2019-06-04 - Introduction to Version Control with Git

Date & place:	AZTI-Tecnalia, Pasajes, Salón de Actos, Tuesday June the 4th, 9:00-17:00 2019
Track:	Introduction to Version Control with Git
Material:	http://iamc.eu/2019-06-04-azti-shell http://iamc.eu/2019-06-04-azti-git
Instructor:	Iñigo Aldazabal Mensa (Centro de Física de Materiales CSIC-UPV/EHU) <inigo.aldazabalm@ehu.eus>
Helpers:	Guillermo Boyra (AZTI-Tecnalia), Abel Carreras (Donostia International Physics Center - DIPC), Jon Uranga (AZTI-Tecnalia)

Abstract

This will be an introductory lesson to version control using the widespread distributed version control system git. we will learn enough to use git to control our files in a day-to-day workflow, and we'll also take a look at GitHub web service and play around a bit with it.

Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later. It allows us to do things as jumping to any moment in a file past history, tracking changes and see differences between any two moments on time, long-term undo, seamlessly collaborate with other people, and many others we'll see...

We will cover topics as:

- Setting up Git and creating a local repository
- Tracking changes and exploring history
- Remotes in GitHub
- Collaborating with other people
- Resolving conflicts
- Contributing to projects
- Git - GitHub - R Studio integration

A short introduction to basic UNIX command line usage will be given, as the first part of the workshop with be done in the command line.

The instructor is a certified Software and Data Carpentry Instructor and for the workshop we will follow official Software Carpentry methodology and Git and UNIX Shell lessons.

Targeted audience: scientific and technical people interested having a control over the evolution and history of changes of files and projects they work on, as well as to collaborate with others on a shared repository.

Content level: beginner

Audience prerequisites: none

Computers setup

This is a hands-on workshop. Participants are encouraged to follow the lesson typing along with the instructor in their own laptops.

Your computers should ideally be already configured by the workshop's day. For this you can follow this installation instructions, "The Bash Shell" and "Git" sections, and ignoring the last Python part if you want.

> ***Note***
>
> We will do some collaborative work using GitHub. In order to follow this part of the lesson you'll need a GitHub account, so please create one. You can always remove it later if you want so.

Temptative schedule

- 9:00-10:00 Introduction to the UNIX Shell.
- 10:00-11:30 Introduction to version control and basic command line Git usage.
- *11:30-12:00 coffee break*
- 12:30-14:00 GitHub: group collaboration and conflict resolution (working in pairs).
- *14:00-15:00 lunch*
- 15:00-16:00 Contributing to projects with GitHub, pull requests (working in pairs).
- 16:00-16:30 Git - GitHub - R-Studio integration.
- 16:30-17:00 Git front-ends overview.

Lesson material and License

This material is forked from "An introduction to version control for novices using Git" and "The Unix Shell" Software Carpentry lessons. You can always find the last version of this material at the previous links.