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Module 8

Tagging

git

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Module Contents

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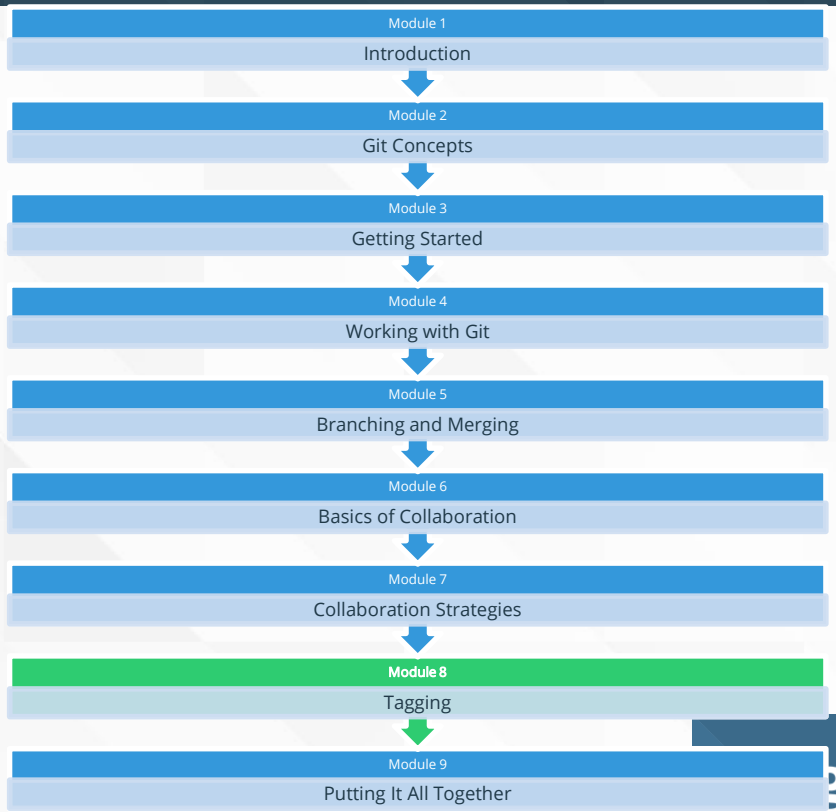
Module Contents

- What Is A Tag
- Viewing And Creating Tags
- Signing And Verifying Tags
- Tagging Later
- Sharing Tags



Tags

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Whether its called a Label a Baseline or a Tag, this underlying concept is common to most version control systems:

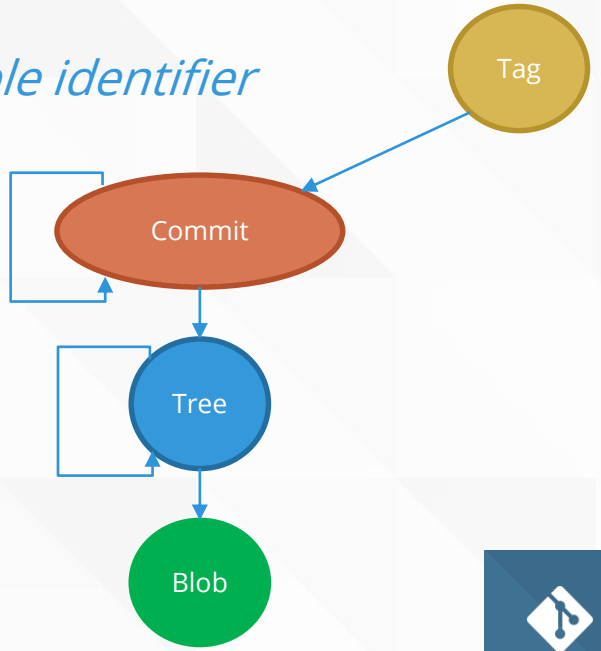
To flag a specific set of files as important with a simple identifier

Git uses tag objects to achieve this.

A tag can provide that identifier:

- Release Version: Rel_1.2, Rel_1.3
- Status Indicator: Tested, Draft, Signed Off

The tag can be used to refer to the commit instead of the SHA-1 value



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Viewing Tags

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To view all existing git tags you can use the *git tag* command.

- Use the *git tag -l* command to filter the results.

- To see details of an individual tags use *git show <tag>*

- A file is created for each tag and it stores the SHA-1 value of the commit it is labelling.

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Creating Tags

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There are two main types of tags that you can create in git, 'annotated' and 'lightweight'.

- Lightweight

  A light weight tag stores the commit SHA-1 of the current HEAD, in a file with no other information - like a branch that doesn't move.

git tag Rel_1.0

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Creating Tags

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- Annotated

An annotated tag is a full git object stored in the object database. It too references the SHA-1 of the current HEAD but stores additional information: tagger name, email, date and a tag message and has its own SHA-1 value.

git tag -a Rel_1.0 -m "First release“

- When you create an annotated tag, you also need to supply a tag message (just like a commit message)

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Signed Tags

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A more formal version of the annotated tag is a signed tag.

This uses a GPG (Gnu Privacy Guard) signature to sign the tag, to enable verification of the commit by others.

To sign a tag use the command *git tag -s <tagname>*

To see the details of a signed tag use the command *git show <tagname>*

Verifying Signed Tags

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In order to verify a signed tag you'll need that users public key in your keyring. (so they'll need to publish it)

You can then use the command *git tag –v <tagname>.*

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Advanced Tagging

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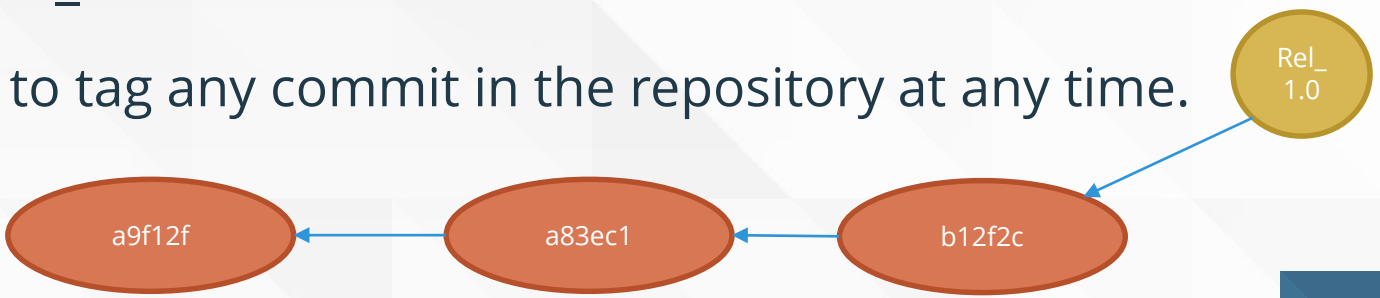
So far we have seen that the tag command just tags the current HEAD commit.
You can tag a commit you have moved past by adding the SHA-1 of the commit object at the end of the tag command.

- git tag -a Rel_1.0 -m "First release" a9f12f

This allows you to tag any commit in the repository at any time.



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Sharing Tags

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By default git does not share tags when you move commits between repositories.

You must explicitly tell Git to share tags when you move commits, by using the *--tags* option or the tag name with the git push command.

git push origin <tagname>
git push --tags
git pull --tags

They are automatically copied from a remote when you clone

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Tags are immutable objects, meaning their content cannot be changed once created.

You can however rename or remove a tag :

Git tag -f <old_tag_name> <new_tag_name>
Git tag -d <tag_name>

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Want to know more about Git?

Additional Reading

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More about Git

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- Want to know more about Git?
  - WikiPedia has a good article
    - http://en.wikipedia.org/wiki/Git_%28software%29
  - The Official Git Web Site and documrntaiong
    - http://git-scm.com/
  - Books/References
    - Pro Git
      - By Scott Chacon
    - Ry's Friendly Guide to Git
      - by Ryan Hodson (24 Jan 2012) [Kindle]
    - Pragmatic Version Control Using Git: 1 (Pragmatic Starter Kit)
      - by Travis Swicegood (4 Jan 2009)

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Online Tutorials

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- Free Tutorials :
  - git-scm.com - http://git-scm.com/docs/gittutorial
  - Atlassian - https://www.atlassian.com/git/tutorial
  - Codeschool - https://try.github.io/
  - Vogella - http://www.vogella.com/tutorials/Git/article.html
- Additional Git training from Clearvision :
  - Git advanced
  - Atlassian Stash
  - Egit for Git
  - Smartgit for Git

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Lab Exercise

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GIT Fundamentals
The End!

Please email any feedback, comments or questions to sales@clearvision-cm.com

Or use the following link to access our 5 minute online survey :

https://www.surveymonkey.com/s/training_clearvision

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