

FrontISTR v5.3 Release Note

FrontISTR commons

FrontISTR ver. 5.3 has been released!

FrontISTR v5.3

- Release date: November 12, 2021
- Changes from ver. 5.2
 - Improvements : 7
 - Specification changes: 4
 - Bug fixes: 17



version	release date
Ver. 4.4	2015/02/17
Ver. 4.5 RC1	2015/12/07
Ver. 4.5	2016/07/22
Ver. 4.6	2017/09/14
Ver. 5.0 α	2018/02/01
Ver. 5.0 β	2018/11/01
Ver. 5.0 RC	2019/09/05
Ver. 5.0	2019/10/18
Ver. 5.1	2020/06/30
Ver. 5.1.1	2020/11/13
Ver. 5.2	2021/4/9
Ver. 5.3	2021/11/12

Improvements

- #103: Allow contact parameters to be specified as input data
- #266: Enable MKL for windows executables.
- #339: Enable trilinos(AMG) amesos in windows binary.
- #364: Multi-arch CI
- #388: Illegal memory access when monitoring non-existent node with global id 0
- #387: Visualization of nodal and element numbers
- #384: Ability to specify parameter beta in heat transfer analysis

Specification changes

- #352: Fix macro naming notation errors.
- #358: Rethinking the default settings of AMG preprocessing by ML
- #359: Output messages when Amesos and MUMPS are not available in ML.
- #360: Simplify ML configuration log.

Bugs fixed

- #125 : Eigenvalues of 0 do not appear in constraint-free eigenvalue analysis
- #301 : Discussion on how to handle serial version of MUMPS with FrontISTR cmake.
- #329 : In iterative contact analysis with friction, convergence behavior of NR method is significantly different between sequential and distributed runs.
- #333 : mumps solver does not work on Windows x64 executable (MPI ver.)
- #336 : Binary VTK output by windows binary cannot be read by paraview.
- #340 : Deviation of calculation results of eigenvalue analysis due to differences in usage environment.
- #343 : The program crashes when a large number of contact points (about several thousand) are judged to be in contact.
- #350 : When building serial version, if MKL is enabled, clustermkl is also enabled, resulting in link error.
- #351 : When building serial version with setup.sh, MKL is not enabled even if --with-mkl is specified.
- #363 : Ctrl+x does not work when starting FrontISTR with docker run.
- #365 : Refiner in binary distribution (Docker/Windows binary) has a bug.
- #366 : Error when specifying contact pressure visualization file output for models with no contact.
- #368 : Enable parallel make when using setup.sh
- #369 : Avoid error when element output is specified for !OUTPUT_VIS
- #376 : Name resolution bug in setting up orthotropic anisotropic material
- #377 : The default setting of DWITH_MPI option in cmake should be ON, but it is OFF.
- #380: Regarding the creation of hecmw_vis.ini, errors due to timing inconsistencies between MPI processes

Acknowledgements

- Contributors

FrontISTR.git

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FrontISTR_manual.git

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Bug reports

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- Count the number of commits merged into the release branch in the git repository (Merge commits are not counted)
- Command: `git log --no-merges [previous release branch]. [This release branch] | grep -e Author | sort | uniq -c | sort -nr`
- Author name deviations are manually merged

Thank you very much for your cooperation!



FrontISTR

Large-scale Parallel Finite Element Analysis Open Software on HEC-MW

Version x.x.x now available