# SVN For Windows –

# SVN Server – Visual SVN Server

# SVN Clint – Tortoisesvn /Subclipse Plugin for Eclips

# How to Install Apache Subversion (SVN) on RHEL 7 / Rocky Linux 7

Apache Subversion is also known as SVN, it is an open-source versioning and revision controlling program which helps in storing the present and past historic file versions like documents, source codes and web pages. SVN comes under Apache License.

In this tutorial, we will learn how install & configure SVN on RHEL 8 and Rocky Linux 8. Here authenticated users will be allowed to perform check-in and checkout operations on SVN repository.

## **Step 1) Install SVN and Apache**

SVN & Apache (http) package are available in the default package repositories of RHEL 8 and Rocky Linux 8. Run following dnf command to install required packages,

$ sudo yum install -y httpd subversion mod\_dav\_svn

## **Step 2) Edit Configuration File of Apache Subversion**

Create a file ‘/etc/httpd/conf.d/subversion.conf’ and add the following lines to it.

$ sudo vi /etc/httpd/conf.d/subversion.conf

<Location /svn>

DAV svn

SVNParentPath /var/www/svn/

AuthType Basic

AuthName "SVN Repository"

AuthUserFile /etc/svn/svn-auth-accounts

Require valid-user

</Location>

Above settings will allow only the authenticated users to use SVN repository.

## **Step 3) Create SVN Users via htpasswd command**

Run the beneath command to create user for SVN via htpasswd command,

mkdir /etc/svn

$ sudo htpasswd -cm /etc/svn/svn-auth-accounts linuxtechi

New password:

Re-type new password:

Adding password for user linuxtechi

$

In the above htpasswd command we have used ‘-c’ & **‘-m’** options. -c is used to create the password file (/etc/svn-auth-accounts) and -m used to create MD5 encryption password for the user. To create second user remove the ‘-c’ from the above command otherwise it will overwrite existing file.

We Can say by –m we can creaye multiple users. But by –cm we can’t create multiple users.

$ sudo htpasswd -m /etc/svn/svn-auth-accounts pkumar

New password:

Re-type new password:

Adding password for user pkumar

For creating multiple users –

sudo htpasswd -m /etc/svn/svn-auth-accounts mm001

## **Step 4)  Create SVN Repository**

Run following commands one after the another to create your first svn repository and to set the required permissions,

$ sudo mkdir /var/www/svn

$ cd /var/www/svn/

$ sudo svnadmin create repo

Change the owner and group owner to **apache** recursively:

$ sudo chown -R apache:apache repo/

Note: In case SELinux is enable then apply below selinux rules by running,

$ sudo chcon -R -t httpd\_sys\_content\_t /var/www/svn/repo/

$ sudo chcon -R -t httpd\_sys\_rw\_content\_t /var/www/svn/repo/

#### Step 5)  Start and Enable Apache Service

Run the beneath systemctl commands to start and enable apache web server’s service.

$ sudo systemctl restart httpd

$ sudo systemctl enable httpd

$ sudo systemctl status httpd

In case firewall is enabled on your system then allow following port by running,

$ sudo firewall-cmd --permanent --zone=public --add-service=http

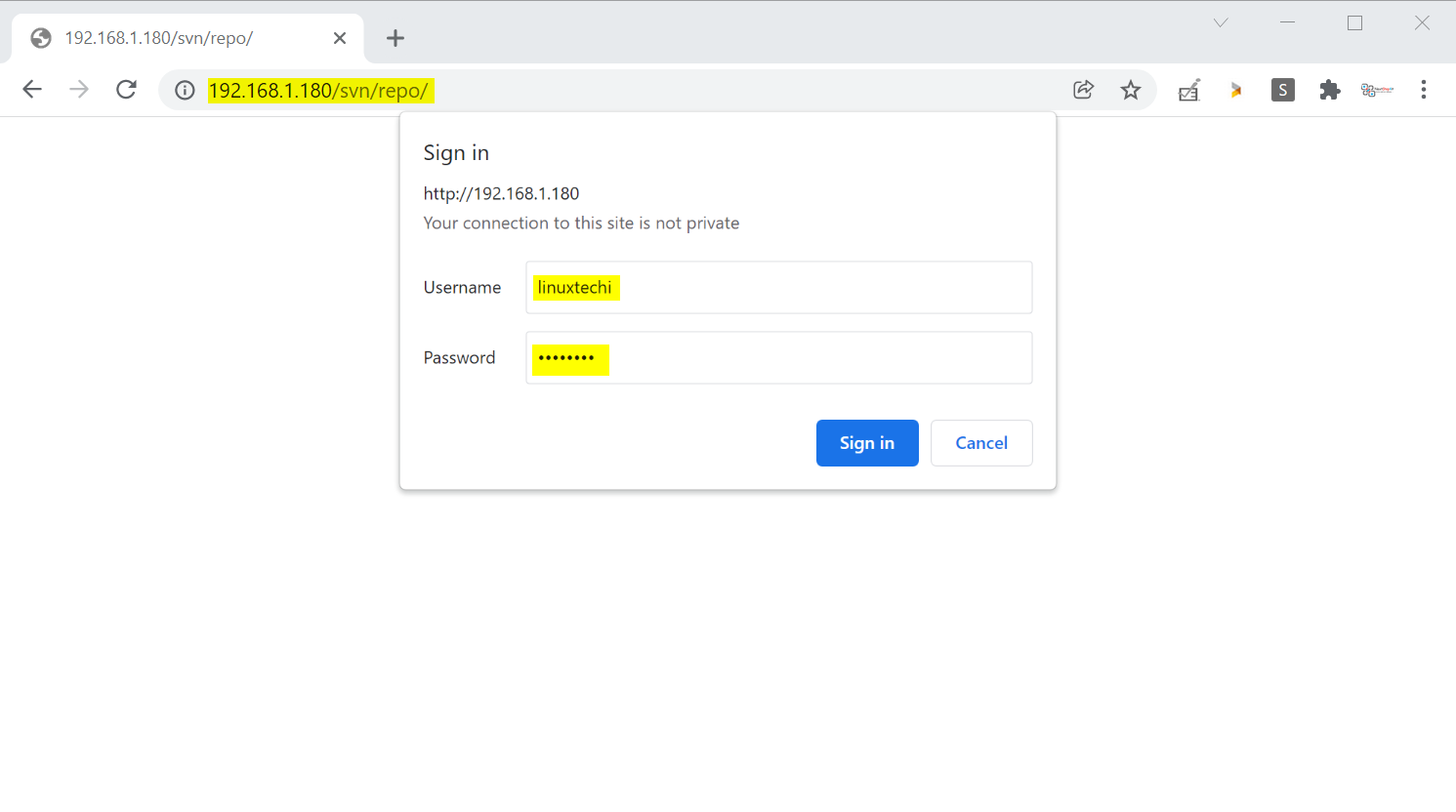
$ sudo firewall-cmd --permanent --zone=public --add-service=https

$ sudo firewall-cmd --reload

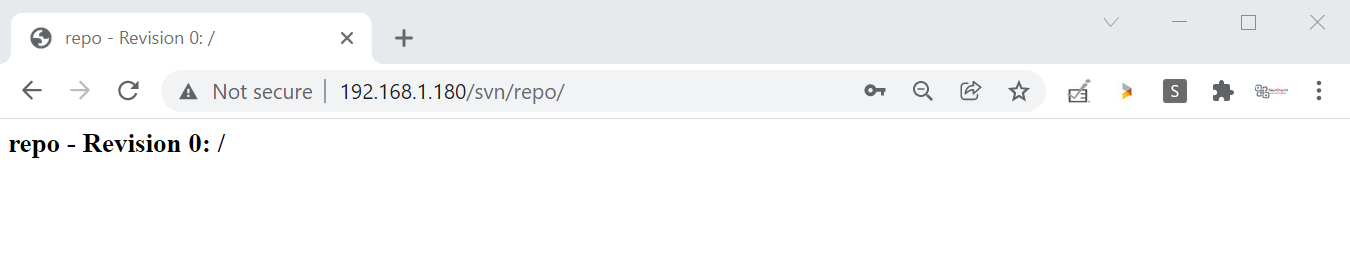
## **Step 6) Access SVN Repo from Web Browser**

Type the following URL in your web browser,

http://<SVN-System-IP>/svn/repo



In the browser just replace ip address with your SVN Server’s IP



## **Step 7) Disable anonymous access on SVN Repository**

Edit the file – /var/www/svn/repo/conf/svnserve.conf, add the below two lines

## Disable Anonymous Access

anon-access = none

## Enable Access control

authz-db = authz

#### Step 8) Import Project Directory’s Content to SVN repository

Let’s create our first sample project directory and its file.

$ cd /var/www/svn/repo/

$ mkdir devops

$ cd devops/

$ touch testfile\_1 ; touch testfile\_2

$

Now use SVN command to import ‘devops’ project to the repo. As we have created sample ‘devops’ project on the svn server itself. So run following svn command,

$ sudo svn import -m "First SVN Repo" devops file:///var/www/svn/repo/devops

Adding devops/testfile\_1

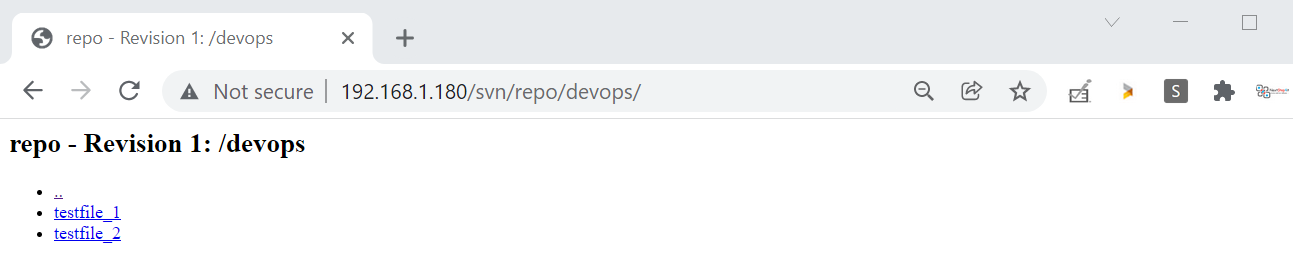
Adding devops/testfile\_2

Committing transaction...

Committed revision 1.

$

Now Check from the Browser



## **Step 9) Check Out the Project**

In my case, I want to checkout the devops project on my Ubuntu laptop using SVN command. So to perform checkout operations, please make your system has subversion package installed, if not then use “sudo apt  install -y subversion“ command to install required package.

$ mkdir svn\_data

$ svn co http://192.168.1.180/svn/repo/devops/ /home/pkumar/svn\_data/ --username linuxtechi

A svn\_data/testfile\_1

A svn\_data/testfile\_2

Checked out revision 1.

$

## **Step 10) Committing Changes**

After making required changes in the project code , we can commit the changes to the SVN repos. In my case i have created one more file in linuxproject folder.

$ cd svn\_data/

$ touch testfile\_3

$ svn add testfile\_3 --username linuxtechi

A testfile\_3

$

$ svn commit -m "New File addedd" --username linuxtechi

Adding testfile\_3

Transmitting file data .

Committed revision 2.

$

Note: While committing the changes if you are getting below error

svn: E000013: Commit failed (details follow):

svn: E000013: could not begin a transaction

Then to solve this error , make sure that Apache user has read & write access to the entire repository.

$ cd /var/www/svn/repo

$ sudo chown -R apache:apache \*

$ sudo chmod -R 664 \*

That’s all from this tutorial, please do share your feedback and queries in below comments section.

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| **Subversion : Set Access Permission**  2020/03/27 |

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|  | Set Access Permission on SVN repositories. [It requires [svnserve] is running](https://www.server-world.info/en/note?os=CentOS_8&p=subversion&f=2). |
| [1] | For example, Set Access Permission to [/var/svn/repos/project] repository. |

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| **[root@dlp ~]#**  [**vi**](https://www.server-world.info/en/command/html/vi.html)**/var/svn/repos/project/conf/svnserve.conf**  **# line 9: add (prohibit anonymous access)**  **[general]**  **anon-access = none**  **# line 28: uncomment**  **password-db = passwd**  **# line 37: uncomment**  **authz-db = authz**  **[root@dlp ~]#**  [**vi**](https://www.server-world.info/en/command/html/vi.html)**/var/svn/repos/project/conf/passwd**  **# set username and password for this repository**  **[users]**  **redhat = password cent = password fedora = password**  **[root@dlp ~]#**  [**vi**](https://www.server-world.info/en/command/html/vi.html)**/var/svn/repos/project/conf/authz**  **# set groups and users**  **[groups]**  **developer = redhat,cent**  **# allow read/write on SVN document-root for developer group**  **[/] @developer = rw**  **# allow read on [trunk] folder for fedora user**  **[/trunk] fedora = r** |

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| [2] | Verify settings to access via SVN to the repository from any remote Hosts. |

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| --- |
| **[cent@node01 ~]$**  **svn --username cent list svn://dlp.srv.world/repos/project**    **Authentication realm: <svn://dlp.srv.world:3690> 9444b7fa-df28-4653-9e56-f5bc2b885f75**  **Password for 'cent': \*\*\*\*\*\*\*\* # password you set on [1]**  **-----------------------------------------------------------------------**  **ATTENTION! Your password for authentication realm:**  **<svn://dlp.srv.world:3690> 9444b7fa-df28-4653-9e56-f5bc2b885f75**  **can only be stored to disk unencrypted! You are advised to configure**  **your system so that Subversion can store passwords encrypted, if**  **possible. See the documentation for details.**  **You can avoid future appearances of this warning by setting the value**  **of the 'store-plaintext-passwords' option to either 'yes' or 'no' in**  **'/home/cent/.subversion/servers'.**  **-----------------------------------------------------------------------**  **Store password unencrypted (yes/no)? no**  **branches/**  **tags/**  **trunk/**  **[cent@node01 ~]$**  [**echo**](https://www.server-world.info/en/command/html/echo.html)**'store-plaintext-passwords = no' >> ~/.subversion/servers**  **[cent@node01 ~]$**  [**mkdir**](https://www.server-world.info/en/command/html/mkdir.html)**work**  **[cent@node01 ~]$**  [**cd**](https://www.server-world.info/en/command/html/cd.html)**work**  **[cent@node01 work]$**  **svn --username cent co svn://dlp.srv.world/repos/project**    **Authentication realm: <svn://dlp.srv.world:3690> 9444b7fa-df28-4653-9e56-f5bc2b885f75**  **Password for 'cent': \*\*\*\*\*\*\*\***  **A project/branches**  **A project/tags**  **A project/trunk**  **A project/trunk/index.html**  **A project/trunk/testfile.txt**  **A project/trunk/testscript.py**  **A project/trunk/testtool.sh**  **Checked out revision 4.**  **[cent@node01 work]$**  [**cd**](https://www.server-world.info/en/command/html/cd.html)**project/trunk**  **# after editing any files under the repository,**  **# try to [commit] with [fedora] user**  **[cent@node01 trunk]$**  **svn --username fedora ci index.html -m "update by fedora"**    **Authentication realm: <svn://dlp.srv.world:3690> 9444b7fa-df28-4653-9e56-f5bc2b885f75**  **Password for 'fedora': \*\*\*\*\*\*\*\***  **svn: E170001: Commit failed (details follow):**  **svn: E170001: Authorization failed**  **# denied normally**  **# [commit] with [redhat] user**  **[cent@node01 trunk]$**  **svn --username redhat ci index.html -m "update by redhat"**    **Authentication realm: <svn://dlp.srv.world:3690> 9444b7fa-df28-4653-9e56-f5bc2b885f75**  **Password for 'redhat': \*\*\*\*\*\*\*\***  **Sending index.html**  **Transmitting file data .done**  **Committing transaction...**  **Committed revision 5.**  **# could [commit] normally** |