Workshops on e-Science Workflows



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Agile Analysis Framework for Complex Iterations and Data Integration

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Anduril (anduril.org) is an open source Java based workflow engine that has been designed especially for the scientific data analysis and method development. Special emphasis has been spent on the simplification of testing, programming, reporting and refactoring of the framework itself, components and workflows. Anduril provides means for the language

independent integration of programs and enables the remote and parallel execution of individual steps of analysis. The workflows are constructed using an extensible custom language that supports inheritable data types, conditions, loops, subworkflows, arrays, etc. The compile time validation of the workflow and the reexecution of modified or out-dated results

enables the maintenance of workflows with hundreds or thousands of steps. Anduril has no graphical user interface, which would be impractical for the complex workflows but it relies on a console that may be used remotely and left open for days depending on the total execution time. The efficacy of the framework is supported by more than 300 community provided components and the ready made libraries for Bash, Lua, MATLAB, GNU Octave, Perl, Python, R, and Java.

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Session Classification: Workflow Systems and Requirements - Presentations