

KARUMANCHI SAI YASWANTH

289236

CASE STUDY: MIGRATE FROM SUBVERSION (SVN) TO GIT

- 1) Check your current working directory

```
yaswanth@3bb36d3d774953e: ~  
yaswanth@3bb36d3d774953e:~$ pwd  
/home/yaswanth  
yaswanth@3bb36d3d774953e:~$
```

- 2) Before starting the migration, ensure you have the following tools installed:

Git

Subversion (SVN)

Git-SVN

```
yaswanth@3bb36d3d774953e:~$ sudo apt install git-svn  
[sudo] password for yaswanth:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
git-svn is already the newest version (1:2.43.0-1ubuntu7.2).  
0 upgraded, 0 newly installed, 0 to remove and 53 not upgraded.
```

```
yaswanth@3bb36d3d774953e:~$ git svn --version  
git-svn version 2.43.0 (svn 1.14.3)  
yaswanth@3bb36d3d774953e:~$
```

- 3) Create an empty directory for your new Git repository and initialize it

```
yaswanth@3bb36d3d774953e:~$ mkdir new-git-repo  
mkdir: cannot create directory 'new-git-repo': File exists
```

```
yaswanth@3bb36d3d774953e:~$ cd new-git-repo  
yaswanth@3bb36d3d774953e:~/new-git-repo$ git init  
Reinitialized existing Git repository in /home/yaswanth/new-git-repo/.git/  
yaswanth@3bb36d3d774953e:~/new-git-repo$
```

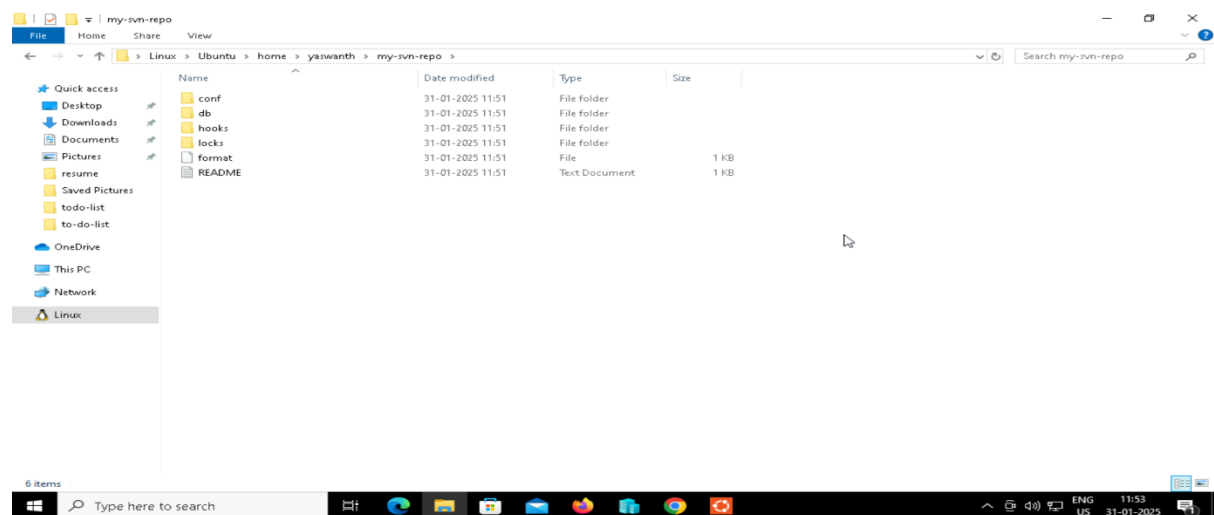
- 4) Install subversion(SVN) to create a SVN repository

```
yaswanth@3bb36d3d774953e:~/new-git-repo$ sudo apt-get install subversion  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
subversion is already the newest version (1.14.3-1build4).  
0 upgraded, 0 newly installed, 0 to remove and 53 not upgraded.  
yaswanth@3bb36d3d774953e:~/new-git-repo$
```

5) Create a SVN repository and repository structure

```
yaswanth@3bb36d3d774953e:~/new-git-repo$ svnadmin create my-svn-repo
svnadmin: E165002: '/home/yaswanth/new-git-repo/my-svn-repo' is an existing repository
```

```
karanamteja@334a7a24d06950c:~$ svn mkdir file:///home/karanamteja/my-svn-repo
/trunk file:///home/karanamteja/my-svn-repo/branches file:///home/karanamteja
/my-svn-repo/tags -m "Initial structure"
Committing transaction...
Committed revision 1.
```



6) Create a test directory called **my-working-copy** and add files like **test-file.txt** and **file.txt**.

7) Add the new files to svn and commit the changes using **svn add** and **svn commit** commands.

8) Verify the changes using **svn log** command

9) Checkout the repository to work locally

```
yaswanth@3bb36d3d774953e: ~/my-working-copy
/home/yaswanth
yaswanth@3bb36d3d774953e:~$ mkdir /home/yaswanth/my-working-copy
yaswanth@3bb36d3d774953e:~$ cd /home/yaswanth/my-working-copy
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn checkout file:///home/yaswanth/my-svn-repo/trunk /home/yaswanth/my-working-copy
Checked out revision 1.
yaswanth@3bb36d3d774953e:~/my-working-copy$ echo "this is a text file" > test-file.txt
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn add test-file.txt
A      test-file.txt
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn status
A      test-file.txt
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn commit -m "added test file"
Adding      test-file.txt
Transmitting file data .done
Committing transaction...
Committed revision 2.
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn log file:///home/yaswanth/my-svn-repo
-----
r2 | yaswanth | 2025-01-31 06:27:13 +0000 (Fri, 31 Jan 2025) | 1 line
|
added test file
-----
r1 | yaswanth | 2025-01-31 06:21:07 +0000 (Fri, 31 Jan 2025) | 1 line
|
initial structure
-----
yaswanth@3bb36d3d774953e:~/my-working-copy$ echo "Another change " > file.txt
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn add file.txt
A      file.txt
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn status
A      file.txt
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn commit -m "added file.txt"
Adding      file.txt
Transmitting file data .done
Committing transaction...
Committed revision 3.
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn log file:///home/yaswanth/my-svn-repo
-----
r3 | yaswanth | 2025-01-31 06:28:57 +0000 (Fri, 31 Jan 2025) | 1 line
|
added file.txt
-----
```

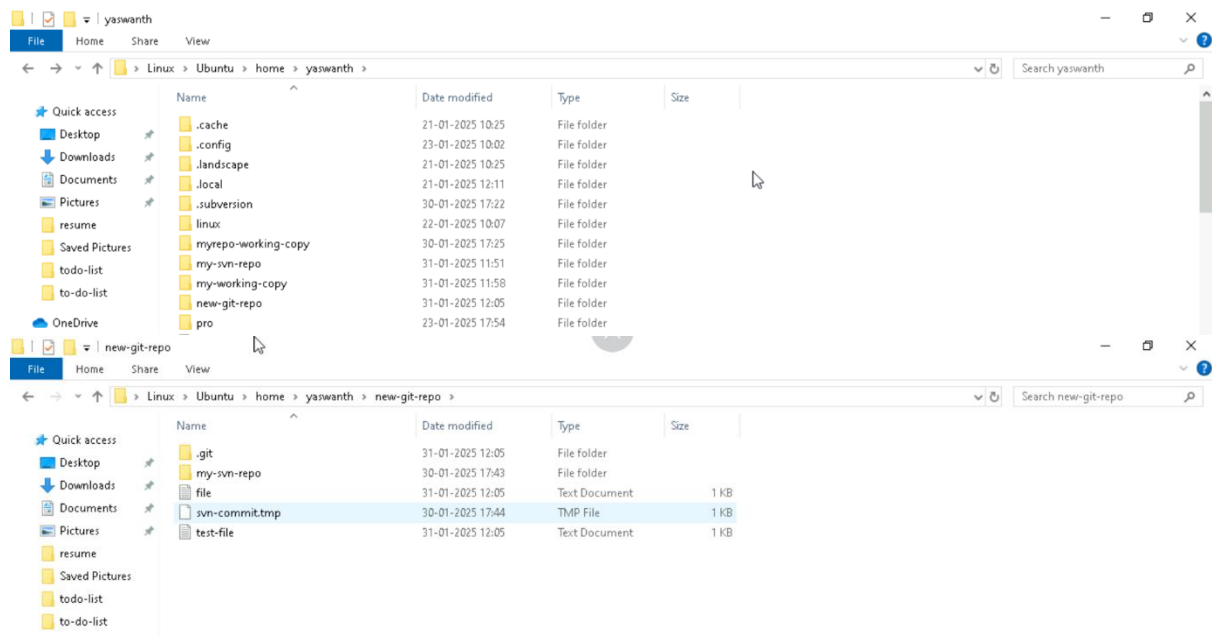
```
yaswanth@3bb36d3d774953e:~/my-working-copy$ svn log file:///home/yaswanth/my-svn-repo
-----
r3 | yaswanth | 2025-01-31 06:28:57 +0000 (Fri, 31 Jan 2025) | 1 line
|
added file.txt
-----
r2 | yaswanth | 2025-01-31 06:27:13 +0000 (Fri, 31 Jan 2025) | 1 line
|
added test file
-----
r1 | yaswanth | 2025-01-31 06:21:07 +0000 (Fri, 31 Jan 2025) | 1 line
|
initial structure
-----
yaswanth@3bb36d3d774953e:~/my-working-copy$ .
```

10) Import the files from test directory to your svn repository and verify the changes

```
yaswanth@3bb36d3d774953e:~/my-working-copy$ cd ..
yaswanth@3bb36d3d774953e:~$ svn import /home/yaswanth/my-working-copy file:///home/yaswanth/my-svn-repo/trunk -m "initial commit"
skipped 'my-working-copy/.svn/.svn'
svn: E160020: File already exists: filesystem 'b4a66ab5-4dba-4343-08fd-093b4ba754b6', transaction '3-3', path '/trunk/file.txt'
yaswanth@3bb36d3d774953e:~$ svn list file:///home/yaswanth/my-svn-repo/trunk
file.txt
test-file.txt
yaswanth@3bb36d3d774953e:~$ .
```

11) Now you will use svn-git to clone the SVN repository into your git repository new-git-repo

```
yaswanth@3bb36d3d774953e:~$ git svn clone file:///home/yaswanth/my-svn-repo --stdlayout /home/yaswanth/new-git-repo
r1 = 9dea33bc22750144112ada6a0e25c0049bfeaf0f (refs/remotes/origin/trunk)
A    test-file.txt
r2 = ae5c6c3b3e712c8de5d2687a32fb1e427210e024 (refs/remotes/origin/trunk)
A    file.txt
r3 = b304d03d984685e32d88ec6a5c00789ddb4ccdc1 (refs/remotes/origin/trunk)
Checked out HEAD:
file:///home/yaswanth/my-svn-repo/trunk r3
yaswanth@3bb36d3d774953e:~$
```



12) PUSHING FROM LOCAL REPO TO GIT :

```
vaṣwānth@3bb36d3d77:~/my-working-copy$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/arjun/my-working-copy/.git/
vaṣwānth@3bb36d3d77:~/my-working-copy$ git add .
```

```
vaṣwānth@3bb36d3d77:~/my-working-copy$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/arjun/my-working-copy/.git/
vaṣwānth@3bb36d3d77:~/my-working-copy$ git add .
```

```
vaṣwānth@3bb36d3d77:~/my-working-copy$ git remote add origin https://github.com/arjunkoppineni/svn-repo.git
vaṣwānth@3bb36d3d77:~/my-working-copy$ git commit -m "first commit"
[master (root-commit) fb869b4] first commit
Committer: Arjun <arjun@66c459cb7f2a51a.>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

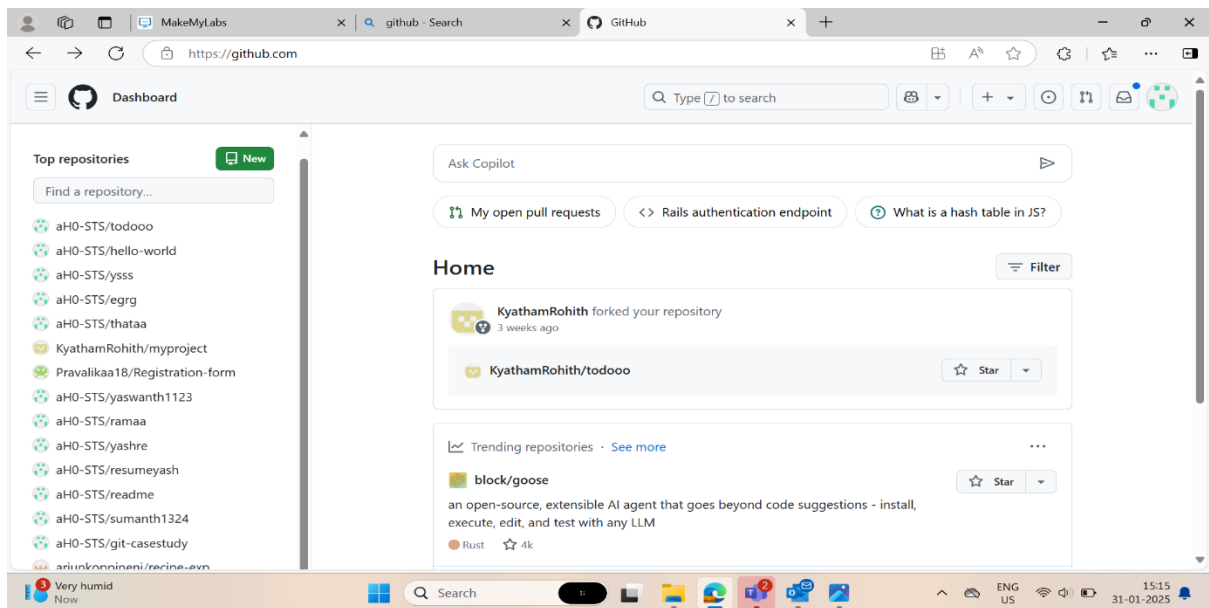
8 files changed, 6 insertions(+)
create mode 100644 .svn/entries
create mode 100644 .svn/format
create mode 100644 .svn/pristine/20/202712ad248cc7617ffdcc6991358bf98debcb25.svn-base
create mode 100644 .svn/pristine/9a/9a58f5559ce5f062592e7f1664c0bedc0d85b842.svn-base
create mode 100644 .svn/wc.db
create mode 100644 .svn/wc-journal
create mode 100644 file.txt
create mode 100644 test-file.txt
```

```

v$swanthh3bb36d3d77~/my-working-copy$ git remote set-url origin https://arjunkoppineni:ghp_97h1B100jldu0vz0bPiWmsr7Gdjd3FcY2w@github.com/arjunkoppineni/svn-repo.git
v$swanthh3bb36d3d77~/my-working-copy$ git push origin master
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 4 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (11/11), 3.87 KiB | 1.29 MiB/s, done.
Total 11 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/arjunkoppineni/svn-repo.git
 * [new branch] master -> master
v$swanthh3bb36d3d77~/my-working-copy$

```

13) After pushing the local to git then go to the remote repository check for the repo



14) Then verify for the files we pushed from svn to git then git to remote repository :

