



# User code distribution via CVMFS using containers

## Feature requests for unpacked.cern.ch

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# Approach

- Different “flavours” of CMSSW containers:
  - Contain full CMSSW release (recently ~35 GB) - only sensible if no CVMFS accessible
    - Can make sense for offline development on laptops/desktops
  - Base OS + mounted CVMFS + user code
    - More difficult to use/support for different user systems (Linux, Mac, Windows, …) - they need to have CVMFS installed or mount via fuse from inside the container
- NanoAOD analysis can be performed independently of CMSSW
  - RDataFrame/uproot based analyses → this should probably be the focus
- All analysis code images can be built using CI systems (GitLab/GitHub)
- Containers could in principle be executed directly on the grid as well
  - Mind: currently very little adoption of using containers for analysis code

# Distribution

- CMS analysis code is supposed to be visible only to CMS
- Recently learned that unpacked.cern.ch can be given access to read from private repositories (by adding cvmfsunpacker account to project)
- Issue: unpacked.cern.ch is world-readable

Questions:

- Could there be a CMS-readable instance (authentication via VOMS proxy?, e.g. unpacked-cms.cern.ch)?
- Approval process via “sync” repository under control of EP-SFT - extend rights to CMS computing delegates?
- How do we archive/clean up outdated code/images?