

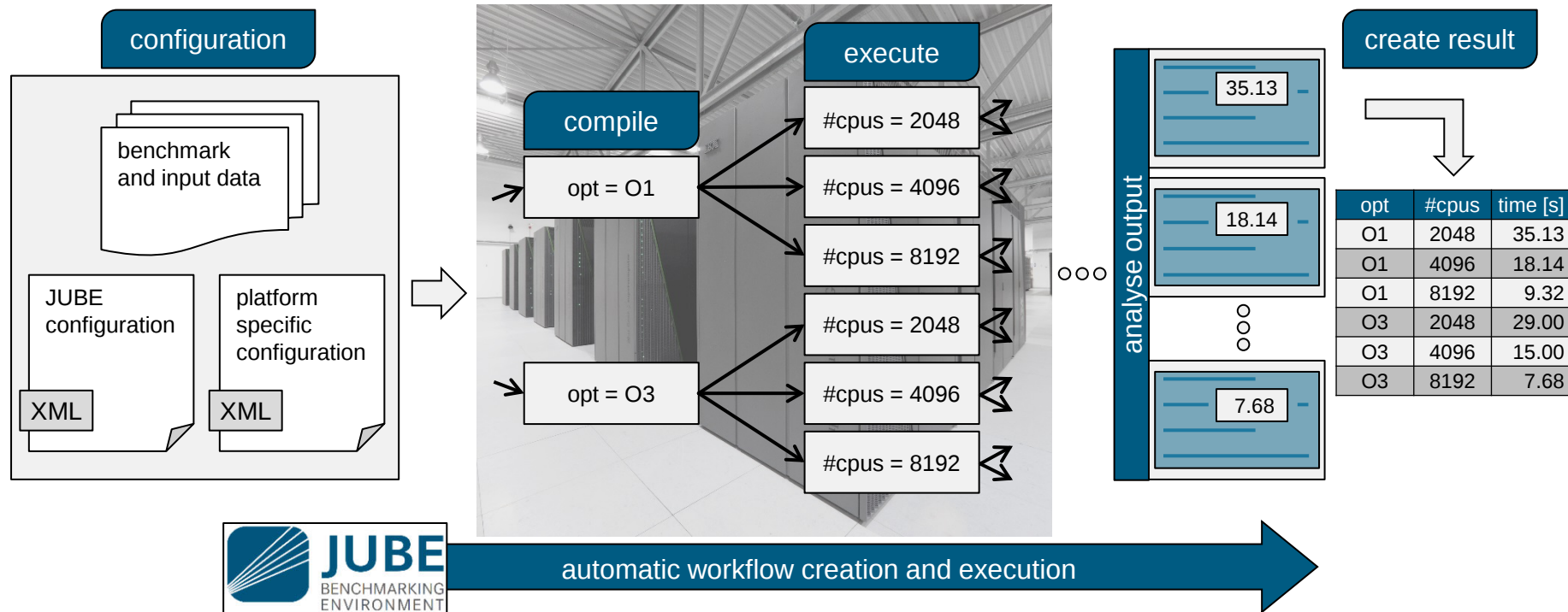
JUBE

A Flexible, Application- and Platform-Independent
Environment for Benchmarking

Sebastian Lührs, Kay Thust

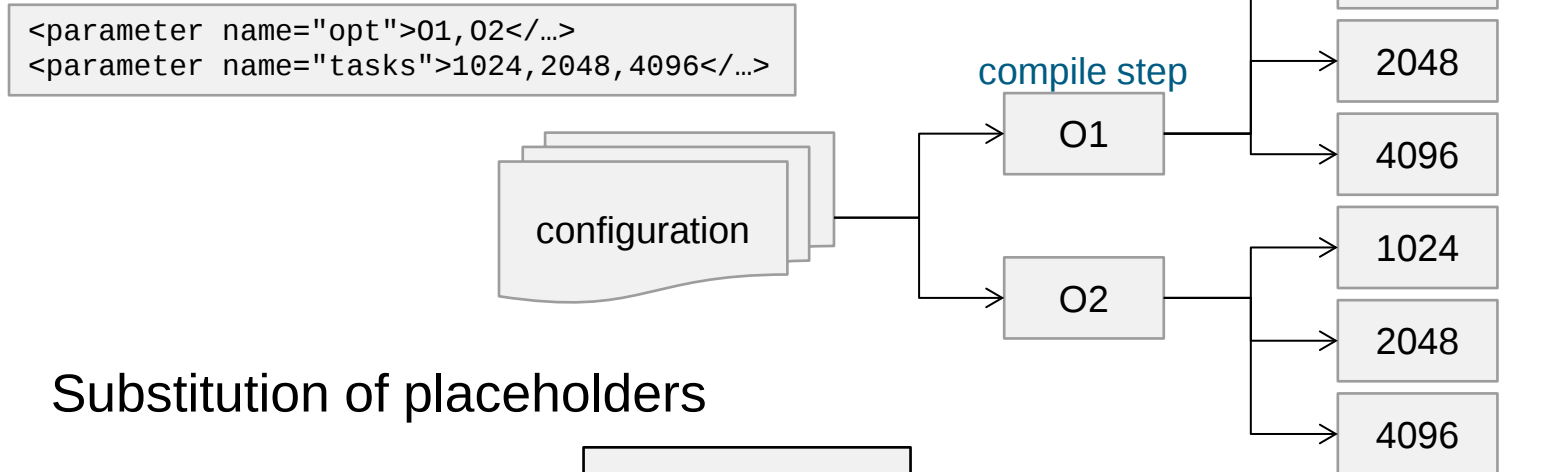
What is JUBE?

- Generic, configurable environment to run, monitor and analyse benchmarks in a **systematic** way
- Developed 2008, redesigned 2014
- Also usable for **testing or production** scenarios

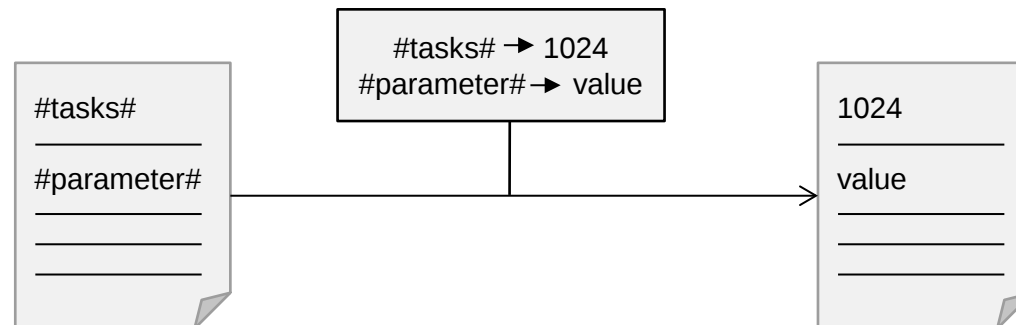


Key Concepts

- Parameter space and workflow creation

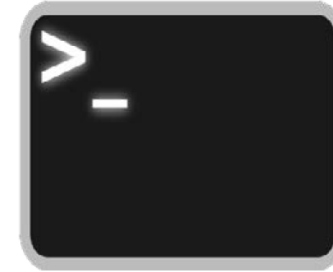


- Substitution of placeholders



- Separation between platform dependent and independent configuration options

Command line access



Start a new benchmark run

- `jube run benchmark.xml`

Continue an existing benchmark run

- `jube continue benchmark_dir [--id <id>]`

Analyse the benchmark data

- `jube analyse benchmark_dir [--id <id>]`

Create and show result representation

- `jube result benchmark_dir [--id <id>]`



Help?!

Online documentation and tutorial

- `www.fz-juelich.de/jsc/jube`

Info mode

- `jube info benchmark_dir [--id <id>] [--step <stepname>]`

Command line accessible glossary

- `jube help <keyword>`

Logs

- `jube log benchmark_dir [--id <id>] [--command <cmd>]`

Debug mode

- `jube --debug run|continue|analyse|result ...`

Verbose mode

- `jube -v[vv] run ...`

Example JUBE Benchmark Configurations

Configurations created in the European project DEEP-ER:

- **HPL:** High-Performance Linpack Benchmark
www.netlib.org/benchmark/hpl
- **IOR:** (InterleavedOrRandom) I/O benchmark
sourceforge.net/projects/ior-sio
- **mdtest:** Metadata test benchmark
sourceforge.net/projects/mdtest
- **LinkTest:** Parallel MPI PingPong Test
www.fz-juelich.de/jsc/linktest

Use Case:

- Continuous software and hardware monitoring
- Compare different I/O strategies and libraries

Publicly available and extensible JUBE configuration file repository:

- <https://github.com/FZJ-JSC/jube-configs>

Where to start?

Download and Tutorials:

- www.fz-juelich.de/jsc/jube
- Open Source (GPLv3)



Versions:

- **1.x** older release, Perl based
- **2.x** new release, new input file format, Python based

Prerequisites:

- OS: Linux
- Python 2.6, Python 2.7, Python 3.2
(or a more recent version)

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