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**SVN/GIT comparison**

# Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | | **SVN(Subversion)** | | **GIT** |
| Repository Model | | Centralized Version Control (CVCS) tool | | Decentralized Version Control (DVCS) tool |
| Cost | | Free (Open Source) | | Free (Open Source) |
| Concurrency model. | Merge | | Merge or lock | |
| Platforms Supported | Window, OS X, Linux | | Window, OS X, Linux | |
| Maintainer | Apache Software Foundation | | Junio Hamano | |
| Programming Language | C | | C, Shell Script, Perl | |
| Source Code Size maximum | 41mb | | 23mb | |
| User interface | Subversion's UI is more mature than Git's | | Git use command line | |
| Network Protocol | custom (svn), custom over [ssh](https://en.wikipedia.org/wiki/Secure_Shell" \o "Secure Shell), [HTTP](https://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol) and SSL | | custom (git), custom over SSH, [HTTP](https://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)/[HTTPS](https://en.wikipedia.org/wiki/HTTP_Secure). | |
| Project Structure |  | | Project involves lots of branching and merging,  Better for open source project .  Better for big project . | |
|  |  | |  | |

Workflow

**-GIT:**

* A Git repository stores the full history of all of its branches and tags within the *.git*
* The latest stable release is contained within the master
* Active feature work is developed in separate branches.
* When a feature is finished, the feature branch is merged into master and deleted.

**-SVN:**

* The trunk directory represents the latest stable release of a project.
* Active feature work is developed within subdirectories under branches.
* When a feature is finished, the feature directory is merged into trunk and removed.

Distribution

**Git**is Distributed Revision Control System which means, every developers checking out code from central repository/server will have their own cloned repository installed on their machine.

**SVN**have centralized Revision Control System, or server

Storing data

**Git** stores content as **metadata**

**SVN** stores content as **files**

Revision

**GIT** does not have a **global revision no**

**SVN’**s **revision no. is a snapshot of source code** at any given time

Location and size

Imagine you are a developer on the road, you develop on your laptop and you want to have source control so that you can go back 3 hours*.*

**With Git**, you do not have the SVN problem. Your local copy is a repository, and you can commit to it and get all benefits of source control. When you regain connectivity to the main repository, you can commit against it.

**With Subversion**, you have a Problem: The SVN Repository may be in a location you can't reach (in your company, and you don't have internet at the moment), you cannot commit. If you want to make a copy of your code, you have to literally copy/paste it.

Content integrity

**GIT**contents are cryptographically hashed using [SHA-1](http://en.wikipedia.org/wiki/SHA-1) hash algorithm. This will ensure the robustness of code contents by making it less prone to repository corruption due to disk failures, network issues etc.

**SVN** doesn’t have a hashed contents. This will risk to lose code and contents due to disk failure, network issues.

* Git branches are easier to work with than SVN branches.
* Git has better content protection than SVN.

# Maintenance

**GIT** Hard to maintenance, properly track file folder renames.

**SVN** easy to maintenance, doesn’t properly track file folder renames.(mostly because file renames rarely happened before refactoring were invented ).

# Git vs SVN Conclusion

So should you use Git or should you use Subversion? Take a look at your situation and your project and make a decision because neither is best, but one is often better for what you are doing.