

# Easy SVN Browser (version 1.11)

## A viewer for SVN repositories

Karel Kubat  
e-tunity

2005 ff.

### Abstract

Easy SVN Browser is a *cgi-bin* driven viewer for SVN repositories. It is suitable for all repositories, but specifically aimed at sites where one cannot easily install specific SVN-related packages. This viewer only needs a command-line `svn` client and Perl. Easy SVN Browser is modelled for high-load usage: requests for the viewer are cached, so that transactions on the repository are minimized.

## Contents

<b>1 Introduction</b>	<b>1</b>
1.1 Porting issues for pre-1.10 versions . . . . .	2
<b>2 Quick Installation</b>	<b>2</b>
<b>3 Tweaking</b>	<b>3</b>
3.1 The Stylesheet . . . . .	3
3.2 Configurations in the script . . . . .	3
3.3 Using the same viewer for multiple repositories . . . . .	4
<b>4 Feedback and Comments</b>	<b>5</b>

## 1 Introduction

Welcome to Easy SVN Browser, "yet another subversion repository viewer". I wrote this viewer because I needed a simple piece of software that would run almost anywhere.

The requirements to make Easy SVN Browser run on your system, are:

- You will of course need a subversion repository, and a commandline `svn` client, version 1.2 or better.
- You will need Perl version 5 or better.
- You will need access to a webserver (preferably Apache), so that you may configure `cgi-bin` actions for the viewer.

As a quick reference, the following URL's are relevant as far as obtaining the Easy SVN Browser is concerned:

- <http://public.e-tunity.com>, the site that serves this package (and others);

- <http://public.e-tunity.com/web-svn-view/web-svn-view.html>, this document;
- <http://public.e-tunity.com/web-svn-view/web-svn-view-latest.tar.gz>, the most recent distribution of web-svn-view in archive format;
- <svn://svn.e-tunity.com/web-svn-view>, the SVN-based repository for this tool (allowing anonymous reading).

### 1.1 Porting issues for pre-1.10 versions

As of version 1.10, the configuration options for images (eg. `svn_imgurl`) were dropped. The style sheet and all images, plus Javascript sources, are now located in a subdirectory `files/`. There is a corresponding configuration value `svn_filesurl`. Please edit your Apache configuration(s) and make the appropriate changes.

## 2 Quick Installation

Follow these steps for a quick installation of the Easy SVN Browser:

1. Log in as the user who is running the webserver (e.g., `www`).
2. As this user, make sure you have read-access on your repository. Issue an `svn` command to make sure that if necessary, you are prompted for a username and password. Once the viewer is running, logins must take place automatically. E.g., assuming that your SVN repository is on `svn://localhost/home/svn`, run the command `svn ls svn://localhost/home/svn`. This must produce output, or else something's afoot.
3. Obtain the web-svn-view package. There are two possibilities:
  - Obtain the the archive `web-svn-view-latest.tar.gz` from the site <http://public.e-tunity.com>. Save the archive to a temporary location on your hard disk (e.g., `/tmp`). Change-dir to a directory where the webserver will run the viewer. Unpack, using `tar xzf /tmp/web-svn-view-latest.tar.gz`. Note the full paths to the contained directories `cgi-bin` and `files`. In the following example we'll assume that the base directory is `/Users/e/src/e`.
  - Change-dir to a directory where the webserver will run the viewer (in the next examples this is assumed as `/Users/e/src/e`). Obtain the latest web-svn-view sources using `svn co svn://svn.e-tunity.com/web-svn-view`.
4. Edit `cgi-bin/web-svn-view` and modify the configuration variables at the top of the file. The variables are documented in the script.
5. Edit the server's configuration file. E.g, for Apache, edit `httpd.conf` and add the following lines:

```
DocumentRoot                /Users/e/src/e/web-svn-view
<Location                    />
    Order                    deny,allow
    Deny from                all
</Location>

ScriptAlias                  /svnbin /Users/e/src/e/web-svn-view/cgi-bin
<Location                    /svnbin>
    Order                    allow,deny
    Allow from                all
</Location>
```

```
Alias /svnfiles /Users/e/src/e/web-svn-view/files
<Location /svnfiles>
    Order allow,deny
    Allow from all
</Location>
```

```
Alias /svncache /Users/e/src/e/web-svn-view/cache
<Location /svncache>
    Order allow,deny
    Allow from all
</Location>
```

You will need to supply the right directories for your system, instead of `/Users/e/src/e` as in the above example. Also make sure that the HTTP user has write-access to the cache directory stated in the script `web-svn/view` (which must match the directory that is aliased to `/svncache` in `httpd.conf`.)

6. Restart the webserver.
7. Point your browser to `http://yoursite/svnbins/web-svn-view`.

## 3 Tweaking

This section describes in some depth how you can modify `web-svn-view` to your likings. (What good is a software package that just does what it's supposed to do, while you can't break it by fiddling 'round with the settings?)

### 3.1 The Stylesheet

The stylesheet `css/web-svn-view.css` is loaded in every screen that `web-svn-view` produces. If you've worked with CSS before, then this all will look familiar.

- Class `icon` defines the look of `<td>` elements on the left side of tables, where the icons are shown. The background is set to white to accomodate pictures.
- Class `small` is for small-text display on `<td>` elements, like `diff` output.

### 3.2 Configurations in the script

The script `web-svn-view` has a hash `%conf` at the top, where the all values are defined that control the script. The following list explains some of them:

- `svn_root` must obviously point to your SVN repository.
- `svn_title` appears as the `<title>` element of output. Change this to your likings.
- `svn_cachedir` and `svn_cachetimeout` control how the script caches results. By default `web-svn-view` will cache screens. This is especially useful for lengthy `diff` output. If you don't want caching, comment out the settings.

If you **do** use caching, then intermediate results will be stored in the `cachedir`. When the results become obsolete, the script `web-svn-view` deletes them. Therefore, there is no need for e.g. a `cron`-driven cleanup script.

- The setting `svn_files_to_render` is an array of regular expressions that are used to match filenames. When a match is found, then `web-svn-view` will try to render the file inside the browser. When the match is not made, then the file contents are displayed in a `<pre>` block. Typical files to render in the browser are images.

- The `svn_baseurl`, `svn_filesurl` and `svn_cssurl` are used when generating output. The values must correspond to the settings in your `httpd.conf`.

### 3.3 Using the same viewer for multiple repositories

If you want to use `web-svn-view` to show the contents of more than one repository, then you don't have to instantiate more than one version of `web-svn-view` on your system. You don't even have to have more than one `cgi-bin` directory.

All it takes is defining multiple `cgi-bin` locations in your `httpd.conf`, and based on the repository that you want to address, overriding the right configuration values of the `web-svn-view` script.

Overriding the values is always done by environment variables. E.g, the configuration variable `svn_root` is overridden using an environment variable `$SVN_ROOT`. Similarly, `svn_title` is overridden using `$SVN_TITLE` and so on.

In `httpd.conf`, you can set such environment variables using the `SetEnv` directive. For example, let's assume that three viewers should be defined for three repositories. The approach is as follows:

- All three views can share the resources for stylesheets and images.
- Per repository a `cgi-bin` directory is defined, always mapping to the same physical instance of the `web-svn-view` script. However, per different location, the following values are specifically overridden:
  - `SVN_TITLE`, the repository title
  - `SVN_ROOT`, the repository root
  - `SVN_HIDE_URL`, whether or not to hide the repository URL from generated views
  - `SVN_CACHEDIR` and `SVN_CACHEURL`, caching-related settings
  - `SVN_BASEURL`, the URL of the `cgi-bin` script as the browser sees it.

An excerpt of such an `httpd.conf` is shown below.

```
# General
ErrorLog          /var/log/apache/svn.e-tunity.com-error.log
CustomLog         /var/log/apache/svn.e-tunity.com-access.log \
                  common

DocumentRoot     /home/http/svn.e-tunity.com/web-svn-view
<Location        />
    Order         allow,deny
    Allow         from all
</Location>

# Generic settings for CSS, images, and the cache root.
Alias             /svnfiles \
                  /home/http/svn.e-tunity.com/web-svn-view/files
Alias            /svncache \
                  /home/http/svn.e-tunity.com/web-svn-view/cache
<Location        /svnfiles>
    Order         allow,deny
    Allow from    all
</Location>
<Location        /svncache>
    Order         allow,deny
    Allow from    all
</Location>
```

```
# Easy SVN Viewer
ScriptAlias          /web-svn-view \
                    /home/http/svn.e-tunity.com/web-svn-view/cgi-bin
<Location            /web-svn-view>
  Order              allow,deny
  Allow from         all
  SetEnv             SVN_TITLE "Easy SVN Browser"
  SetEnv             SVN_ROOT  svn://svn.e-tunity.com/web-svn-view
  SetEnv             SVN_HIDE_URL 0
  SetEnv             SVN_CACHEDIR ../cache/web-svn-view
  SetEnv             SVN_BASEURL /web-svn-view/web-svn-view
  SetEnv             SVN_CACHEURL /svncache/web-svn-view
</Location>

# Crossroads
ScriptAlias          /crossroads \
                    /home/http/svn.e-tunity.com/web-svn-view/cgi-bin
<Location            /crossroads>
  Order              allow,deny
  Allow from         all
  SetEnv             SVN_TITLE "Crossroads Balancer"
  SetEnv             SVN_ROOT  svn://svn.e-tunity.com/crossroads
  SetEnv             SVN_HIDE_URL 0
  SetEnv             SVN_CACHEDIR ../cache/crossroads
  SetEnv             SVN_BASEURL /crossroads/web-svn-view
  SetEnv             SVN_CACHEURL /svncache/crossroads
</Location>

# e-lib
ScriptAlias          /e-lib \
                    /home/http/svn.e-tunity.com/web-svn-view/cgi-bin
<Location            /e-lib>
  Order              allow,deny
  Allow from         all
  SetEnv             SVN_TITLE "Utility library e-lib"
  SetEnv             SVN_ROOT  svn://svn.e-tunity.com/e-lib
  SetEnv             SVN_HIDE_URL 0
  SetEnv             SVN_CACHEDIR ../cache/e-lib
  SetEnv             SVN_BASEURL /e-lib/web-svn-view
  SetEnv             SVN_CACHEURL /svncache/e-lib
</Location>
```

## 4 Feedback and Comments

Feedback is always appreciated. I can be reached as [karel@e-tunity.com](mailto:karel@e-tunity.com)<sup>1</sup>. Work on this package is in progress; e.g., the command `svn status` can be used more effectively. Also I'm not fully satisfied with the `diff` output.

Nevertheless, I appreciate hearing from you. If you have bug reports, please clearly state:

- The nature of the bug: which screen does it occur on;
- Your local configuration: Perl version, SVN version and so on;

---

<sup>1</sup><mailto:karel@e-tunity.com>

- If possible: a fix for the bug.