



Merging Master and Future

Sébastien Ponce

`sebastien.ponce@cern.ch`

Outline

Context

The sad past

Defining the bright future

Discussion

Outline

Context

The sad past

Defining the bright future

Discussion

Stable branches in LHCb projects

- master
 - main branch
 - all developments targetting run 2 go there
- 2017-patches
 - current production branch
 - only patches should go there
 - no major developments
- future
 - run 3 branch
 - host of TDR related work

The main questions

- How to keep these branches in sync ?
- When to merge / backport ?
- Should we merge master and future ?

Outline

Context

The sad past

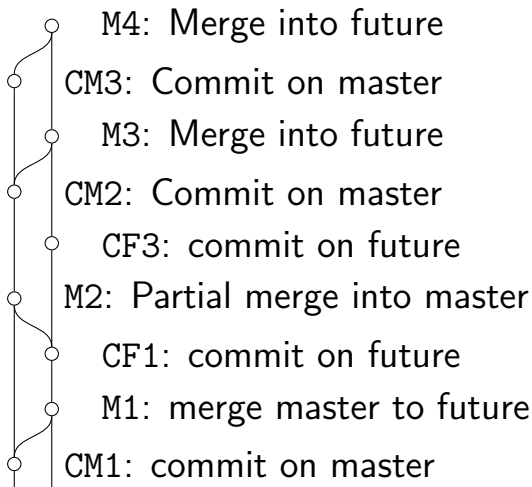
Defining the bright future

Discussion

A brief story of the last 6 months

- master and future were never synchronized
 - I should have taken care of that...
- some partial merges were done
 - the wrong way ! and both ways on top
- we finally ended up with a major mess
 - including loss of work

A typical git history

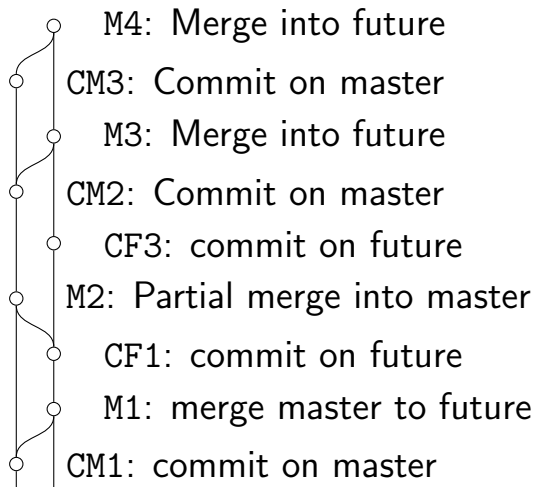


A word on partial merges

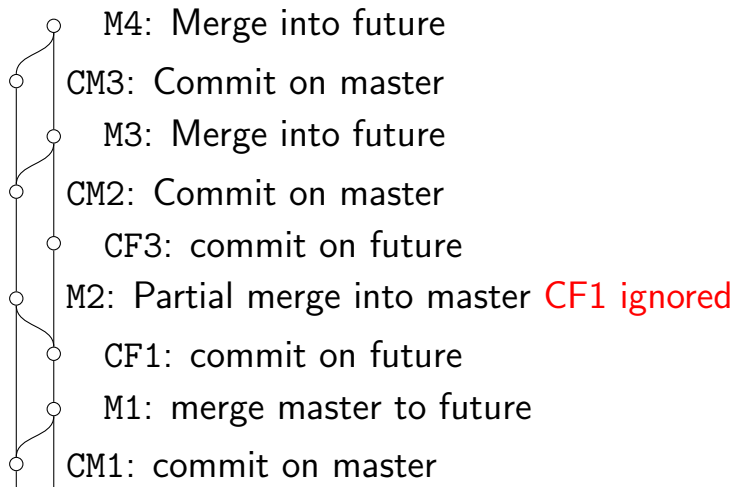
The bad way

- anything using `--ours` or `--theirs`
- tells git to discard the part you do not merge
- so the ignored part is lost in the target branch
- and future “back” merge will even revert it in the source branch !

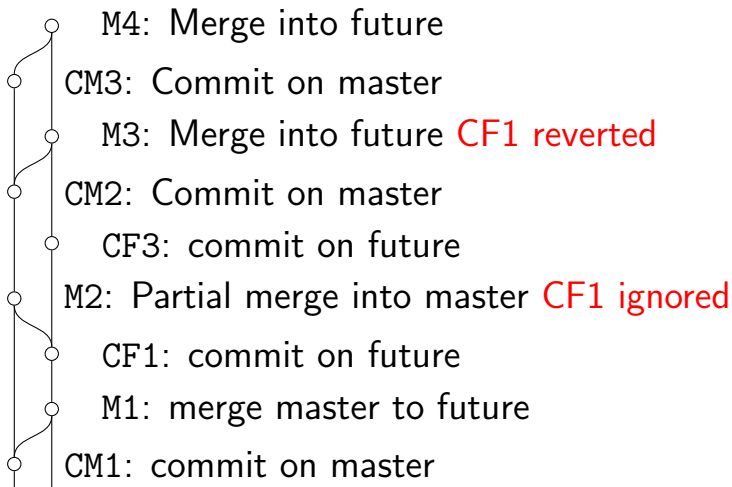
A typical git history



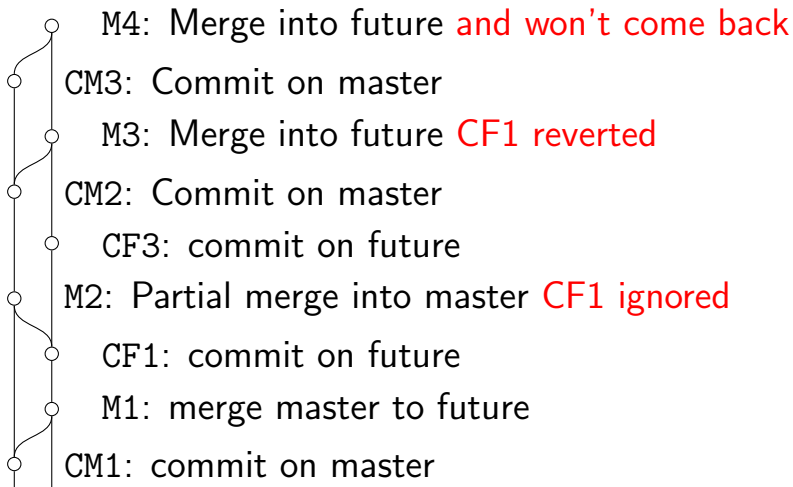
A typical git history



A typical git history



A typical git history



A word on partial merges

The bad way

- anything using `--ours` or `--theirs`
- tells git to discard the part you do not merge
- so the ignored part is lost in the target branch
- and future “back” merge will even revert it in the source branch !

The proper way

- use cherry-pick to port commits across branches

Current situation

- proper state recovered by hand
 - roughly 2 weeks of work
 - big thanks to Marco Clemencic !
- still a couple of details to debug
 - small problems in complex hand-made merges
 - leading to red tests in future branch

Outline

Context

The sad past

Defining the bright future

Discussion

Ideas for the future

- **use cherry-pick**
- merge master (much) more often into future
 - every 2 weeks ?
- keep the future branch green
 - all tests passing
 - so that backports are easier as bugs are already fixed
- do more in master
 - also backport more from future to master
 - in general reduce the gap between the 2 branches
 - can we even remove the gap and merge them ?

Outline

Context

The sad past

Defining the bright future

Discussion



www.cern.ch