SourceForge Installation Guide

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Résumé

This document is a complete installation guide for all Sourceforge services

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1 Introduction

1.1 Summary

This document is intended to be a complete installation and configuration guide for the SourceForge code. Since this code is very dependent from the archictecture, we had to choose one. Therefore this document focuses on a "one-machine" SourceForge. It is likely to be the most popular architecture. However, we hope that this document will be useful if you intend to distribute all SourceForge services on more boxes.

1.2 Acknowledgements

I would like to thank Roland Mas and Sam Gasster for their help and corrections and all the Alcôve crew for their support and testing.

Of course, I thank the developpers of SourceForge for their amazing development tool.

1.3 Generic installation

1.3.1 Requirements

You will need to get the Sourceforge 2.0 source code. In this document, this is the only supported version. You'll find it at http ://sourceforge.net/projects/alexandria/.

You need to choose a root for sourceforge. I suggest that you choose something like /sfroot. This root will be noted as SF_ROOT in the rest of this document.

Furthermore if you want to use all the SourceForge features such as DNS or Mail, you have to choose a domainname. This domain name will be refered as DOMAIN_NAME. This domain can be either regular or just virtual. That is to say that you can either register a domain name (such as sourceforge.net) via a registrar or use a completely virtual domain name (like sourceforge.internal) which will just exist on your private network. Either way, we do recommend that you setup a DNS for your domain. The procedure is explained later.

1.3.2 Procedure

Run the following commands in a root shell

```
# mkdir SF_ROOT
# cd SF_ROOT
# tar xvzf 'path'/SF2_0.tar.gz
# mv SF2.0/* .
# rmdir SF2.0
```

Get the patch and the images tar file at http ://zoy.org/˜guillaum/SF/. Detar the images archive. At this time, check that a ftp group exists if not you will have to create it. Then run

```
# cd SF_ROOT
# cp good_path/ad.gif www/images
# cp good_path/clear.gif www/images
# gzip -cd path_of_the_patch | patch -p1
# chmod 755 guide/*
# guide/mkdirs.sh
# guide/perms.sh (the user under which Apache runs) (the group under which Apache runs)
# cd www
# ../guide/fix_news.pl
```

This creates the required dirs with correct permissions and remove the hardcoded number of the SF news group.

2 Web services Configuration

2.1 Required software

In order to run all the web services, you will need the following software :

- Apache (1.3.9 or later) with SuEXEC enabled (it need to run on port 80 for http and 443 for https)
- PHP4 with MySQL support
- mod_ssl
- MySQL (3.23.x or later)

We assume that you've setup /root/.my.cnf to simplify our work :) (see the MySQL documentation for more details).

FYI, I run Apache 1.3.9, PHP4 4.0.2, mod_ssl 2.4.10 on a Debian GNU/Linux.

2.2 Configuring Apache

2.2.1 Access configuration

These modifications should be applied on your httpd.conf. Add a directory directive for SourceForge (all those directives are in `misc/apache.conf`)

```
<Directory SF_ROOT/www>
Options Indexes FollowSymlinks
AllowOverride All
order allow,deny
allow from all
php_admin_value include_path "SF_ROOT/www/include:."
</Directory>
```

For security reasons, we prevent people to read the htaccess files

```
<Files .htaccess>
order allow,deny
deny from all
</Files>
```

2.2.2 Host configuration

Note that depending of your distribution you might have to change the paths. If you cut and paste the following, verify that the DocumentRoot is NOT used anywhere in the Apache configuration files. For Debian 2.2, you must comment out the DocumentRoot Directive in /etc/apache/srm.conf

```
<IfModule mod_ssl.c>
Listen 80
Listen 443
</IfModule>

<IfModule mod_ssl.c>
AddType application/x-x509-ca-cert .crt
AddType application/x-pkcs7-crl    .crl
</IfModule>

<IfModule mod_ssl.c>
SSLPassPhraseDialog  builtin
SSLSessionCache         dbm:/var/run/ssl_scache
SSLSessionCacheTimeout  300
SSLMutex  file:/var/run/ssl_mutex
SSLRandomSeed startup builtin
SSLRandomSeed connect builtin
</IfModule>

# this directive is very important
DocumentRoot SF_ROOT/www
DirectoryIndex index.php index.html
NameVirtualHost 10.16.110.29

<VirtualHost DOMAIN_NAME>
ServerAdmin your_email_address
DocumentRoot SF_ROOT/www
</VirtualHost>

<VirtualHost cvs.DOMAIN_NAME>
DocumentRoot SF_ROOT/cvs
AddHandler cgi-script .cgi
# this may vary with your distribution
ScriptAlias /cgi-bin/ /usr/lib/cgi-bin/
</VirtualHost>

# this is only interesting if you want Mailing Lists support
<VirtualHost lists.DOMAIN_NAME>
AddHandler cgi-script .cgi
#this may vary with your Linux distribution
ScriptAlias /mailman/ /usr/lib/mailman/cgi-bin/
</VirtualHost>
```

```
<VirtualHost DOMAIN_NAME:443>
DocumentRoot SF_ROOT/www

<IfModule mod_ssl.c>

SSLEngine on
SSLCertificateFile    /etc/apache/ssl.crt/server.crt
SSLCertificateKeyFile /etc/apache/ssl.key/server.key

<Files ~ "\.(cgi|shtml)$">
SSLOptions +StdEnvVars
</Files>

<Directory "/usr/lib/cgi-bin">
SSLOptions +StdEnvVars
</Directory>

SetEnvIf User-Agent ".*MSIE.*" nokeepalive ssl-unclean-shutdown

</IfModule>
</VirtualHost>
```

2.3 MySQL Configuration

2.3.1 Create the database

As root, run in a shell

```
mysql -e "create database sourceforge"
```

2.3.2 Access Configuration

Pick a random password for the sourceforge user. The makepasswd tool is useful for that.
Run mysql on the mysql database.

```
# mysql mysql

mysql> GRANT ALL PRIVILEGES
      on sourceforge.*
      to sourceforge@localhost
      identified by 'password';

mysql> Flush Privileges;
mysql> quit
```

2.3.3 Fill the database

Run in a shell :

```
# cd SF_ROOT
# guide/fill_db.sh
```

2.4 Configure Sourceforge

2.4.1 Change the config file location

We need to change the location of local.inc from /etc/local.inc to SF_ROOT/etc/local.inc. In a shell run

```
# cd SF_ROOT
# guide/chlocal.pl SF_ROOT
```

All original files are saved with the .bak extension.

2.4.2 Changing the config file

Edit SF_ROOT/etc/local.inc :

- Set all $*_host variables EXCEPT for sys_download_host that you point to correct_hostname :81. You may add a dot at the end of the dns variables.
- $sys_default_domain = "domain_name"
- $sys_dbpasswd = "the password you chose before"
- $sf_root = SF_ROOT ;
- $sys_name = "system_name"

"system_name" stands for the string returned by hostname -f. You will need to create a group which will moderate the news for the front page after the installation. You will have to set $sys_news_groupid to the number of this group.

2.5 Create the sourceforge admin user

2.5.1 Create the user

`Note : at this point, a basic mail server must be setup on your system.`

Point a browser to http ://the_server_name/. Follow the link "New User via SSL", fill in the form (login could be 'admin'), validate. Wait for the confirmation email. Use the URL in it. Re-type login and password. You should be logged in.

2.5.2 Give him super-admin-root privileges

```
# mysql sourceforge
mysql> select user_id from user where user_name='admin';
[Should return 101 - Replace 'admin' by your login]
mysql> insert into user_group (user_id, group_id, admin_flags)
```

```
values (101, 1, 'A');
[Replace 101 by last result if need be]
```

You should also modify his unix uid because on most distributions the first 100 accounts are already taken, so I suggest you update it to 1001.

```
mysql> update user set unix_uid=1001 where user_id = 101;
```

2.6 Fileforge

This is a small utility which is called by the Apache server to move files from the incoming ftp directory to the project space.

Go to SF_ROOT/utils. In fileforge.c, modify at line 48 :

```
  char * src_dir   = "SF_ROOT/ftp/incoming/";
  char * dest_dir  = "SF_ROOT/download/";
```

The trailing slashes are mandatory. Compile it with gcc -O2 -o fileforge fileforge.c. Then copy fileforge to /usr/local/bin and run :

```
# cd /usr/local/bin
# chown root:(the group under which your Apache server runs) fileforge
# chmod 4750 fileforge
```

2.7 Improvements

2.7.1 Misc.

An example of how to add an administration menu to your SF page is given in the Online forum. Consult the following link :

```
http://sourceforge.net/forum/message.php?msg_id=46285&group_id=1
```

We suggest that you comment the line 45 in SF_ROOT/www/new/index.php. (you just have to add a // at the beginning of this line).

If you don't want that everybody sees the first survey, we suggest that you modify the where condition of line 116 in SF_ROOT/www/include/vote_function.php into

```
survey_id='$survey_id' and group_id=1
```

I advise you to create a cronjob that remove all files in cache every hour like

```
0 * * * * rm -f SF_ROOT/sfcache/*
```


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3 Mail configuration

3.1 Introduction

Sourceforge uses sendmail as a mail transport agent (MTA). A cron job dumps all members' email to an alias text file.

Another MTA, Exim, allows to check the aliases directly from the MySQL database. Thus we are going to use it as a replacement of sendmail.

Please note that you will need a Exim version compiled with MySQL support. So if you install it from a package, you need to check that. For more information, see http ://www.exim.org.

3.2 Configuring Exim for Sourceforge

This paragraph will not discuss the common Exim configuration but only the modifications that you need to run Sourceforge.

For security reasons, we suggest that you make the exim.conf file only readable by root and that you create a special MySQL user which can only select email and user_name in the user table.

```
# mysql mysql

mysql> GRANT SELECT(user_name,email) on sourceforge.user
  to some_user@localhost
identified by 'some_password';
mysql> FLUSH PRIVILEGES;
mysql> quit
```

Then you have to add users.DOMAIN_NAME in the list of the local domains. Then you have to add this line in the beginning of the Exim conf file :

```
hide mysql_servers = "localhost/sourceforge/some_user/some_password"
```

and a add a special director (it should be the first director) (a sample is given in SF_ROOT/misc/exim.directors)

```
forward_for_sourceforge:
  domains = users.DOMAIN_NAME
  driver = aliasfile
  file_transport = address_file
  query = "select email from user where user_name = '$local_part'"
  search_type = mysql
user = nobody
group = nogroup
```

3.3 Basic alias file

Some alias are predefined on Sourceforge, you can find them in SF_ROOT/backend/zones/aliases.zone. This file is a good start to make your own alias file.

4 FTP Backend

4.1 Introduction

SourceForge need a ftp server to handle the file releases. As for the genuine SF, we are going to use proftpd. Basically, we need to create an incoming directory and a anonymous ftp space for each project. At this time, we only support the ftp incoming directory. You just need to have a look at the proftp.conf file which is in SF_ROOT/etc. Customize it and copy it to /etc.

You must add the user under which Apache runs in the ftp group.

5 Shell user authentication

5.1 Introduction

Sourceforge offers a shell account to all users with a project. It uses a dump from the database to generate /etc/shadow, /etc/passwd and /etc/group. This has two big drawbacks : first you have to wait for the next cron job for any changes to your password etc. and this implies a lock every 6 hour (on SourceForge) on three critical files of the system. This is not very important for VA since they have a lot of powerful machines but for a "one machine Sourceforge" this is critical.

5.2 Solution

We suggest that you use the nss-mysql library which can authenticate groups or users directly from your MySQL database. We recommend that you use the tarball that you can find at http ://zoy.org/˜guillaum/SF/.

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We suppose that you have created a users group. We'll assume that its PID is 100.Now Untar the archive and run

```
configure --enable-default_home=SF_ROOT/home/users --enable-default_gid=100
```

Now type make, su and make install.

Generate two random passwords for two MySQL users. And edit guide/db_perms.sh and run it to give the correct rights to them.

- nss-mysql.conf

```
# This is an example configuration file for nss-mysql library
# You CANNOT put 2 assignments on the same line.

# This is the user configuration part
users.host = inet:localhost:3306; # db host
users.where_clause = user.unix_status = 'A'; # fully qualifed where clause
users.database = sourceforge;
users.db_user = nssmysql;
users.db_password = password;
users.table = user;
users.user_column = user_name;
users.password_column = password; # not used if you have enabled the sha-
dow support
users.userid_column = user_id;
```

```
users.uid_column = unix_uid;
users.gid_column = gid; # not used if you have run configure --with-default_gid=GID
users.realname_column = realname;
users.shell_column = shell;
users.default_gid = 100; # GID of users default group
users.default_home = /sfroot/home; # used only if you have run confi-
gure --with-default_home=DIR

# This is the groups configuration part
# This is only used if you have enabled the group support

groups.host = localhost;
groups.where_clause = groups.status = 'A'; #fully qualified where clause
groups.database = sourceforge;
groups.db_user = nssmysql;
groups.db_password = password;
groups.group_info_table = groups;
groups.group_name_column = unix_group_name;
groups.groupid_column = group_id;
groups.members_table = user_group;
groups.member_userid_column = user_id;
groups.member_groupid_column = group_id;
# At this time, we do not support a GID column. We use
# the following trick to choose a GID : gid = group_id + first_gid.
# You should not set first_gid to less than 1000
groups.first_gid = 2000;
```

- nss-mysql-root.conf

```
# This is an example configuration file for nss-mysql library
# You CANNOT put 2 assignments on the same line.
# This file must be readable ONLY FOR ROOT

# This is only used if you have enabled the shadow support
# Read the SHADOW file for more information

shadow.host = inet:localhost:3306; # db host
shadow.where_clause = user.unix_status = 'A'; # fully qualifed where clause
shadow.database = sourceforge;
shadow.db_user = shadow;
shadow.db_password = password;
shadow.table = user;
shadow.user_column = user_name;
shadow.password_column = unix_pw;
```

You just have to modify your nsswitch.conf to add the "mysql" service to passwd, group and shadow.

```
# /etc/nsswitch.conf
```

```
#
# Example configuration of GNU Name Service Switch functionality.
# If you have the `glibc-doc' and `info' packages installed, try:
# `info libc "Name Service Switch"' for information about this file.

passwd:         files mysql
group:          files mysql
shadow:         files mysql

hosts:          files dns
networks:       files

protocols:      db files
services:       db files
ethers:         db files
rpc:            db files

netgroup:       nis
```

6 Using the Backend

6.1 Introduction

Sourceforge dumps a lot of information from its database into text files which will be parsed later by other scripts. This is the main role of the backend. It is composed of several Perl scripts that you can find in SF_ROOT/utils/underworld-* and some text files (in SF_ROOT/backend/zones) which are the head of the dumped file.

As we said, the current SF implementation procedes in two steps. On our one-machine Sourceforge, we will modify the scripts so we can do the whole thing in only one step.

6.2 Configuring include.pl

This files resides in SF_ROOT/utils and will be used by every backend scripts.You have to configure some variables, here is what we need.

```
$db_include =   "SF_ROOT/etc/local.inc";    # Local Include file for data-
base us
$tar_dir    =   "/tmp";          # Place to put deleted user's accounts
$uid_add    =   "1000";         # How much to add to the database uid to get the
$gid_add    =   "2000";          # How much to add to the database gid to get the
$homedir_prefix = "SF_ROOT/home/users/";     # What prefix to add to the user's homed
$grpdir_prefix  =   "SF_ROOT/home/groups/";    # What prefix to add to the user's homed
$file_dir   =   "SF_ROOT/dumps/";   # Where should we stick files we're work
$dummy_uid      =       "65534";    #  A user that nobody can be (usually nobody)
$dummy_name     =   "nobody";
$dummy_group_id     =       "65534"; # A group that has no members (usually nogroup)
$dummy_group_name       =   "nogroup";
$date           =       int(time()/3600/24);    # Get the number of days since 1
$cvsroot   = "SF_ROOT/cvs";
$cvslogs_dir = "SF_ROOT/cvslogs";
$boalogs_dir = "SF_ROOT/boalogs";
$download_dir = "SF_ROOT/download";
$domainname = "DOMAIN_NAME";
$IP = "10.0.0.1"; # The machine IP
```

6.3 Configuring DNS backend

6.3.1 Working on SourceForge Files

The perl script is SF_ROOT/utils/underworld-dummy/dns_conf.pl. Make it executable.

In order to use the backend, you have to write a head file and copy it to SF_ROOT/utils/zones/dns.zone. You should maybe just edit the example provided with the patch and modify it to fit your own needs. Note that the second line MUST BE the serial number line.

6.3.2 Configuring BIND

Add this to your named.conf

```
zone "DOMAIN_NAME" {
  type master;
    file "/etc/bind/db.DOMAIN_NAME";
};
```

Now `you link /etc/bind/db.DOMAIN to SF_ROOT/dumps/dns.dump.` and create a cron job :

```
0 * * * * cd SF_ROOT/utils/underworld-dummy/ && ./dns_conf.pl && ndc -q reload
```

6.4 User and group backend

This part has been modified to use the MySQL NSS library (this is discussed in the next chapter).

Add a cronjob for the backend script :

```
*/10 * * * * cd SF_ROOT/utils && ./new_parse.pl >/dev/null
```

Don't forget to customize SF_ROOT/utils/default_page.php ! (for example remove all occurrences of sourceforge.net and replace them by DOMAIN_NAME).

6.5 CVS stats Backend

Make $SF_ROOT/utils/cvs1/cvs_history_parse.pl executable and add a cron job for it

```
30 0 * * * cd SF_ROOT/utils/cvs1 && ./cvs_history_parse.pl >/dev/null
```

6.6 SSH Keys backend

Now add a cron job for the backend script

```
*/5 * * * * cd SF_ROOT/utils/ && ./ssh_create.pl > /dev/null
```

6.7 Download Statistics

First you need to install the Boa server (see `http//www.boa.org`) and cronolog (see `http ://www.ford-mason.co.uk/resources/cronolog/`).

We have to configure Boa. You just need to customize SF_ROOT/etc/boa.conf and copy it to /etc/[boa].Then add a cron job for the stats backend

```
0 1 * * * cd SF_ROOT/utils/download && ./stats_logparse.sh >/dev/null
```


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6.8 WWW backend

We need a script to create the Virtual Host entries. This is done by SF_ROOT/utils/apache.pl. Copy your httpd.conf to SF_ROOT/utils/zones/httpd.conf.zone.

Now add a cron job for the WWW backend

```
0 * * * * cd SF_ROOT/utils/ && ./apache.pl > /dev/null & & apachectl res-
tart >/dev/null
```

Then http.conf must become a symlink to SF_ROOT/dumps/httpd.conf.

6.9 Mailing Lists

6.9.1 Backend configuration

The Sourceforge mailing lists system uses GNU Mailman. So you will have to install it. Then we need to customize SF_ROOT/utils/mailing_lists_create.pl. Indeed it is very dependent of your Linux distribution. Note that I've removed the Geocrawler stuff since only the Sourceforge hosts are allowed to add lists there.

Don't forget to add a cron job for this script

```
*/10 * * * * cd SF_ROOT/utils && ./mailing_lists_create.pl > /dev/null
```

6.9.2 Exim configuration

You need to create aliases for all mailing lists. As always, we are going to use the MySQL features of Exim. First add lists.DOMAIN_NAME to your local domains. Then you have to add three directors (after forward_for_sourceforge) : (a sample is included in SF_ROOT/misc/exim.directors)

```
forward_for_lists:
  domains = lists.DOMAIN_NAME
  driver = aliasfile
  file_transport = address_file
  pipe_transport = address_pipe
  query = "select CONCAT('|/usr/lib/mailman/mail/wrapper post ',list_name)
       from mail_group_list where list_name = '$local_part'"
  search_type = mysql
user=root
group=root

forward_for_lists_admin:
  domains = lists.DOMAIN_NAME
  driver = aliasfile
  file_transport = address_file
  pipe_transport = address_pipe
  query = "select CONCAT('|/usr/lib/mailman/mail/wrapper mailowner ',list_name)
    from mail_group_list where list_name =
    LEFT('$local_part',LENGTH('$local_part')-6) and
    RIGHT('$local_part',6) = '-admin'"
```

```
  search_type = mysql
user=root
group=root

forward_for_lists_request:
  domains = lists.DOMAIN_NAME
  driver = aliasfile
  file_transport = address_file
  pipe_transport = address_pipe
  query = "select CONCAT('|/usr/lib/mailman/mail/wrapper mailcmd ',list_name)
    from mail_group_list where list_name =
    LEFT('$local_part',LENGTH('$local_part')-8) and
    RIGHT('$local_part',8) = '-request'"
  search_type = mysql
user=root
group=root
```

With Exim(<3.2) the query must reside on ONE line.

As for the mail configuration, you need to give the right to select list_name in mail_group_list to the same user.

6.9.3 Mailman configuration

We suggest that you edit mm_cfg.py (in /etc/ or /etc/mailman/) and set DEFAULT_HOST_NAME to your DOMAIN_NAME and DEFAULT_URL to lists.DOMAIN_NAME/mailman.

6.10 Misc

Add as cron jobs

```
0 * * * * cd SF_ROOT/utils/underworld-root && ./db_trove_treesums.pl
0 2 * * * cd SF_ROOT/utils/underworld-root && ./stats_nightly.sh >/dev/null
0 2 * * * cd SF_ROOT/utils/underworld-root && ./db_jobs_close.pl
@daily cd SF_ROOT/utils/underworld-root/ && (./db_project_metric.pl ;
./db_project_cleanup.pl)
@daily cd SF_ROOT/utils/underworld-root && db_project_weekly_metric.pl >/dev/null
@daily cd SF_ROOT/utils/underworld-root && db_rating_stats.pl
@daily cd SF_ROOT/utils/underworld-root && db_top_groups_calc.pl>/dev/null
@daily cd SF_ROOT/utils/underworld-root && db_site_stats.pl
```

At this time, I cannot say if all these files are required since it seems that they are some useless scripts in the archive.

7 CVS configuration

7.1 CVS

7.1.1 Configuration

There is no special configuration for the cvs access via ssh. But for pserver you have to add this entry for the pserver in your inetd.conf

```
cvspserver  stream  tcp nowait  root    /usr/sbin/tcpd  /usr/bin/cvs \
-b /usr/bin --allow-root=SF_ROOT/cvs pserver
```

You'll need to launch `killall -HUP inetd` in a root shell.

As for the genuine SourceForge, we'll need to make some modifications to CVS. These have been done by Gavin Walker that I thank a lot for his help. Go in the src directory of the CVS sources and apply this patch (you can find it in misc/cvs_patch.diff) :

```
--- root.c.orig Sun Mar  7 21:17:02 1999
+++ root.c Thu Dec 14 11:53:55 2000
@@ -261,9 +261,34 @@
     }

     for (i = 0; i < root_allow_count; ++i)
-if (strcmp (root_allow_vector[i], arg) == 0)
+ if (strncmp (root_allow_vector[i], arg, strlen (root_allow_vector[i]) ) == 0
+     && root_allow_ok_match(&arg[strlen(root_allow_vector[i])], "^/[a-zA-
Z][a-zA-Z0-9 -]+$"))
      return 1;
     return 0;
+}
+
+/*
+ * Match string against the extended regular expression in
+ * pattern, treating errors as no match.
+ *
+ * return 1 for match, 0 for no match
+ */
+
+int
+root_allow_ok_match (char * string, char * pattern)
+{
+     int  status;
+     regex_t   re;
```

```
+
+     if (regcomp(&re, pattern, REG_EXTENDED|REG_NOSUB) != 0) {
+   return 0;   /* report error */
+     }
+     status = regexec(&re, string, (size_t) 0, NULL, 0);
+     regfree(&re);
+     if (status != 0) {
+   return 0;   /* report error */
+     }
+     return 1;
 }

 /* This global variable holds the global -d option.  It is NULL if -d
```

7.2 CVSWeb

7.2.1 Introduction

SourceForge uses CVSWeb to allow its users to browse their CVS repositories. But its developpers have slightly modified it so we will have make some modifications for our own needs. I've modified version 1.79. So if you are running another version, you maybe have to hack CVSWeb to make it work.

7.2.2 Required modifications

I suggest you configure /etc/cvsweb.conf like this

```
%CVSROOT = (
# Uncomment next line and modify the path if you have only one CVS repository.
        'Whatever-CVS' => 'SF_ROOT/cvs',
        );

# This tree is enabled by default when
# you enter the page
$cvstreedefault = 'Whatever-CVS';
```

%DEFAULTVALUE{"hidecvsroot"} should be set to 1 too.

Here is the diff between the upstream version of CVSWeb and "mine"

```
--- cvsweb      Fri Jul  7 06:00:01 2000
+++ cvswebsf.cgi        Thu Nov  2 13:47:16 2000
@@ -260,10 +260,16 @@

 # alternate CVS-Tree, configured in cvsweb.conf
 if ($input{'cvsroot'}) {
-    if ($CVSROOT{$input{'cvsroot'}}) {
-       $cvstree = $input{'cvsroot'};
-       $cvsroot = $CVSROOT{"$cvstree"};
```

```
-    }
+#    if ($CVSROOT{$input{'cvsroot'}}) {
+#      $cvstree = $input{'cvsroot'};
+#      $cvsroot = $CVSROOT{"$cvstree"};
+       $input{'cvsroot'} =~ s/\.//g; # we do not like dots
+       if ( -d ($CVSROOT{"$cvstree"} . "/" . $input{'cvsroot'}) )
+       {
+               $cvsroot = $CVSROOT{"$cvstree"} . "/" . $input{'cvsroot'};
+    } else {
+       &fatal("500 Internal Error",
+       "<strong>no such project</strong>");
+       }
 }

 # create icons out of description
```

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