

Workflow binary versioning

Users have expressed a wish to use different versions of the various binaries needed during the ground motion workflow.

In order to accomplish this we need a way of storing these different binary versions, a way for the user to specify which is to be used and for the workflow to use the appropriate binary.

Places that will want to use different binaries:

- SRF generation
- HF calculation
- LF calculation

TODO:

1. ~~Ask Robin for a list of the tools that won't change~~
2. ~~Version the remainder by placing their version number after the file name in a defined format~~
3. ~~Create a CMake file for each binary that needs versioning~~ Changed to one CMake with a flag to build each versioned binary
4. ~~Determine how SRF generation should take the requested version number from the user~~
5. ~~Implement SRF generation versioning~~ Delayed for Pre Processing refactor
6. ~~Determine how the cybershake install process should take the requested version number from the user~~ Will read root_params.yaml
7. ~~Implement versioning for HF and LF~~
8. ~~Determine where in the geore library versioned tools are being used~~
9. ~~Determine how these parts should receive user input for which binary version to use~~
10. ~~Modify all occurrences of tools_dir in slurm_gm_workflow to use the new binary_version function~~
11. ~~Load tools_dir version from yaml templates~~
12. ~~Test slurm_gm_workflow with new binary_version on maui~~

Tools to be versioned:

EMOD3D

- Will be named emod3d-mpi_v<version>

HF tools (binmod and np2mm+ in particular)

- Will be named hb_high_binmod_v<version>
- Will be named hb_high_np2mm+_v<version>

Genslip

- Will be named genslip_v<version>

Where version is generally of the form X.Y.Z where each of X, Y, Z are normally integers

Tools that won't change:

Everything else in the folder

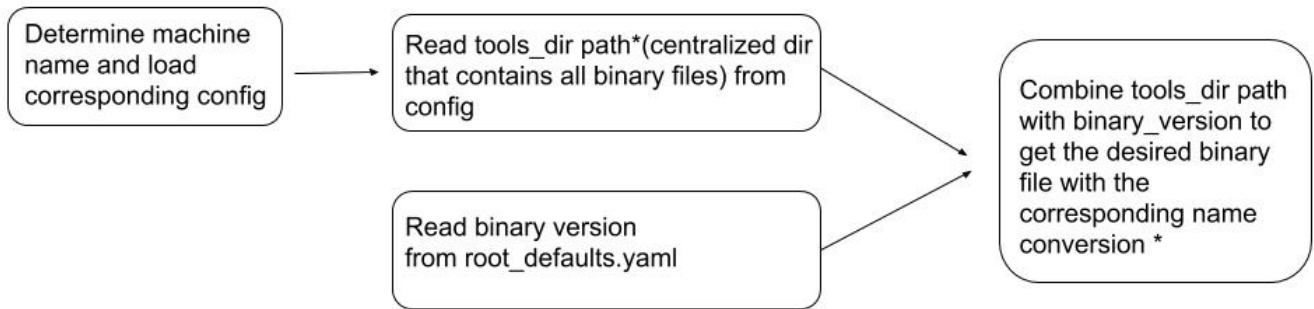
Build method

One CMake exists for all tools found in the tools repository.

The required tools can be built using the -DTOOL_TO_MAKE=<tool> flag, where tool is one of:

- tools, for non-versioned tools
- emod3d, for versioned emod3d (lf) tools
- hf, for versioned high frequency tools
- genslip, for versioned genslip tools
- all, to build all tools. This is the default option.

How different versions of binary file is used in slurm_gm_workflow



*tools_dir path: `/nesi/project/nesi00213/opt/$machine/hybrid_sim_tools`

*name conversion: see *Tools to be versioned* section.