

# CASE STUDY :SVN TO GIT MIGRATION

## Moving a Project from Subversion (SVN) to Git with Full History

### Convert the source SVN repository to a local Git repository

#### Step 1 : Install Svn for ubuntu and Create a Local SVN Repository

```
karthik@f542ba3b5a78573:~/my_git_repo$ sudo apt install subversion
[sudo] password for karthik:
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 59 not upgraded.
karthik@f542ba3b5a78573:~/my_git_repo$ mkdir my_svn_repo
karthik@f542ba3b5a78573:~/my_git_repo$ svnadmin create my_svn_repo
karthik@f542ba3b5a78573:~/my_git_repo$ git log
commit b2bb2e1764abe8d7f526a98d45794994912fff65 (HEAD -> master, origin/trunk, origin/master)
Author: karthik <karthik@3ecff636-6c56-4f25-af8d-5024b5668063>
Date:   Fri Jan 31 10:18:24 2025 +0000

    Initial commit with sample files

commit 36be690fa6ecbcbcd4cc3f7776f00e1b2ba7e8f3
Author: karthik <karthik@3ecff636-6c56-4f25-af8d-5024b5668063>
Date:   Thu Jan 30 11:57:21 2025 +0000

    Initial commit - Created trunk, branches, and tags
karthik@f542ba3b5a78573:~/my_git_repo$
```

#### Step 2: Navigate to the svn repository

```
karthik@f542ba3b5a78573: ~/my_git_repo
karthik@f542ba3b5a78573:~$ cd svn_repos
karthik@f542ba3b5a78573:~/svn_repos$ cd MyRepo
karthik@f542ba3b5a78573:~/svn_repos/MyRepo$ ls
README.txt  conf  db  format  hooks  locks
karthik@f542ba3b5a78573:~/svn_repos/MyRepo$ svn mkdir -m "Creating trunk, branches, and tags structure" file:///HOME/svn_repos/MyRepo/trunk
svn: E160020: File already exists: filesystem '3ecff636-6c56-4f25-af8d-5024b5668063', transaction '1-2', path '/branches'
karthik@f542ba3b5a78573:~/svn_repos/MyRepo$ svn list file:///HOME/svn_repos/MyRepo/
branches/
tags/
trunk/
karthik@f542ba3b5a78573:~/svn_repos/MyRepo$ svn mkdir -m "Creating missing directories" file:///HOME/svn_repos/MyRepo/tags
svn: E160020: File already exists: filesystem '3ecff636-6c56-4f25-af8d-5024b5668063', transaction '1-3', path '/tags'
karthik@f542ba3b5a78573:~/svn_repos/MyRepo$ svn checkout file:///HOME/svn_repos/MyRepo ~/svn_working_copy
svn_working_copy/trunk
A      /home/karthik/svn_working_copy/branches
A      /home/karthik/svn_working_copy/tags
A      /home/karthik/svn_working_copy/trunk
Checked out revision 1.
karthik@f542ba3b5a78573:~/svn_repos/MyRepo$ cd ~/svn_working_copy/trunk
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ ls
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ echo "Hello, SVN!" > file1.txt
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ echo "This is a sample SVN repository." > file2.txt
src
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ mkdir src
('Hello, SVN!') > src/hello.py
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ echo "print('Hello, SVN!')" > src/hello.py
-bash: !: event not found
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ ls
file1.txt  file2.txt  src
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ echo "Hello, SVN!" > file1.txt
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ echo "This is a sample SVN repository." > file2.txt
karthik@f542ba3b5a78573:~/svn_working_copy/trunk$ mkdir src
```

## Push the repository to GitHub

- Clone the Subversion repository using git-svn
- Check if everything was migrated successfully
- Fetch the SVN Repository
- Check Git Logs for Missing Branches
- Migrate SVN tags to be Git tags

```
karthik@f542ba3b5a78573: ~/my_git_repo
t svn clkarthik@f542ba3b5a78573:~$ git svn clone file:///HOME/svn_repos/MyRepo --stdlayout --no-metadata my_git_repo
my_git_repo
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/karthik/my_git_repo/.git/
r1 = 36be690fa6ecbcbcd4cc3f7776f00e1b2ba7e8f3 (refs/remotes/origin/trunk)
A       file1.txt
A       file2.txt
A       src/hello.py
r2 = b2bb2e1764abe8d7f526a98d45794994912fff65 (refs/remotes/origin/trunk)
Checked out HEAD:
  file:///home/karthik/svn_repos/MyRepo/trunk r2
karthik@f542ba3b5a78573:~$ cd my_git_repo
karthik@f542ba3b5a78573:~/my_git_repo$ git log --oneline --graph --all
* b2bb2e1 (HEAD -> master, origin/trunk) Initial commit with sample files
* 36be690 Initial commit - Created trunk, branches, and tags
karthik@f542ba3b5a78573:~/my_git_repo$ git remote add origin https://github.com/karthikeya964/MyGitRepo1.git
karthik@f542ba3b5a78573:~/my_git_repo$ git push -u origin --all
Username for 'https://github.com': karthikeya964
Password for 'https://karthikeya964@github.com':
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
```

## SVN COMMITS HISTORY





```
commit b2bb2e1764abe8d7f526a98d45794994912fff65 (HEAD -> master, origin/trunk, origin/master)
Author: karthik <karthik@3ecff636-6c56-4f25-af8d-5024b5668063>
Date:   Fri Jan 31 10:18:24 2025 +0000

    Initial commit with sample files



commit 36be690fa6ecbcbcd4cc3f7776f00e1b2ba7e8f3
Author: karthik <karthik@3ecff636-6c56-4f25-af8d-5024b5668063>
Date:   Thu Jan 30 11:57:21 2025 +0000

    Initial commit - Created trunk, branches, and tags
karthik@f542ba3b5a78573:~/my_git_repo$
```

## Verify The Change On Github


← → ↻ [github.com/karthikeya964/MyGitRepo1/tree/master/src](https://github.com/karthikeya964/MyGitRepo1/tree/master/src)     ⋮




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  [karthikeya964](#) / [MyGitRepo1](#)

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 **Files**


 **master**  





▼ **src**


 [hello.py](#)



 [file1.txt](#)


 [file2.txt](#)


[MyGitRepo1/src](#) 

[Add file](#) 

 **karthik** Initial commit with sample files b2bb2e1 · 1 hour ago [History](#)

Name	Last commit message	Last commit date
 ..		
 <a href="#">hello.py</a>	Initial commit with sample files	1 hour ago





ENG 16:56  
US 31-01-2025

