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How To Configure Web Access To Subversion Repositories Using Apache

This how to is going to describe the steps to get the mod_dav_svn module to work on an Apache web server. First I'll assume that we don't have Apache and Subversion installed on our FreeBSD box, in a second part I'll explain how to add the module using our current installation.

First we have to install our Apache 2.0.x with Berkeley DB support (because Subversion will use Berkeley DB to save the repositories). To do this we have to go to the *ports* dir and do this:

```
box# cd /usr/ports/www/apache20/
box# make -DWITH_BDB4 install clean
some installation steps...
```

Add apache ability to start automatically at boot time:

```
box# echo 'apache2_enable="YES"' >> /etc/rc.conf
```

After we have apache20 installed with bdb support, we'll have to install Subversion:

```
box# cd /usr/ports/devel/subversion
box# make -DWITH_MOD_DAV_SVN install clean
some installation steps...
```

After installation we'll have to ensure that mod_dav_svn module was properly installed on apache.

```
box# cat /usr/local/etc/apache2/httpd.conf | grep svn
```

```
LoadModule dav_svn_module     libexec/apache2/mod_dav_svn.so
LoadModule authz_svn_module   libexec/apache2/mod_authz_svn.so
```

We have apache with mod_dav_svn module installed properly. At this point we can create a repository. This will help us to test our instalation:

```
box# mkdir /usr/home/svn
box# mkdir /usr/home/svn/repos
box# svnadmin create /usr/home/svn/repos/test
```

Then we have to create the files that are going to be used to authenticate the users.

```
box# mkdir /usr/home/svn/access
box# cd /usr/home/svn/access
box# htpasswd -cm users root
password:****
box# htpasswd -m users viewer
password:*****
```

```
box# vi control
```

```
[test:/]
root = rw
viewer = r
```

At this point we have apache with bdb support, subversion with mod_dav_svn module installed, our repository created, the users and the control to our repository. Now we will configure apache to read the repositories:

```
box# cd /usr/local/etc/apache2/Includes/
```

```
box# cat svn.conf
```

```
<Location /svn/repos>
DAV svn
SVNParentPath /usr/home/svn/repos
SVNIndexXSLT "http://svn.example.com/svnindex.xsl"
AuthzSVNAccessFile /usr/home/svn/access/control
# anonymous first
Satisfy Any
Require valid-user
# authenticating them valid ones
AuthType Basic
AuthName "Subversion Repositories at example.com"
AuthUserFile /usr/home/svn/access/users
</Location>
```

Apache will read all the files that are under the *Includes* directory, so our *svn.conf* will be loaded when apache starts, note that we are loading *svnindex.xsl* that is the file where the transformations are done, if you would like to give to your repository some look and feel work these file will be the appropiate. The file skeletons are under */usr/local/share/subversion/xslt/* directory, there are two files, one *.xsl* and another *.css.* Copy these files to your document root. I have a virtual server called *svn.example.com* in my machine. I have all my virtual servers under */usr/local/www/pages*, so I have *svn.example.com* directory and I've configured that virtual server in */usr/local/etc/apache2/httpd.conf*.

```
NameVirtualHost *:80
<VirtualHost *:80>
    ServerAdmin ecruz@example.com
    ServerName svn.example.com
    DocumentRoot /usr/local/www/pages/svn.example.com
 CustomLog /var/log/svn.example.com-access_log common
</VirtualHost>
```

Restart the web server:

```
/usr/local/etc/rc.d/apache2.sh restart
```

If all went ok, we have our web server working properly, to test it, open in your Firefox or whatever browser and go to *http://svn.example.com/svn/repos/test*. It will ask you for the credentials, so use *root* or *viewer*. It must display the test repository at revision 0. I'll suggest to install TortoiseSVN on Windows boxes to get access to the repositories.

Now, as a plus, we will configure an alert in our subversion test repository to send a notification when a commit was done. To do this we will have to create an executable file under the *hooks* directory:

```
box# cd /usr/home/svn/repos/test/hooks/
box# cat post-commit
```

```
[code]
#!/usr/local/bin/php
<?
$message = "SubVersion Commit
Project: Test
http://svn.example.com/svn/repos/test full repository
==============Comments==============
";
$repos = $argv[1];
$version = $argv[2];
$message .= `svnlook log -r $version /usr/home/svn/repos/test`;
$message .= "
===========Lista de Cambios========
";
$message .= `svnlog diff -r $version /usr/home/svn/repos/test`;
mail("ecruz@example.com","SubVersion Commit $repos $version",$mensaje,"From: svn@example.com");
?>
[/code]
```

To get this to work with your current installation you have to change only the subversion installation step:

```
box# cd /usr/ports/devel/subversion
box# make deinstall
box# make -DWITH_MOD_DAV_SVN -DWITHOUT_BDB4 install clean
```

Ok, this is the end of this howto, any improvements are welcome. Regards!