

# Introduction: technical details

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Tracking workshop for HEP

# ACTS code development



- Will hear about setting up ACTS software in the next talks
- ACTS code is available on gitlab, its main repository is <https://gitlab.cern.ch/acts>
- For easy development we created a fork of acts software <https://gitlab.cern.ch/berkeleylab/acts>
  - *master* branches are synchronized with the main repositories: acts-core, acts-framework, acts-fatras
- A branch of acts-framework (from master) was created for common “add-ons” that we may want to share for this workshop: *lbl-trkws*
  - Was needed in December for non SLC systems, now ok
- Note: a CERN computing account is needed to access and push your changes to acts, if you can’t access the URL above:
  - Login to your CERN account
  - Make sure you login to <https://gitlab.cern.ch>
  - Email me ([spagangriso@lbl.gov](mailto:spagangriso@lbl.gov)) and I’ll add you to the project
  - I’ve already added the ones who did do the steps above in the past

# Suggested workflow for workshop



- Create your own branch from *lbl-trkws* or *master*:

First user of the group creates a specific branch for the workshop work:

```
$ git clone --branch lbl-trkws --recursive  
https://gitlab.cern.ch/berkeleylab/acts/acts-framework.git  
$ cd acts-framework  
$ git checkout -b trkws-vtx-kalman-fitter  
$ git push origin trkws-vtx-kalman-fitter
```



example branch name

Other users can directly checkout the given branch:

```
$ git clone --branch trkws-vtx-kalman-fitter --recursive  
https://gitlab.cern.ch/berkeleylab/acts/acts-framework.git
```

- Develop your code, push to the repo for sharing among the group
- Once the work is done, you can open a merge-request to the main acts repository

## New Merge Request

Source branch	Target branch
<div>berkeleylab/acts/acts-framework</div> <div>trkws-vtx-kalman-fitter</div>	<div>acts/acts-framework</div> <div>master</div>
<div> added PATH and LIBRARY_PATH setup Simone Pagan Griso authored 1 month ago</div> <div>✗</div> <div>e390d719</div> <div>🔗</div>	<div> Merge branch 'update-to-core-master' into 'master' Paul Gessinger authored 2 days ago</div> <div>✓</div> <div>8191c8d5</div> <div>🔗</div>

Compare branches and continue

# Computing resources



- You can develop and test your code either:
  - Locally on your laptop (some dependencies needed)
  - On `lxplus.cern.ch` (familiar env, pacific ocean in the middle)
  - On `pdsf.nersc.gov` (local NERSC cluster, guest accounts available)
- In case you want to access our PDSF cluster:
  - Guest accounts are already available, talk to Heather or me
  - `cvmfs` is available, and can be used to setup acts dependencies:  
`source CI/setup_lcg94.sh #from acts-framework folder`
  - See also `CI/setup_lbl_pdsf.sh` if using the *lbl-trkws* branch
  - if you need to setup ATLAS sw:  
`source /project/projectdirs/atlas/scripts/setupATLAS.sh`  
`setupATLAS`

# HAPPY DEVELOPMENT!

For “local” questions at any point:

[spagangriso@lbl.gov](mailto:spagangriso@lbl.gov)

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