SVN Installation

This document describes the SVN setup with apache, ssl, ldap authentication. This has information to install view vc tool also.

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# Information

This document tells about SVN Installation via Apache. This document also provides information about enabling and installing SVN+apache with ssl and ldap authentication.

I have included installation of ViewVC tool for SVN.

# Require Software and tools

You need to have following tools and software downloaded for complete setup, Here is the list

SVN

Openldap

Apache

Swig

Expat

Pcre

Openssl

Python

viewvc

Get these softwares from internet and download the latest stable version.

All these softwares are open source and available free.

# Pre-Requisite libraries

Before starting the installation we need to check availability of supporting tools.

gcc, g++

zip

java

We need some more libraries which you can install via “yum install” or “apt-get install”.

apt-get install libdb4.6-dev

apt-get install zlib1g-dev (install zlib devel)

# Installation

## 4.1 OpenSSL

Unzip and untar the downloaded openSSL source code and follow the instruction.

gunzip openssl-1.0.0e.tar.gz

tar -xf openssl-1.0.0e.tar

cd openssl-1.0.0e

./config --prefix=/usr/share/openssl enable-shared

make

make install

ln -s /usr/share/openssl/lib/\* /usr/lib/.

## 4.2 OpenLdap

Unzip and untar the downloaded openldap source code and follow the instruction.

tar -xf openldap-stable-20100719.tar

cd openldap-2.4.23/

./configure --prefix=/usr/share/ldap

make depend

make

make install

env CPPFLAGS="-I/usr/share/openssl/include" LDFLAGS="-L/usr/share/openssl/lib" ./configure --prefix=/usr/share/ldap --with-ssl=/usr/share/openssl -with-tls=openssl

## 4.3 Apache

Unzip and untar the downloaded http source code and follow the instruction.

./configure --prefix=/etc/apache2 --with-included-apr --enable-module=shared --enable-dav --enable-dav-fs --enable-dav-lock --enable-ldap --enable-authnz-ldap --with-ldap --with-ldap-lib=/usr/share/ldap/lib --with-ldap-include=/usr/share/ldap/include/ --enable-ssl --with-ssl=/usr/share/openssl/

make

make install

create the use name and group apache by running following command.

groupadd apache

useradd -g apache apache

change the ownership of the /opt/apache2 to apache:apache

chown –R apache:apache /opt/apache2

## 4.4 expat

./configure --prefix=/usr/share/expat

make

make install

link expact lib to /usr/lib

ln -s /usr/share/expat/lib/\* /usr/lib/

## 4.5 PCRE

./configure --prefix=/usr/share/pcre

make

make install

ln -s /usr/share/pcre/lib/\* /usr/lib/.

## 4.6 Swig

./configure --prefix=/usr/share/swig --with-pcre-prefix=/usr/share/pcre/

make

make install

## 4.7 Subversion

Get the copy of latest subversion stable release source code from net.

tar -xf subversion-1.7.1.tar

cd subversion-1.7.1

Get the dependencies

./get-deps.sh

We need to install some dependencies also

**Install Zlib**

cd zlib/

./configure --prefix=/usr/share/zlib

make

make install

**Install Python**

./configure --prefix=/usr/share/python2.6.7 enable-share

make

make install

link the python bin file to /usr/bin

link the lib folder to /usr/lib

**SVN Installation**

./configure --prefix=/etc/subversion PYTHON=/usr/share/python2.6.7/bin/python --with-apr=/etc/apache2/bin/apr-1-config --with-apr-util=/etc/apache2/bin/apu-1-config --with-apxs=/etc/apache2/bin/apxs --with-openssl=/usr/share/openssl --with-zlib=/usr/share/zlib --enable-shared

make

make install

**Install bindings for viewVC**

Change directory to subversion directory where you are compiling

make swig-py

make install-swig-py

tell your Python where to find the subversion bindings

echo /etc/subversion/lib/svn-python > /usr/share/python2.6.7/lib/python2.6/site-packages/subversion.pth

echo /etc/subversion/lib/svn-python > /usr/lib/python2.6/site-packages/subversion.pth

Test the swig binding installation

python -c "from svn import client"

It should not throw any error.

Link svn lib and bin to /usr/lib abd /usr/bin

## 4.8 ViewVC

Download and untar the source code file.

./viewvc-install --prefix=/usr/share/viewvc

Edit the /usr/share/viewvc/viewvc.conf file to add SVN path and mail ID

edit httpd.conf to include following

ScriptAlias /viewvc /usr/share/viewvc/bin/cgi/viewvc.cgi

ScriptAlias /query /usr/share/viewvc/bin/cgi/query.cgi

<Directory /usr/share/viewvc/bin/cgi>

Order allow,deny

Allow from all

</Directory>

# Other Configurations

## 5.1 Ldap

update the ldap.conf file

vi /etc/ldap/ldap.conf

add the entry at last

REFERRALS off

## 5.2 SSL Keys

Generate the ssl key

Generate a Private Key

openssl genrsa -des3 -out server.key 1024

Generate a CSR (Certificate Signing Request)

**openssl req -new -key server.key -out server.csr**

Remove Passphrase from Key

cp server.key server.key.org  
openssl rsa -in server.key.org -out server.key

Generating a Self-Signed Certificate

openssl x509 -req -days 365 -in server.csr -signkey server.key -out server.crt

installing the certificate.

cp server.crt /usr/local/apache/conf/ssl.crt  
cp server.key /usr/local/apache/conf/ssl.key

For more detail

<http://www.akadia.com/services/ssh_test_certificate.html>

<http://www.xenocafe.com/tutorials/linux/centos/openssl/self_signed_certificates/index.php>

## 5.3 Apache conf file

Configuration for SVN

<Location /svn>

DAV svn

SVNParentPath /opt/svnroot/svn

# Limit write permission to list of valid ldap (Rctive Directory)users.

AuthzLDAPAuthoritative off

AuthType Basic

AuthBasicProvider ldap

AuthName "some authentication heading"

AuthLDAPBindDN use@domain.com

AuthLDAPBindPassword "password"

AuthLDAPURL "complete ldap URL” NONE

require valid-user

</Location>