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## Setting Up Subversion And Trac As Virtual Hosts On An Ubuntu Server

This howto outlines the process by which one can set up the [Subversion](#) version control system, and have it work in tandem with [Trac](#), the project manager for software development projects, on a server running Ubuntu (or possibly Debian). It is brought to you by [Openject Consulting](#).

### Setting up Subversion

For detailed information on this, including alternate setups, have a look at [Version Control with Subversion](#).

- Install the required packages.`sudo aptitude install enscript libapache2-mod-python python-docutils trac db4.3-util libapache2-svn subversion-tools`
- Create a virtual host directory for SVN. We'll use `/var/local/svn` instead of `/var/www` so that Subversion instances don't clog up the directory of web root directories.`sudo mkdir -p /var/local/svn/svn.example.com`
- Create a development group, and add the web user to it.`sudo addgroup example; sudo adduser www-data example`
- Add users to the development group. These are persons that need access to the repository.
- `sudo adduser username1 example`
- `sudo adduser username2 example`
- `sudo adduser username3 example`
- Set the proper permissions.`sudo chmod 2770 /var/local/svn/svn.example.com`
- Set up the repository.`sudo svnadmin create /var/local/svn/svn.example.com`
- Clear the current password file. By default it's for the svnserve protocol, but we'll be using HTTPS (or just HTTP). We'll be adding users to this file later in the process.`sudo rm /var/local/svn/svn.example.com/conf/passwd`  
`sudo touch /var/local/svn/svn.example.com/conf/passwd`
- Allow the group to write to the repository.`sudo chmod -R g+w /var/local/svn/svn.example.com`
- Set proper file ownership.`sudo chown -R www-data:example /var/local/svn/svn.example.com`
- Set the repository access permissions. Information on how to do this can be found in the [Path-Based Authorization](#) section of [Version Control with Subversion](#).`sudo vi /var/local/svn/svn.example.com/conf/authz`
- Create a directory for the log files.`sudo mkdir /var/log/apache2/svn.example.com`
- Add the site to the log rotation list.`sudo vi /etc/logrotate.d/apache2`
- Configure the virtual host...`sudo vi /etc/apache2/sites-available/svn.example.com`...with the following data. If you don't care about SSL, you can ignore

the SSL options and run this on port 80.

```
<VirtualHost [server's IP address]:443>
  ServerName svn.example.com
  <Location />
    DAV svn
    AuthType Basic
    AuthName "svn.example.com"
    AuthUserFile /var/local/svn/svn.example.com/conf/passwd
    AuthzSVNAccessFile /var/local/svn/svn.example.com/conf/authz
    SVNPath /var/local/svn/svn.example.com
    Require valid-user
  </Location>
  CustomLog /var/log/apache2/svn.example.com/access.log combined
  ErrorLog /var/log/apache2/svn.example.com/error.log
  SSLEngine on
  SSLCertificateFile /etc/apache2/ssl/apache.pem
  # Add this once there is a real (non self-signed) certificate.
  # SSLCertificateKeyFile /etc/apache2/ssl/server.key
</VirtualHost>
<VirtualHost [server's IP address]:80>
  ServerName svn.example.com
  Redirect / https://svn.example.com/
</VirtualHost>
```

Reference:/etc/apache2/mods-enabled/dav\_svn.conf

- Enable the subversion virtual host.sudo a2ensite svn.example.com
- Create user/password combinations.htpasswd /var/local/svn/svn.example.com/conf/passwd username
- Restart the web server.sudo /etc/init.d/apache2 restart
- If you're going to have users working locally, set up svnwrap. (See the man page for details.)sudo ln -s /usr/bin/svnwrap /usr/local/bin/svn

## Setting up Trac

- Create the web directory. We'll use /var/local/trac instead of /var/www so as not to clog up the directory of webroots.sudo mkdir

/var/local/trac/trac.example.com

- Set the proper permissions.sudo chmod 2770 /var/local/trac/trac.example.com
- Create a Trac instance.sudo trac-admin /var/local/trac/trac.example.com initenv
- Set proper ownership on the web directory.sudo chown -R www-data:example /var/local/trac/trac.example.com
- Allow the group to write to the repository.sudo chmod -R g+w /var/local/trac/trac.example.com
- Configure it.sudo vi /var/local/trac/trac.example.com/conf/trac.ini
- Create a directory for the log files.sudo mkdir /var/log/apache2/trac.example.com
- Add the site to the log rotation list.sudo vi /etc/logrotate.d/apache2
- Configure the virtual host...sudo vi /etc/apache2/sites-available/trac.example.com...with the following data. If you don't care about SSL, you can skip the SSL options and run this on port 80.

```
# Trac Configuration
<VirtualHost [server's IP address]:80>
    ServerName trac.example.com
    Redirect / https://trac.example.com/
</VirtualHost>
<VirtualHost [server's IP address]:443>
    ServerName trac.example.com
    DocumentRoot /var/local/trac/trac.example.com/
    Alias /trac/ /usr/share/trac/htdocs
    <Directory "/usr/share/trac/htdocs/">
        Options Indexes MultiViews
        AllowOverride None
        Order allow,deny
        Allow from all
    </Directory>
    <Location />
        SetHandler mod_python
        PythonHandler trac.web.modpython_frontend
        PythonInterpreter main_interpreter
        PythonOption TracEnv /var/local/trac/trac.example.com/
        PythonOption TracUriRoot /
        AuthType Basic
```

```
AuthName "trac.example.com"
# Use the SVN password file.
AuthUserFile /var/local/svn/svn.example.com/conf/passwd
Require valid-user
</Location>
CustomLog /var/log/apache2/trac.example.com/access.log combined
ErrorLog /var/log/apache2/trac.example.com/error.log
SSLEngine on
SSLCertificateFile /etc/apache2/ssl/apache.pem
# Add this once there is a real (non self-signed) certificate.
# SSLCertificateKeyFile /etc/apache2/ssl/server.key
</VirtualHost>
```

Reference: <http://trac.edgewall.org/wiki/TracOnUbuntu>

- Enable the Trac virtual host. `sudo a2ensite trac.example.com`
- Restart the web server. `sudo /etc/init.d/apache2 restart`

The last thing to do is add the subdomains "svn" and "trac" to the DNS configuration for your domain. Once this is done, Subversion and Trac will be integrated into your server environment, and will be accessible from the web.