry from a list. The user interface for such type is a combo-box.
  
  Type ‘email’ is used for storing email addresses.
Type 'checkbox' is like enumeration but the list is shown as checkboxes and the user is allowed to tick more than one selection. The default value and the possible value can contain multiple values like 'RED|YELLOW|BLUE' (without the single quote).

Type 'radio' is like enumeration but the list is shown as radio buttons and the user is allowed to tick on of the options. The possible values can be 'RED|YELLOW|BLUE', where the default value can be 'YELLOW'. Note that the default value can’t contain multiple values.

Type 'list' is like enumeration but the list is shown as a list box where the user is only allowed to select one option. The possible values can be 'RED|YELLOW|BLUE', where the default value can be 'YELLOW'. Note that the default value can’t contain multiple values.

Type 'multi-selection list' is like enumeration but the list is shown as a list box where the user is allowed to select multiple options. The possible values can be 'RED|YELLOW|BLUE', where the default value can be 'RED|BLUE'. Note that in this case the default value contains multiple values.

Type 'date' is for date values. The default value can be empty, or \{tomorrow\}, \{yesterday\}, \{next week\}, \{last week\}, \{+3 days\}, \{-2 days\}.

- Enumeration possible values (eg: RED|YELLOW|BLUE). Use the pipe (‘|’) character to separate possible values for an enumeration. One of the possible values can be an empty string. The set of possible values can also be calculated at runtime. For example, "=versions" would automatically resolve into all the versions defined for the current project.
- Default value - see details above for a sample default value for each type.
- Minimum/maximum length for the custom field value (use 0 to disable). Note that these metrics are not really relevant to custom fields that are based on an enumeration of possible values.
- Regular expression to use for validating user input (use PCRE syntax).
- Read Access level: Minimum access level for users to be able to see the value of the custom field.
- Write Access level: Minimum access level for users to be able to edit the value of the custom field.
- Display when reporting issues? - If this custom field should be shown on the Report Issue page.
- Display when updating issues? - If this custom field should be shown on the Update Issue page.
- Display when resolving issues? - If this custom field should be shown when resolving an issue. For example, a "root cause" custom field would make sense to set when resolving the issue.
- Display when closing issues? - If this custom field should be shown when closing an issue.
- Required on Report - If this custom field is a mandatory field on the Report Issue page.
- Required on Update - If this custom field is a mandatory field on the Update Issue page.
- Required on Resolve - If this custom field is a mandatory field when resolving an issue.
- Required on Close - If this custom field is a mandatory field when closing an issue.

All custom fields are currently saved to a field of type VARCHAR(255) in the database. However, in future releases, it is possible to support custom fields of different types (eg: memo, file).

If the value of a custom field for a certain defect is not found, the default value is assumed.
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Adding/Editing Custom Fields

- The logged in user needs $g_manage_custom_fields_threshold access level.
- Select "Manage" from the main menu.
- Select "Manage Custom Fields" from the management menu.
- In case of edit, click on the name of an existing custom field to edit its information.
- In case of adding a new one, enter the name of the new custom field then click "New Custom Field".

**Note:** Added custom fields will not show up in any of the issues until the added custom field is linked to the appropriate projects.

Linking/Unlinking/Ordering Existing Custom Fields in Projects

- The logged in user needs to have access level that is greater than or equal to $g_custom_field_link_threshold and $g_manage_project_threshold.
- Select "Manage" from the main menu.
- Select "Manage Projects".
- Select the name of the project to manage.
- Scroll down to the "Custom Fields" box.
- Select the field to add from the list, then click "Add This Existing Custom Field".
- To change the order of the custom fields, edit the "Sequence" value and click update. Custom fields with smaller values are displayed first.
- To unlink a custom field, click on "Remove" link next to the field. Unlinking a custom field will not delete the values that are associated with the issues for this field. These values are only deleted if the custom field definition is removed (not unlinked!) from the database. This is useful if you decide to re-link the custom field. These values may also re-appear if issues are moved to another project which has this field linked.

Moving Issues

When an issue is moved from one project to another, custom fields that are not defined for the new project are not deleted. These fields will re-appear with their correct values if the issue is moved back to the original project, or if these custom fields are linked to the new project.

Localizing Custom Field Names

It is possible to localize the custom fields' labels. This can be done as follows:

1. Define the custom field (see the Section called Custom Field Definition), keeping in mind that its name must be a valid PHP identifier.
   As an example, we will use *my_start_date* for a custom field of type "Date", storing the date when work on an issue was initiated.
2. Set the localization strings
   - In the main MantisBT directory, locate and edit file `custom_strings_inc.php` (create it if it does not exist)
   - Localize the custom field’s label `my_start_date` by adding the following code

```php
<?php
switch( $g_active_language ) {
    case 'french':
        $s_my_start_date = 'Date de début';
        break;
    default:
        # Default language, as defined in config_inc.php
        # ($g_default_language, English in this case)
        $s_my_start_date = 'Start Date';
        break;
}
```

**Warning**

Do NOT call `lang_get_current()` from `custom_strings_inc.php`, as doing so will reset the `active_language`, causing the code to return incorrect translations if the default language is different from English. Always use the `$g_active_language` global variable instead.

**Note:** Had we decided to use `start_date` as the custom field’s name, then it would not have been necessary to modify `custom_strings_inc.php`, since MantisBT would have used the existing, already localized string from the standard language files. To check for standard strings, inspect `lang/strings_english.txt`.

### Dynamic default values

#### Dynamic defaults for Date fields

Custom fields of type date can be defaulted to a specific dates or to relative dates. Typically relative dates is the scenario that makes sense in most of the cases. The format for specific dates is an integer which indicates the number of seconds since the Unix Epoch (January 1 1970 00:00:00 GMT), which is the format consumed by the PHP date() method. The relative scenario expects default values like `{tomorrow}`, `{yesterday}`, `{+2 days}`, `{3 days}`, `{next week}`, etc. The curly brackets indicate that this is a logical value which is then evaluated using the PHP strtotime() function.

#### Dynamic values for Enumeration Custom Fields

As discussed earlier, one of the possible types of a custom field is “enumeration”. This type of custom field allows the user to select one value from a provided list of possible values. The standard way of defining such custom fields is to provide a ‘|’ separated list of possible values. However, this approach has two limitations: the list is static, and the maximum length of the list must be no longer than 255 characters. Hence, the need for the ability to construct the list of possible values dynamically.
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Dynamic possible values included by default
MantisBT ships with some dynamic possible values, these include the following:

- \=categories - a list of categories defined in the current project (or the project to which the issue belongs).
- \=versions - a list of all versions defined in the current project (or the project to which the issue belongs).
- \=future_versions - a list of all versions that belong to the current project with released flag set to false.
- \=released_versions - a list of all versions that belong to the current project with released flag set to true.

Note: The \= before the name of the dynamic list of options is used to tell MantisBT that this is a dynamic list, rather than a static list with just one option.

Defining Custom Dynamic Possible Values
If the user selects \=versions, the actual custom function that is executed is custom_function_*_enum_versions(). The reason why the "enum_" is not included is to have a fixed prefix for all custom functions used for this purpose and protect against users using custom functions that were not intended for this purpose. For example, you don’t want the user to use custom_function_*_issue_delete_notify() which may be overridden by the web master to delete associated data in other databases.

Following is a sample custom function that is used to populate a field with the categories belonging to the currently selected project:

```php
# Construct an enumeration for all categories for the current project.
# The enumeration will be empty if current project is ALL PROJECTS.
# Enumerations format is: "abc|lmn|xyz"
# To use this in a custom field type \=categories in the possible values field.
function custom_function_override_enum_categories() {
    $t_categories = category_get_all_rows(helper_get_current_project());
    $t_enum = array();
    foreach ($t_categories as $t_category) {
        $t_enum[] = $t_category['category'];
    }
    $t_possible_values = implode( '|', $t_enum );
    return $t_possible_values;
}
```

Notice the following:

- The custom function doesn’t take any parameters.
- The custom function returns the possible values in the format (A|B|C).
- The custom function uses the current project.
- The custom function builds on top of the already existing APIs.
To define your own function `\u201c=mine\u201d`, you will have to define it with the following signature:

```php
# --------------------
# To use this in a custom field type "=mine" in the possible values field.
function custom_function_override_enum_mine() {
    $t_enum = array();
    :

    $t_possible_values = implode( '|', $t_enum );

    return $t_possible_values;
}
```

Notice "override" in the function name. This is because this method is defined by the MantisBT administrator/webmaster and not part of the MantisBT source. It is OK to override a method that doesn’t exist.

As usual, when MantisBT is upgraded to future releases, the custom functions will not be overwritten. The difference between the “default” implementation and the “override” implementation is explained in more details in the custom functions section.

Enumerations

Enumerations are used in MantisBT to represent a set of possible values for an attribute. Enumerations are used for access levels, severities, priorities, project statuses, project view state, reproducibility, resolution, ETA, and projection. MantisBT provides the administrator with the flexibility of altering the values in these enumerations. The rest of this topic explains how enumerations work, and then how they can be customised.

**How enumerations work?**

`core/constant_inc.php` defines the constants that correspond to those in the enumeration. These are useful to refer to these enumerations in the configs and the code.

```php
define( ‘VIEWER’, 10 )
define( ‘REPORTER’, 25 )
define( ‘UPDATER’, 40 )
define( ‘DEVELOPER’, 55 )
define( ‘MANAGER’, 70 )
define( ‘ADMINISTRATOR’, 90 )
```

`config_defaults_inc.php` includes the defaults for the enumerations. The configuration options that are defaulted here are used in specifying which enumerations are active and should be used in MantisBT. However, the strings included in the enumerations here are just for documentation purpose, they are not shown to the user (due to the need for localisation). Hence, if an entry in this enumeration is not found in the corresponding localised enumeration (i.e. 70:manager), then it will be printed to the user as `@70@`.

```php
$g_access_levels_enum_string =
```
lang/strings_german.txt provide the localised strings (in this case, in german) for enumerations. But again, the master list is the enumeration in the configs, the ones in the language files are just used for finding the localised equivalent for an entry. Hence, if a user changes the config to have only two types of users developers and administrators, then only those will be prompted to the users even if the enumerations in the language files still includes the full list.

$s_access_levels_enum_string =

How can they be customised?

Let say we want to remove access level "Updater" and add access level "Senior Developer".

The file custom_constants_inc.php is supported for the exclusive purpose of allowing administrators to define their own constants while maintaining a simple upgrade path for future releases of MantisBT. Note that this file is not distributed with MantisBT and you will need to create it if you need such customisation. In our example, we need to define a constant for the new access level.

```php
define ( 'SENIOR_DEVELOPER', 60 );
```

In config_inc.php

```php
// Remove Updater and add Senior Developer
$g_access_levels_enum_string =
'10:viewer,25:reporter,60:senior_developer,70:manager,90:administrator';
// Give access to Senior developers to create/delete custom field.
$g_manage_custom_fields_threshold = SENIOR_DEVELOPER;
```

The file custom_strings_inc.php is introduced for a similar reason to that of custom_constants_inc.php, which is to define custom strings. The advantage of defining them here is to provide a simple upgrade path, and avoid having to re-do the changes when upgrading to the next MantisBT release. Note that you will need to create this file if you need such customisation. The file is automatically detected and included by MantisBT code.

```php
# Note that we don't have to remove the Updater entry from the localisation file if the current language is 'english' ) {
$s_access_levels_enum_string =
}
```

Conclusion

We have covered how enumerations work in general, and how to customise one of them. If you are interested in customising other enumerations, a good starting point would be to go to "MantisBT Enum Strings" section in config_defaults_inc.php. This section defines all enumerations that are used by MantisBT. For versions that are older than 0.18.0, custom_*_inc.php files are not supported, and hence you will need to change in the actual constants / language files directly.
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Email Notifications

See Email in the Configuration section.

Examples:

- Notify only managers of new issues.
  
  ```
  $g_notify_flags['new']['threshold_min'] = MANAGER;
  $g_notify_flags['new']['threshold_max'] = MANAGER;
  ```

- Notify Developers and managers of all project events, except, exclude developers from the ‘closed’ events.

  ```
  $g_default_notify_flags['threshold_min'] = DEVELOPER;
  $g_default_notify_flags['threshold_max'] = MANAGER;
  $g_notify_flags['closed']['threshold_min'] = MANAGER;
  $g_notify_flags['closed']['threshold_max'] = MANAGER;
  ```

- Exclude those who contributed issue notes from getting messages about other changes in the issue.

  ```
  $g_default_notify_flags['bugnotes'] = OFF;
  ```

- Exclude those monitoring issues from seeing the ‘closed’ message

  ```
  $g_notify_flags['closed']['monitor'] = OFF;
  ```

- Only notify developers when issue notes are added.

  ```
  $g_notify_flags['bugnote']['threshold_min'] = DEVELOPER;
  $g_notify_flags['bugnote']['threshold_max'] = DEVELOPER;
  ```

- Notify managers of changes in sponsorship.

  ```
  $g_notify_flags['sponsor']['threshold_max'] = MANAGER;
  $g_notify_flags['sponsor']['threshold_max'] = MANAGER;
  ```

- Notify originator and managers of changes in ownership (‘Assigned To’).

  ```
  $g_notify_flags['owner']['threshold_max'] = MANAGER;
  $g_notify_flags['owner']['threshold_max'] = MANAGER;
  ```

- I’m paranoid about mail. Only send information on issues to those involved in them. Don’t send mail people already know about. Also send new issue notifications to managers so they can screen them.

  ```
  $g_mail_receive_own = OFF;
  ```

  ```
  $g_default_notify_flags =
  array('reporter' => ON, 'handler' => ON, 'monitor' => ON, 'bugnotes' => ON, 'threshold_min' => NOBODY, 'threshold_max' => NOBODY);
  ```

- How do I replace the $g_to_email configuration variable to log all messages to an email logger.

  You will need to create a dummy user with the appropriate access level for the notices you want to log. Once this user is added to projects, they will receive mail using the appropriate rules.
Customizing Status Values

This section describes how to add a custom status.

1. Define a constant to map the new status to.
   In the main MantisBT directory, locate and edit file `custom_constants_inc.php`; (create it if it does not exist)
   ```php
   # Custom status code
   define( 'TESTING', 60 );
   ``

2. Define the new status in the enumeration, as well as the corresponding color code.
   In the main mantisbt directory, edit your `config_inc.php`
   ```php
   # Revised enum string with new 'testing' status
   $g_status_enum_string = '10:new,20:feedback,30:acknowledged,40:confirmed,50:assigned,60:testing,
   80:resolved,90:closed';
   # Status color additions
   $g_status_colors['testing'] = '#ACE7AE';
   Note that the key in the $g_status_colors array must be equal to the value defined for
   the new status code in $g_status_enum_string.
   
3. Define the required translation strings for the new status, for each language used in
   the installation.
   • `s_status_enum_string`: status codes translation (refer to the original language strings
     for standard values)
   • `s_XXXX_bug_title`: title displayed in the change status page
   • `s_XXXX_bug_button`: label for the submit button in the change status page
   • `s_email_notification_title_for_status_bug_XXXX`: title for notification e-mails
     where XXXX is the name of the new status as it was defined in `g_status_enum_string`
     above. If XXXX contains spaces, they should be replaced by underscores in the lan-
     guage strings names (e.g. for '35:pending user', use `$s_pending_user_bug_button`)
   In the main mantisbt directory, locate and edit file `custom_strings_inc.php`; (create it
   if it does not exist)
   ```php
   # Translation for Custom Status Code: testing
   switch( $g_active_language ) {
   case 'french':
     $s_testing_bug_title = 'Mettre le bogue en test';
     $s_testing_bug_button = 'A tester';
     $s_email_notification_title_for_status_bug_testing = 'Le bogue suivant est prêt à être testé.';
     break;
   default: # english
     $s_status_enum_string = '10:new,20:feedback,30:acknowledged,40:confirmed,50:assigned,60:testing,80:resolved,90:closed';
     $s_testing_bug_title = 'Mark issue Ready for Testing';
     $s_testing_bug_button = 'Ready for Testing';
     $s_email_notification_title_for_status_bug_testing = 'The following issue is ready for Testing.';
     break;
   ```

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4. Add the new status to the workflow as required.

This can either be done from the Manage Workflow Transitions page or by manually editing `config_inc.php` as per the example below:

```php
$g_status_enum_workflow[NEW_] = '30:acknowledged,20:feedback,40:confirmed,50:assigned,80:resolved';
$g_status_enum_workflow[FEEDBACK] = '30:acknowledged,40:confirmed,50:assigned,80:resolved';
$g_status_enum_workflow[ACKNOWLEDGED] = '40:confirmed,20:feedback,50:assigned,80:resolved';
$g_status_enum_workflow[CONFIRMED] = '50:assigned,20:feedback,30:acknowledged,80:resolved';
$g_status_enum_workflow[ASSIGNED] = '60:testing,20:feedback,30:acknowledged,40:confirmed,80:resolved';
$g_status_enum_workflow[TESTING] = '80:resolved,20:feedback,50:assigned';
$g_status_enum_workflow[RESOLVED] = '90:closed,20:feedback,50:assigned';
$g_status_enum_workflow[CLOSED] = '20:feedback,50:assigned';
```

5. Check and update existing workflow configurations

If you do not perform this step and have existing workflow definitions, it will not be possible to transition to and from your new status.

Go to the Workflow Transitions page (manage_config_workflow_page.php), and update the workflow as appropriate. Make sure that you have picked the correct Project in the selection list).

Hint: to identify whether you have any workflows that should be updated, open the Manage Configuration Report page (adm_config_report.php) and filter on ‘All Users’, [any] project and config option = ‘status_enum_workflow’. All of the listed projects should be reviewed to eventually include transitions to and from the newly added states.

---

### Custom Functions

Custom functions are used to extend the functionality of MantisBT by integrating user-written functions into the issue processing at strategic places. This allows the system administrator to change the functionality without touching MantisBT’s core.

Default Custom Functions are defined in the API file `core/custom_function_api.php`, and are named `custom_function_default_descriptive_name`, where `descriptive_name` describes the particular function. See below for a description of the specific functions.

User versions of these functions (overrides) are named like `custom_function_override_descriptive_name`, and placed in a file called `custom_functions_inc.php` that must be saved in MantisBT’s root directory (This is the same place where the `config_inc.php` file resides). In normal processing, the system will look for override functions and execute them instead of the provided default functions.

The simplest way to create a custom function is to copy the default one from the api to your override file (`custom_functions_inc.php`), and rename it (i.e. replacing ‘default’ by ‘override’). The specific functionality you need can then be coded into the override function.

### Default Custom Functions

Refer to `core/custom_functions_api.php` for further details.
<table>
<thead>
<tr>
<th>Custom Function Name</th>
<th>Description</th>
<th>Return value</th>
</tr>
</thead>
<tbody>
<tr>
<td>custom_function_default_auth_can_change_password()</td>
<td>Determines whether MantisBT can update the password</td>
<td>True if yes, False if not</td>
</tr>
<tr>
<td>custom_function_default_changelog_include_issue( $p_issue_id )</td>
<td>Determines whether the specified issue should be included in the Changelog or not.</td>
<td>True to include, False to exclude</td>
</tr>
<tr>
<td>custom_function_default_changelog_print_issue( $p_issue_id, $p_issue_level = 0 )</td>
<td>Print one entry in the Changelog</td>
<td>None</td>
</tr>
<tr>
<td>custom_function_default_checkin( $p_issue_id, $p_comment, $p_file, $p_new_version, $p_fixed )</td>
<td>Register a checkin in source control by adding a history entry and a note</td>
<td>None</td>
</tr>
<tr>
<td>custom_function_default_enum_categories()</td>
<td>Build a list of all categories for the current project</td>
<td>Enumeration, delimited by &quot;</td>
</tr>
<tr>
<td>custom_function_default_enum_future_versions()</td>
<td>Build a list of all future versions for the current project</td>
<td>Enumeration, delimited by &quot;</td>
</tr>
<tr>
<td>custom_function_default_enum_released_versions()</td>
<td>Build a list of all released versions for the current project</td>
<td>Enumeration, delimited by &quot;</td>
</tr>
<tr>
<td>custom_function_default_enum_versions()</td>
<td>Build a list of all versions for the current project</td>
<td>Enumeration, delimited by &quot;</td>
</tr>
<tr>
<td>custom_function_default_format_issue_summary( $p_issue_id, $p_context = 0 )</td>
<td>Format the issue summary</td>
<td>Formatted string</td>
</tr>
<tr>
<td>custom_function_default_format_issue_summary( $p_issue_id, $p_context = 0 )</td>
<td>Format the issue summary</td>
<td>Formatted string</td>
</tr>
<tr>
<td>custom_function_default_get_columns_to_view( $p_columns_target = COLUMNS_TARGET_VIEW_PAGE, $p_user_id = null )</td>
<td>Defines which columns should be displayed</td>
<td>Array of the column names</td>
</tr>
<tr>
<td>custom_function_default_issue_create_notify( $p_issue_id )</td>
<td>Notify after an issue has been created</td>
<td>In case of invalid data, this function should call trigger_error()</td>
</tr>
<tr>
<td>custom_function_default_issue_create_validate( $p_new_issue_data )</td>
<td>Validate field settings before creating an issue</td>
<td>In case of invalid data, this function should call trigger_error()</td>
</tr>
<tr>
<td>custom_function_default_issue_delete_notify( $p_issue_data )</td>
<td>Notify after an issue has been deleted</td>
<td>In case of invalid data, this function should call trigger_error()</td>
</tr>
<tr>
<td>custom_function_default_issue_delete_validate( $p_issue_id )</td>
<td>Validate field settings before deleting an issue</td>
<td>In case of invalid data, this function should call trigger_error()</td>
</tr>
<tr>
<td>custom_function_default_issue_update_notify( $p_issue_id )</td>
<td>Notify after an issue has been updated</td>
<td>In case of invalid data, this function should call trigger_error()</td>
</tr>
<tr>
<td>custom_function_default_issue_update_validate( $p_issue_id, $p_new_issue_data, $p_bugnote_text )</td>
<td>Validate field settings before updating</td>
<td>In case of invalid data, this function should call trigger_error()</td>
</tr>
</tbody>
</table>
### Custom Function Name

<table>
<thead>
<tr>
<th>Custom Function Name</th>
<th>Description</th>
<th>Return value</th>
</tr>
</thead>
<tbody>
<tr>
<td>custom_function_default_print_bug_view_page_custom_buttons($p_bug_id)</td>
<td>Prints the custom buttons on the current view page</td>
<td>None</td>
</tr>
<tr>
<td>custom_function_default_print_column_title($p_column, $p_columns_target = COLUMNS_TARGET_VIEW_PAGE)</td>
<td>Prints a column's title based on its name</td>
<td>None</td>
</tr>
<tr>
<td>custom_function_default_print_column_value($p_column, $p_bug, $p_columns_target = COLUMNS_TARGET_VIEW_PAGE)</td>
<td>Prints a column's value based on its name</td>
<td>None</td>
</tr>
<tr>
<td>custom_function_default_roadmap_include_issue($p_issue_id)</td>
<td>Determines whether the specified issue should be included in the Roadmap or not.</td>
<td>True to include, False to exclude</td>
</tr>
<tr>
<td>custom_function_default_roadmap_print_issue($p_issue_id, $p_issue_level = 0)</td>
<td>Prints one entry in the Roadmap</td>
<td>None</td>
</tr>
</tbody>
</table>

### Example Custom Function Override

The following function is used to validate an issue before it is resolved.

```php
/**
 * Hook to validate Validate field settings before resolving
 * verify that the resolution is not set to OPEN
 * verify that the fixed in version is set (if versions of the product exist)
 */
function custom_function_override_issue_update_validate( \$p_issue_id, \$p_bug_data, \$p_bugnote_text ) {
    if( \$p_bug_data->status == RESOLVED ) {
        if ( \$p_bug_data->resolution == OPEN ) {
            error_parameters( 'the resolution cannot be open to resolve the issue' );
            trigger_error( ERROR_VALIDATE_FAILURE, ERROR );
        }
        \$t_version_count = count( version_get_all_rows( \$p_bug_data->project_id ) );
        if( ( \$t_version_count > 0 ) && ( \$p_bug_data->fixed_in_version == '' ) ) {
            error_parameters( 'fixed in version must be set to resolve the issue' );
            trigger_error( ERROR_VALIDATE_FAILURE, ERROR );
        }
    }
}
?>
```

The errors will also need to be defined, by modifying the following files:

- `custom_constants_inc.php`
  ```php
  define( 'ERROR_VALIDATE_FAILURE', 2000 );
  ```
- `custom_strings_inc.php`
  ```php
  $MANTIS_ERROR['ERROR_VALIDATE_FAILURE'] = 'This change cannot be made because %s';
  ```

### Notes

4. [http://www.php.net/date](http://www.php.net/date)
Chapter 8. Troubleshooting

This chapter provides the Administrator with additional information related to Application Errors and common problems in MantisBT.

Useful additional reference information and support may also be found on the MantisBT website\(^1\), more specifically the Forums\(^2\) and the Bugtracker\(^3\).

Application Errors

Additional information about MantisBT common errors.

**Error 1502 - Category not found**

This error occurs whenever MantisBT tries to access an issue having a Category which has been deleted from the database.

It will most likely happen when the Category specified by $g\_default\_category\_for\_moves has been deleted, and an issue is subsequently moved to another project where its current category does not exist.

There are two ways to resolve this issue:

1. Recreate the missing category
   - Find the missing Category’s Id
     
     This can be done by checking the value of *default\_category\_for\_moves* in config\_inc.php and/or in Manage Configuration. Alternatively, the following SQL can be executed
     
     ```sql
     SELECT DISTINCT category_id
     FROM mantis_bug_table b
     LEFT OUTER JOIN mantis_category_table c ON category_id = c.id
     WHERE category_id <> 0
     AND c.id IS NULL
     ```
   
   - Recreate the missing Category
     
     The category’s id must be manually set to reflect the value retrieved above (e.g. using SQL or your favorite DB admin tool)

2. Assign a new category to the issues referencing the missing one
   - Identify the corrupted issues and corresponding missing categories
     
     ```sql
     SELECT b.id, category_id
     FROM mantis_bug_table b
     LEFT OUTER JOIN mantis_category_table c ON category_id = c.id
     WHERE category_id <> 0
     AND c.id IS NULL
     ```
   
   - Determine which Category id to use instead of the deleted one
   
   - Update the issues
     
     This can either be done manually using your favorite DB admin tool or with SQL, e.g.
     
     ```sql
     UPDATE mantis_bug_table
     SET category_id = (NewCategoryId)
     WHERE category_id = (OldCategoryId)
     ```
Finally, to avoid future occurrences, you need to set `$g_default_category_for_moves` to a valid Category Id. This must be done as appropriate, either globally in `config_inc.php`, or via the Manage Configuration page, for all occurrences of the parameter.

Note: to retrieve a category’s ID, you can either

- Look up the value directly in the database: `mantis_category_table`, column ‘id’
- Go to Manage Projects, click the Edit button for the desired category and look for the the value next to ‘id=’ in the page’s URL

Error 2800 - Invalid form security token
This error may only occur when Form Validation is enabled with `$g_form_security_validation = ON`. There are several known cases that could trigger it:

- Multiple submissions of a form by clicking on the submit button several times (user error)
- Invalid or unauthorized submission of a form, e.g. by hand-crafting the URL (CSRF attack)
- Expired PHP session

In the first two instances, MantisBT’s behavior is by design, and the response as expected. For expired sessions however, the user is impacted by system behavior, which could not only cause confusion, but also potential loss of submitted form data. What happens is driven by several `php.ini` configuration settings:

- The ratio `session.gc_probability` divided by `session.gc_divisor`, which determines the probability that the garbage collection process will start when a session is initialized.
- `session.gc_maxlifetime` which specifies (as the name does not indicate) the minimum validity of session data.

With PHP default values, sessions created more than 1440 seconds (24 minutes) ago have a 1% chance to be invalidated each time a new session is initialized. This explains the seemingly random occurrence of this error.

Unfortunately, this problem cannot be fixed without a major rework of the way sessions and form security are handled in MantisBT.

As a workaround, the Administrator can

- Increase the value of `session.gc_maxlifetime`
- Set `$g_form_security_validation = OFF`. *Note that for security reasons, it is strongly recommended not to do this.*

Users may also install local tools to avoid loss of form data, e.g. Lazarus Form Recovery add-on for Firefox.

Further references and reading:

- MantisBT issues 12381, 12492, 13106, 13246
Chapter 8. Troubleshooting

Notes

Chapter 9. Authentication

MantisBT supports several authentication methods out of the box. In addition, there is work in progress relating to supporting authentication plug-ins. Once these are implemented, authentication against any protocol or repository of user names and passwords will be possible without having to touch MantisBT core code.

It is important to note that MantisBT does not yet support hybrid authentication scenarios. For example, internal staff authenticating against LDAP while customers authenticate against the MantisBT database with MD5 hash.

See $g_login_method in Global authentication parameters for more details about how to configure MantisBT to use one of these authentication techniques.

Standard Authentication

With Standard login method, MantisBT users are authenticated against records in the MantisBT database, where the passwords are stored as a hash.

Note: while technically unlimited, the password’s length is arbitrarily restricted to 1024 characters (PASSWORD_MAX_SIZE_BEFORE_HASH constant).

Values for $g_login_method:

- MD5\(^1\) is the default - and recommended - method
- Support for additional methods (e.g. SHA-1\(^2\)) could be added in the future

LDAP and Microsoft Active Directory

Value for $g_login_method: LDAP

Authentication is made against an LDAP\(^3\) or Active Directory\(^4\) server.

The LDAP parameters should be setup as explained in LDAP authentication parameters.

An MD5 hash of the user’s password will be stored in the database upon successful login, allowing fall-back to Standard Authentication when the LDAP server is not available.

The user’s ID and password is checked against the Directory; if the credentials are valid, then the user is allowed to login and their user account in MantisBT is created automatically.

Basic Authentication

Value for $g_login_method: BASIC_AUTH

When MantisBT is configured to use basic auth, it automatically detects the logged in user and checks if they are already registered in MantisBT, if not, then a new account is automatically created for the username.

The password length is limited to the size of the underlying database field (DB_FIELD_SIZE_PASSWORD constant), currently 32 characters.

HTTP Authentication

Value for $g_login_method: HTTP_AUTH

TODO
The password length is limited to the size of the underlying database field (DB_FIELD_SIZE_PASSWORD constant), currently 32 characters.

** Deprecated authentication methods **

The following methods of authentication are deprecated, and supported for backwards-compatibility reasons only. It is strongly recommended to update MantisBT installations relying on these to use standard authentication instead.

Deprecated values for $g_login_method:

- CRYPT
- CRYPT_FULL_SALT
- PLAIN

With CRYPT-based methods, the password’s length is limited as per Standard Authentication. With PLAIN, its size is restricted as for Basic Authentication.

** Notes **

This section covers the project management features of MantisBT. This includes features like change log, roadmap, time tracking, reporting and others.

**Change Log**

MantisBT doesn’t just track the status of issues, it also relates issues to versions. Each project can have several versions, which are marked with attributes like released and obsolete. Users typically report issues against released issues and developers typically fix issues in not released versions. With every new release comes question like: what’s new? what has been fixed? Customers wonder if the new release is of interest to them and whether they should take an upgrade. Well, the change log is specifically tailored to answer these kind of questions.

In order for an issue to show up in the change log, it has to satisfy certain criteria. The criteria is that the issue has to be resolved with a ‘fixed’ resolution and has to have the ‘fixed_in_version’ field set. Users sometimes wonder why resolved or closed issues don’t show up in the change log, and the answer is that the ‘fixed_in_version’ field is not set. Without the ‘fixed_in_version’, it is not possible for MantisBT to include the issues in the appropriate section of the changelog. Note that it is possible to set the ‘fixed_in_version’ for multiple issues using the ‘Update Fixed in Version’ group action on the View Issues page (just below the issues list). This option is only available when the selected project is not ‘All Projects’. Once a version is marked as obsolete, it is now longer included in the change log.

MantisBT also provides the ability to customize the criteria used for an issue to be included in the change log. For example, for installations that use a custom set of resolutions, it is possible to select multiple resolutions as valid candidates for the change log. This can be done using custom functions (see custom functions documentation for more details). The custom function below overrides the MantisBT default behavior to include issues with both FIXED and IMPLEMENTED (a custom resolution) resolutions in the change log.

```php
# --------------------
# Checks the provided bug and determines whether it should be included in the changelog
# or not.
function custom_function_override_changelog_include_issue( $p_issue_id ) {
    $t_issue = bug_get( $p_issue_id );
    return ( ( $t_issue->resolution == FIXED || $t_issue->resolution == IMPLEMENTED ) &&
        ( $t_issue->status >= config_get( 'bug_resolved_status_threshold' ) ) );
}
```

MantisBT also provides the ability to customize the details to include from the issue and in what format. This can be done using the following custom function.

```php
# --------------------
# Prints one entry in the changelog.
function custom_function_override_changelog_print_issue( $p_issue_id, $p_issue_level = 0 ) {
    $t_bug = bug_get( $p_issue_id );
    if ( $t_bug->category_id ) {
        $t_category_name = category_get_name( $t_bug->category_id );
    } else {
        $t_category_name = "";
    }
    $t_category = is_blank( $t_category_name ) ? "" : '<b>' . $t_category_name . '</b>';
    echo str_pad( "", $p_issue_level * 6, ' ' ), '- ', string_get_bug_view_link( $p_issue_id ), ':
```
if ( $t_bug->handler_id != 0 ) {
    echo '(' . prepare_user_name( $t_bug->handler_id ), ')';
}

echo ' - ' . get_enum_element( 'status', $t_bug->status ) . '.<br />

By combining both customization features, it is also possible to do more advanced customization scenarios. For example, users can add a ‘ChangelogSummary’ custom field and include all issues that have such field in the changelog. Through customizing what information being included for a qualifying issue, users can also include the ‘ChangelogSummary’ text rather than the native summary field.

In some cases, users know that they fixed an issue and that the fix will be included in the next release, however, they don’t know yet the name of the release. In such case, the recommended approach is to always have a version defined that corresponds to the next release, which is typically called ‘Next Release’. Once the release is cut and has a concrete name, then ‘Next Release’ can be renamed to the appropriate name and a new ‘Next Release’ can then be created. For teams that manage releases from multiple branches for the same project, then more than one next release can be possible. For example, ‘Next Dev Release’ and ‘Next Stable Release’.

Another common requirement is to be able to link to the change log of a specific project from the project’s main website. There is a variety of ways to do that:

- To link to the changelog of version "ver1" of project "myproject":
  http://www.example.com/mantisbt/changelog_page.php?project=myproject&version=ver1

- To link to the changelog of all non-obsolete versions of project 'myproject':
  http://www.example.com/mantisbt/changelog_page.php?project=myproject

- To link to the changelog of project with id 1. The project id can be figured out by going to the management page for the project and getting the value of project_id field form the URL.
  http://www.example.com/mantisbt/changelog_page.php?project_id=1

  Another approach is to go to the project page and from there users can get to multiple other locations relating to the project include the change log. This can be done by a URL like the following:

  http://www.example.com/mantisbt/project_page.php?project_id=1

  It is possible to customize the access level required for viewing the change log page. This can be done using the $g_view_changelog_threshold configuration option.
Roadmap

One of the very important scenarios in project management is where the project managers (or team leads) triage the issues to set their priorities, target version, and possibly assign the issues to specific developers or take other actions on the issue. By setting the target version of an issue to a version that is not yet released, the issue shows up on the project roadmap, providing user with information about when to expect the issues to be resolved. The roadmap page has a section for each release showing information like planned issues, issues done and percentage of issues completed. Issues that are fixed in a specific version, but didn’t have the target_version field set, will not show up in the roadmap. This allows the ability to control the issues that are significant enough to show in the roadmap, while all resolved fields can be found in the change log. Note that it is possible to set the 'target_version' for multiple issues using the 'Update Target Version' group action that is available through the View Issues page (below the issues list). This option is only available when the current project is not 'All Projects'. Although it is not a typical scenario, it is worth mentioning that once a version is marked as obsolete, it is not included in the roadmap.

Note that the roadmap only includes future versions, once a version is marked as released, it no longer is included in the roadmap. For information about such releases, the change log feature should be used. For an issue to be shown on the roadmap, it has to have the target version set. It does not matter whether the feature is resolved or not. Resolved features will be decorated with a strikethrough and will be counted as done.

MantisBT provides the ability to customize the criteria for issues to show up on the roadmap. The default criteria is that the issue has to belong to a version that is not yet released and that the issues is not a duplicate. However, such criteria can be customized by using custom functions as below.

```php
# --------------------
# Checks the provided bug and determines whether it should be included in the roadmap or not.
# returns true: to include, false: to exclude.
function custom_function_override_roadmap_include_issue( $p_issue_id ) {
    return ( true );
}
```

It is also possible to customize the details included about an issues and the presentation of such details. This can be done through the following custom function:

```php
# --------------------
# Prints one entry in the roadmap.
function custom_function_override_roadmap_print_issue( $p_issue_id, $p_issue_level = 0 ) {
    $t_bug = bug_get( $p_issue_id );
    if ( bug_is_resolved( $p_issue_id ) ) {
        $t_strike_start = '&lt;strike&gt;';
        $t_strike_end = '&lt;/strike&gt;';
    } else {
        $t_strike_start = $t_strike_end = '';
    }
    if ( $t_bug->category_id ) {
        $t_category_name = category_get_name( $t_bug->category_id );
    } else {
        $t_category_name = '';
    }
    $t_category = is_blank( $t_category_name ) ? '&lt;b&gt;' . $t_category_name . '&lt;/b&gt;' : '';
    echo str_pad( ', ' . $p_issue_level * 6, ' ' ), '- ', $t_strike_start, string_get_bug_view_link( $p_issue_id ), ': ', $t_category, string_display_line_links( $t_bug->summary );
    if ( $t_bug->handler_id != 0 ) {
        echo ' (' . prepare_user_name( $t_bug->handler_id ) . ')';
    }
}
```

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Some teams manage different branches for each of their projects (e.g. development and maintenance branches). As part of triaging the issue, they may decide that an issue should be targeted to multiple branches. Hence, frequently the request comes up to be able to target a single issue to multiple releases. The current MantisBT approach is that an issue represents an implementation or a fix for an issue on a specific branch. Since sometimes applying and verifying a fix to the two branches does not happen at the same time and in some cases the approach for fixing an issue is different based on the branch. Hence, the way to manage such scenario is to have the main issue for the initial fix and have related issues which capture the work relating to applying the fix to other branches. The issues for porting the fix can contain any discussions relating to progress, reflect the appropriate status and can go through the standard workflow process independent of the original issues.

Another common requirement is to be able to link to the roadmap of a specific project from the project’s main website. There is a variety of ways to do that:

- To link to the roadmap of version "ver1" of project "myproject":
  
  http://www.example.com/mantisbt/roadmap_page.php?project=myproject&version=ver1

- To link to the roadmap of all non-obsolete versions of project 'myproject':


- To link to the roadmap of project with id 1. The project id can be figured out by going to the management page for the project and getting the value of project_id field form the URL.

  http://www.example.com/mantisbt/roadmap_page.php?project_id=1

- To link to the roadmap of version with id 1. The version id is unique across all projects and hence in this case it is not necessary to include the project id/name. The version id can be figured out by going to the manage project page and editing the required version. The version_id will be included in the URL.


Another approach is to go to the project page and from there users can get to multiple other locations relating to the project include the roadmap. This can be done by a URL like the following:

http://www.example.com/mantisbt/project_page.php?project_id=1

The access level required to view and modify the roadmap can be configured through $g_roadmap_view_threshold and $g_roadmap_update_threshold respectively. Modifying the roadmap is the ability to set the target versions for issues. Users who have such access can set the target versions while reporting new issues or by updating existing issues.
Time Tracking

This is currently a work in progress. To follow the work have a look on the wiki page Time Tracking (Issue 4428).

To activate the Time Tracking feature you have to set the configuration option "time_tracking_enabled" to ON. To activating the Time Tracking you can:

- Static solution: change the variable ‘$g_time_tracking_enabled’ in the configuration file ‘config_defaults_inc.php’, this will change the configuration for all the MantisBT instance;
- Dynamic and "project by project" solution: Use the administration page "Manage Configuration" and set the variable ‘time_tracking_enabled’ to ‘1’ for which user and which project of you choice.

All Time Tracking configuration options are described in the configuration section of this guide.

Graphs

Assigned to me: TODO
Release Delta: TODO
Category: TODO
Severity: TODO
Severity / Status: TODO
Daily Delta: TODO
Reported by Me: TODO

Summary Page

By Status: TODO
By Severity: TODO
By Category: TODO
Time Stats for Resolved Issues (days): TODO
Developer Status: TODO
Reporter by Resolution: TODO
Developer by Resolution: TODO
By Date: TODO
Most Active: TODO
Longest Open: TODO
By Resolution: TODO
By Priority: TODO
Reporter Status: TODO
Reporter Effectiveness: TODO
Chapter 10. Project Management

Notes

Chapter 11. Contributing to MantisBT

Talent and Time

One of the greatest ways to contribute to MantisBT is to contribute your talent and time. For MantisBT to keep growing we need such support in all areas related to the software development cycle. This includes: business analysts, developers, web designers, graphics designers, technical writers, globalization developers, translators, testers, super users, packagers and active users. If you would like to contribute in any of these capacities please contact us through the "Contact Us" page.

Recommend MantisBT to Others

It feels great when we get feedback from the user community about how MantisBT boosted their productivity, and benefited their organization. A lot of the feedback I get is via email, some on mailing lists, and some on forums. I would encourage such users to blog about it, tell their friends about MantisBT, and recommend MantisBT to other organizations. MantisBT is driven by it’s community, the greater the community, the greater the ideas, the greater of a product it becomes.

Blog about MantisBT

If you have a blog, then blog about MantisBT, review it’s features and help us spread the word. A lot of users also like to blog about how they customized MantisBT to fit their needs or to integrate with other tools that they use in their work environment.

Integrate with MantisBT

If you have a product that can be integrates with MantisBT to provide a value for MantisBT users, that would be a great place to contribute and benefit both your project’s community and the MantisBT community. A great examples in this area are integrations with content management systems (e.g. *Nuke, Xoops), project management (PHPProjekt), and TestLink for Test Management. MantisBT can easily be integrated with projects in any programming language whether it is hosted on the same webserver or anywhere else in the world. This can be achieved through it’s SOAP API and MantisConnect client libraries. MantisConnect comes with client libraries and samples in languages like PHP, .NET, Java and Cocoa.

Registered in MantisBT Users Directory

Join the Users Directory by clicking Submit. While entering your company or project details you will be able to write up a testimonial about MantisBT which will then be included in the Testimonials page.

Donate Money

Use the PayPal donate buttons that you will see around the website (e.g. bottom left of the home page). You can donate using your credit card even if you don’t have a PayPal account. Donations is a very easy way for the MantisBT community to give back to MantisBT. The donations can be as small as US$1 or as big as you or your organization want it to be.
Chapter 11. Contributing to MantisBT

Sponsor MantisBT

MantisBT Sponsors are organizations that have realized the benefit brought to their business by using MantisBT and would like to protect such investment and always push it forward via sponsorship. Please take a moment to visit our sponsors page and use the “Contact Us” page for further information.

Notes

Acknowledgements

We would like to thank all the past and present contributors to the project:

- name
- name
- name
- name