Repository Administration

- 1. Quick start
- 2. Specifying repositories
 - 1. In trac.ini
 - 2. In the database
- 3. Repository synchronization
 - 1. Explicit synchronization
 - 2. Per-request synchronization
- 4. Migration from a single-repository setup
- 5. <u>Troubleshooting</u>
 - 1. My trac-post-commit-hook doesn't work anymore

Quick start

- Manage repositories in the "Repository" admin panel, with trac-admin or in the [repositories] section of trac.ini.
- Set up a call to trac-admin \$ENV changeset added \$REPO \$REV in the post-commit hook of each repository. Additionally, add a call to trac-admin \$ENV changeset modified \$REPO \$REV in the post-revprop-change hook of repositories allowing revision property changes.
- Set the [trac] repository_sync_per_request option to an empty value to disable per-request syncing.

Specifying repositories

Starting with 0.12, Trac can handle more than one repository per environment. The pre-0.12 way of specifying the repository with the repository_dir and repository_type options in the [trac] section of <u>trac.ini</u> is still supported, but two new mechanisms allow including additional repositories into an environment.

It is also possible to define aliases of repositories, that act as "pointers" to real repositories. This can be useful when renaming a repository, to avoid breaking all the links to the old name.

A number of attributes can be associated with each repository, which define the repository's location, type, name and how it is displayed in the source browser. The following attributes are supported:

Attribute	Description
alias	A repository having an alias attribute is an alias to a real repository. All <u>TracLinks</u> referencing the alias resolve to the aliased repository. Note that multiple indirection is not supported, so an alias must always point to a real repository. The alias and dir attributes are mutually exclusive.
description	The text specified in the description attribute is displayed below the top-level entry for the repository in the source browser. It supports <u>WikiFormatting</u> .
dir	The dir attribute specifies the location of the repository in the filesystem. It corresponds to the value previously specified in the option [trac] repository_dir. The alias and dir attributes are mutually exclusive.
hidden	When set to true, the repository is hidden from the repository index page in the source browser. Browsing the repository is still possible, and links referencing the repository remain valid.
name	The name attribute specifies the leading path element to the repository.
type	The type attribute sets the type of version control system used by the repository. Trac supports Subversion out-of-the-box, and plugins add support for many other systems. If type is not

Attribute Description

specified, it defaults to the value of the [trac] repository_type option.

The url attribute specifies the root URL to be used for checking out from the repository. When specified, a "Repository URL" link is added to the context navigation links in the source browser, that can be copied into the tool used for creating the working copy.

The name attribute and one of alias or dir are mandatory. All others are optional.

After adding a repository, the cache for that repository must be re-synchronized once with the trac-admin \$ENV repository resync command.

```
repository resync <repos>
Re-synchronize Trac with a repository.
```

In trac.ini

Repositories and repository attributes can be specified in the [repositories] section of <u>trac.ini</u>. Every attribute consists of a key structured as {name}. {attribute} and the corresponding value separated with an equal sign (=). The name of the default repository is empty.

The main advantage of specifying repositories in trac.ini is that they can be inherited from a global configuration (see the global configuration section of <u>TracIni</u>). One drawback is that, due to limitations in the ConfigParser class used to parse trac.ini, the repository name is always all-lowercase.

The following example defines two Subversion repositories named project and lib, and a hidden alias to project as the default repository. This is a typical use case where a Trac environment previously had a single repository (the project repository), and was converted to multiple repositories. The alias ensures that links predating the change continue to resolve to the project repository.

```
[repositories]
project.dir = /var/repos/project
project.description = This is the ''main'' project repository.
project.type = svn
project.url = http://example.com/svn/project
lib.dir = /var/repos/lib
lib.description = This is the secondary library code.
lib.type = svn
lib.url = http://example.com/svn/lib
.alias = project
.hidden = true
```

Note that name.alias = target makes name an alias for the target repo, not the other way around.

In the database

Repositories can also be specified in the database, using either the "Repositories" admin panel under "Version Control", or the trac-admin \$ENV repository commands.

The admin panel shows the list of all repositories defined in the Trac environment. It allows adding repositories and aliases, editing repository attributes and removing repositories. Note that repositories defined in trac.ini are displayed but cannot be edited.

The following trac-admin commands can be used to perform repository operations from the command line.

```
repository add <repos> <dir> [type]
```

Add a repository <repos> located at <dir>, and optionally specify its type.

Note that the default repository has an empty name, so it will likely need to be quoted when running trac-admin from a shell. Alternatively, the name "(default)" can be used instead, for example when running trac-admin in interactive mode.

Repository synchronization

Prior to 0.12, Trac synchronized its cache with the repository on every HTTP request. This approach is not very efficient and not practical anymore with multiple repositories. For this reason, explicit synchronization through post-commit hooks was added.

There is also new functionality in the form of a repository listener extension point (*IRepositoryChangeListener*) that is triggered by the post-commit hook when a changeset is added or modified, and can be used by plugins to perform actions on commit.

Explicit synchronization

This is the preferred method of repository synchronization. It requires setting the [trac] repository_sync_per_request option in <u>trac.ini</u> to an empty value, and adding a call to trac-admin in the post-commit hook of each repository. Additionally, if a repository allows changing revision metadata, a call to trac-admin must be added to the post-revprop-change hook as well.

```
changeset added <repos> <rev> [?]
    Notify Trac that one or more changesets have been added to a repository.
changeset modified <repos> <rev> [?]
```

Notify Trac that metadata on one or more changesets in a repository has been modified.

The <repos> argument can be either a repository name (use " (default)" for the default repository) or the path to the repository.

The following examples are complete post-commit and post-revprop-change scripts for Subversion. They should be edited for the specific environment, marked executable (where applicable) and placed in the hooks directory of each repository. On Unix (post-commit):

```
#!/bin/sh
/usr/bin/trac-admin /path/to/env changeset added "$1" "$2"

On Windows (post-commit.cmd):

@C:\Python26\Scripts\trac-admin.exe C:\path\to\env changeset added "%1" "%2"
```

The post-revprop-change hook for Subversion is very similar. On Unix (post-revprop-change):

In the database 3

```
#!/bin/sh
/usr/bin/trac-admin /path/to/env changeset modified "$1" "$2"
```

On Windows (post-revprop-change.cmd):

```
@C:\Python26\Scripts\trac-admin.exe C:\path\to\env changeset modified "%1" "%2"
```

Note that calling trac-admin in your Subversion hooks can slow down the commit and log editing operations on the client side. You might want to use the ?contrib/trac-svn-hook script which starts trac-admin in an asynchronous way. The script also comes with a number of safety checks and usage advices which should make it easier to set up and test your hooks. There's no equivalent trac-svn-hook.bat for Windows yet, but the script can be run by Cygwin's bash.

See the <u>?section about hooks</u> in the Subversion book for more information. Other repository types will require different hook setups. Please see the plugin documentation for specific instructions.

Per-request synchronization

If the post-commit hooks are not available, the environment can be set up for per-request synchronization. In that case, the [trac] repository_sync_per_request option in <u>trac.ini</u> must be set to a comma-separated list of repository names to be synchronized.

Note that in this case, the changeset listener extension point is not called, and therefore plugins using it will not work correctly.

Migration from a single-repository setup

The following procedure illustrates a typical migration from a single-repository setup to multiple repositories.

- 1. Remove the default repository specification from the [trac] repository_dir option.
- 2. Add the "main" repository as a named repository.
- 3. Re-synchronize the main repository.
- 4. Set up post-commit and post-revprop-change hooks on the main repository, and set [trac] repository sync per request to an empty value.
- 5. Add a hidden alias to the main repository as the default repository. This ensures that all links predating the migration still resolve to the main repository.
- 6. Repeat steps 2, 3 and 4 to add other (named) repositories as needed.

Troubleshooting

My trac-post-commit-hook doesn't work anymore

You must now use the optional components from tracopt.ticket.commit_updater.*, which you can activate through the Plugins panel in the Administrative part of the web interface, or by directly modifying the [components] section in the trac.ini. Be sure to use explicit synchronization as explained above.