

# Trac Installation Guide for 0.11

**NOTE: this page is now for 0.11, which will be released soon. For installing previous Trac versions, please refer to [wiki:0.10/TracInstall?](#).**

Trac is written in the Python programming language and needs a database, [SQLite](#), [PostgreSQL](#), or [MySQL](#). For HTML rendering, Trac uses the [Genshi](#) templating system.

What follows are generic instructions for installing and setting up Trac and its requirements. While you can find instructions for installing Trac on specific systems at [TracInstallPlatforms?](#) on the main Trac site, please be sure to **first read through these general instructions** to get a good understanding of the tasks involved.

## Short - Install a released version

For the quick install, make sure you have [Python-2.5](#), [easy\\_install](#) and [SQLite-3.3.4](#) installed (or above).

```
sudo easy_install Pygments
sudo easy_install Genshi
sudo easy_install Trac
```

## Requirements - also older versions possible

To install Trac, the following software packages must be installed:

- [Python](#), version  $\geq 2.3$ 
  - ◆ if using `mod_python` together with xml-related things, use `python-2.5`. `expat` is namespaced there and does not cause apache to crash any more(see [here](#) for details).
  - ◆ For RPM-based systems you might also need the `python-devel` and `python-xml` packages.
  - ◆ See instructions in [TracOnWindows/Python2.5?](#)
- [setuptools](#), version  $\geq 0.6$
- [Genshi](#), version  $\geq 0.3.6$
- You also need a database system and the corresponding python drivers for it. The database can be either `SQLite`, `PostgreSQL` or `MySQL` (*experimental*).
- optional if some plugins require it: [ClearSilver](#)

## For SQLite

- [SQLite](#), version 3.3.4 and above preferred.
- If not using `Python-2.5`: [PySQLite](#), version 1.x (for `SQLite 2.x`) or version 2.x (for `SQLite 3.x`), version 2.3.2 preferred. For details see [PySqlite?](#)

*Note: It appears that `PySQLite 2.x` is required for `Trac 0.9+ / SQLite 3.x` if you plan to use the `'trac-post-commit-hook.py'` script available from the `'contrib'` section of the source repository.*

*Note: Users of Mac OS X please take care; the Apple-supplied `SQLite` contains additional code to support file locking on network filesystems like `AFP` or `SMB`. This is not presently (3.3.6) in the mainline sources, so if you build your own `SQLite` from source it will not function correctly on such filesystems - typically it gives the error "database is locked". [A patch](#) is available for version 3.3.6, based on Apple's code, otherwise you're probably best off using the Apple supplied version (presently 3.1.3).*

## For PostgreSQL

- [PostgreSQL](#)
- [psycopg2](#) or [pyPgSQL](#)

## For MySQL

**Warning:** MySQL support is currently *still* experimental. That means it works for some people, but several issues remain, in particular regarding the use of unicode and the key length in the repository cache. See [MySQLDb?](#) for more detailed informations.

- [MySQL](#), version 4.1 or later
- [MySQLdb](#), version 1.2.1 or later

## Optional Requirements

### Version Control System

**Please note:** if using Subversion, Trac must be installed on the **same machine**. Remote repositories are currently not supported.

- [Subversion](#), version  $\geq 1.0$ . (versions recommended: 1.2.4, 1.3.2 or 1.4.2) and the *corresponding* Python bindings. For troubleshooting, check [TracSubversion?](#)
  - ◆ Trac uses the [SWIG](#) bindings included in the Subversion distribution, **not** [PySVN](#) (which is sometimes confused with the standard SWIG bindings).
  - ◆ If Subversion was already installed without the SWIG bindings, on Unix you'll need to re-configure Subversion and make `swig-py`, `make` `install-swig-py`.
  - ◆ There are [pre-compiled bindings](#) available for win32.
- Support for other version control systems is provided via third-parties. See [PluginList?](#) and [VersioningSystemBackend?](#).

### Web Server

- A CGI-capable web server (see [TracCgi](#)), or
- a [FastCGI](#)-capable web server (see [TracFastCgi](#)), or
- [Apache](#) with [mod\\_python 3.1.3+](#) (see [TracModPython](#))
  - ◆ When installing `mod_python` the development versions of Python and Apache are required (actually the libraries and header files)
- [Apache](#) with [mod\\_wsgi](#) (see [TracModWSGI?](#))
  - ◆ While `mod_wsgi` is very new and somewhat experimental, this should work with Apache 1.3, 2.0 or 2.2 and promises to deliver more performance than using `mod_python`.

For those stuck with Apache 1.3, it is also possible to get Trac working with [mod\\_python 2.7](#) (see [TracModPython2.7?](#)). This guide hasn't been updated since 0.84, so it may or may not work.

### Other Python Utilities

- [docutils](#), version  $\geq 0.3.9$  for [WikiRestructuredText](#).
- [Pygments](#) for [syntax highlighting](#), also [SilverCity](#) and/or [Enscript](#) may still be used.

- ◆ Note that SilverCity 0.9.6 has a [bug](#) that breaks Python syntax highlighting in Trac. Until an update is made available, we recommend using version 0.9.5.
- [pytz](#) to get a complete list of time zones, otherwise Trac will fall back on a shorter list from an internal time zone implementation.

**Attention:** The various available versions of these dependencies are not necessarily interchangeable, so please pay attention to the version numbers above. If you are having trouble getting Trac to work please double-check all the dependencies before asking for help on the MailingList? or IRCChannel?.

Please refer to the documentation of these packages to find out how they are best installed. In addition, most of the platform-specific instructions? also describe the installation of the dependencies. Keep in mind however that the information there *probably concern older versions of Trac than the one you're installing* (there are even some pages that are still talking about Trac 0.8!).

## Installing Trac

One way to install Trac is using `setuptools`. With `setuptools` you can install Trac from the subversion repository; for example, to install release version 0.11 do:

```
easy_install http://svn.edgewall.com/repos/trac/tags/trac-0.11
```

But of course the python-typical setup at the top of the source directory also works:

```
$ python ./setup.py install
```

*Note: you'll need root permissions or equivalent for this step.*

This will byte-compile the python source code and install it in the `site-packages` directory of your Python installation. The directories `cgi-bin`, `templates`, `htdocs`, `wiki-default` and `wiki-macros` are all copied to `$prefix/share/trac/`. `conf` and `plugins stub` directories are also created under `$prefix/share/trac/`. On Linux, the default value of `$prefix` is `/usr`, so the installation will be to `/usr/share/trac`, whereas the BSDs use `/usr/local`. Other Unix or Unix-like systems might use a similar prefix or something like `/opt`, please see your system's documentation for details.

The script will also install the [trac-admin](#) command-line tool, used to create and maintain [project environments](#), as well as the [tracd](#) standalone server.

## Advanced Options

To install Trac to a custom location, or find out about other advanced installation options, run:

```
easy_install --help
```

Also see [Installing Python Modules](#) for detailed information.

Specifically, you might be interested in:

```
easy_install --prefix=/path/to/installdir
```

# Creating a Project Environment

A Trac environment is the backend storage where Trac stores information like wiki pages, tickets, reports, settings, etc. An environment is basically a directory that contains a human-readable configuration file and various other files and directories.

A new environment is created using trac-admin:

```
$ trac-admin /path/to/myproject initenv
```

trac-admin will prompt you for the information it needs to create the environment, such as the name of the project, the type and the path to an existing source code repository, the database connection string, and so on. If you're not sure what to specify for one of these options, just leave it blank to use the default value. The database connection string in particular will always work as long as you have SQLite installed. Leaving the path to the source code repository empty will disable any functionality related to version control, but you can always add that back when the basic system is running.

Also note that the values you specify here can be changed later by directly editing the TracIni configuration file.

*Note: The user account under which the web server runs will require write permissions to the environment directory and all the files inside. On Linux, with the web server running as user apache and group apache, enter:*

```
chown -R apache.apache /path/to/myproject
```

## Running the Standalone Server

After having created a Trac environment, you can easily try the web interface by running the standalone server tracd:

```
$ tracd --port 8000 /path/to/myproject
```

Then, fire up a browser and visit `http://localhost:8000/`. You should get a simple listing of all environments that tracd knows about. Follow the link to the environment you just created, and you should see Trac in action.

## Running Trac on a Web Server

Trac provides three options for connecting to a `real` web server: CGI, FastCGI and mod\_python. For decent performance, it is recommended that you use either FastCGI or mod\_python.

If you're not afraid of running development code, you can also try running Trac on `mod_wsgi`?. This should deliver even better performance than mod\_python, but the module is not considered stable just yet.

## Configuring Authentication

The process of adding, removing, and configuring user accounts for authentication depends on the specific way you run Trac. The basic procedure is described in the Adding Authentication section on the TracCgi page. To learn how to setup authentication for the frontend you're using, please refer to one of the following

pages:

- [TracStandalone](#) if you use the standalone server, `tracd`.
- [TracCgi](#) if you use the CGI or FastCGI methods.
- [TracModPython](#) if you use the `mod_python` method.

## Using Trac

Once you have your Trac site up and running, you should be able to browse your subversion repository, create tickets, view the timeline, etc.

Keep in mind that anonymous (not logged in) users can by default access most but not all of the features. You will need to configure authentication and grant additional [permissions](#) to authenticated users to see the full set of features.

*Enjoy!*

The Trac Team?

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See also: [TracGuide](#), [TracCgi](#), [TracFastCgi](#), [TracModPython](#), [TracModWSGI?](#), [TracUpgrade](#), [TracPermissions](#)