

02 Version Control

Version control, also known as revision control and source control, is the management of changes to information. A version control system keeps track of software versions throughout development. A distributed version control system allows many developers to work on a given project without requiring that they maintain a connection to a common network.

Introduction

We use [git](#) for distributed LabVIEW code version control. Our code repositories are managed externally on a [GitLab](#) server and internally on a Git server.



In order to be able to work on our LabVIEW code you need to follow the steps described in our [git knowledge base](#).

SCC Best Practices

You can find more information on how to work with(in) Source Code Control in our [Best Practices](#) section:

- [Source Code Control](#)
 - [Rules & Guides](#)
 - [Workflow Model](#)
 - [Submodules](#)

Version Numbering

Please read [Version Numbers](#) for more information on our version number formats and policy.

Git Tags

Git does not give perfect integer revision numbers that increment on each commit. Instead, git hashes the commit data and uses that as a unique identifier of the commit. That means one commit could be 8d844d8d... and the next f1728db4..., which is incomprehensible AND unusable as (part of) our [version numbering convention](#).

However, git allows you to create descriptive labels for marking specific points in history as being important, i.e. creating pointers to specific commits. These pointers are called *tags*.

Typically, tagging is used for marking release points (v1.2.3, and so on), and that's exactly what we do, as well.

Read the [Git Documentation](#) for detailed info on how to use tags, and the [Tower Documentation](#) on how to create tags with Tower.

Further Resources

General

- [Official Git Tutorial](#)
- [GitLab Documentation](#)
- [Simple git how-to in german](#)

Password Management

By courtesy of Fabiola De La Cueva

pageant is a tool that runs at startup so you only have to enter your password once:

<http://blog.shvetsov.com/2010/03/making-pageant-automatically-load-keys.html>

Compare / Merge VIs

By courtesy of Fabiola De La Cueva

Instructions on how to configure your client tool to use LabVIEW Compare and LabVIEW Merge towards the end of this article:

<http://delacor.com/configuring-hg-or-git-to-use-labview-compare-and-labview-merge/>

Internal

HSE-internal resources

- [Infrastructure - SCC](#)

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