Run-time resource allocation

Re-allocation of resources in case of heavy load

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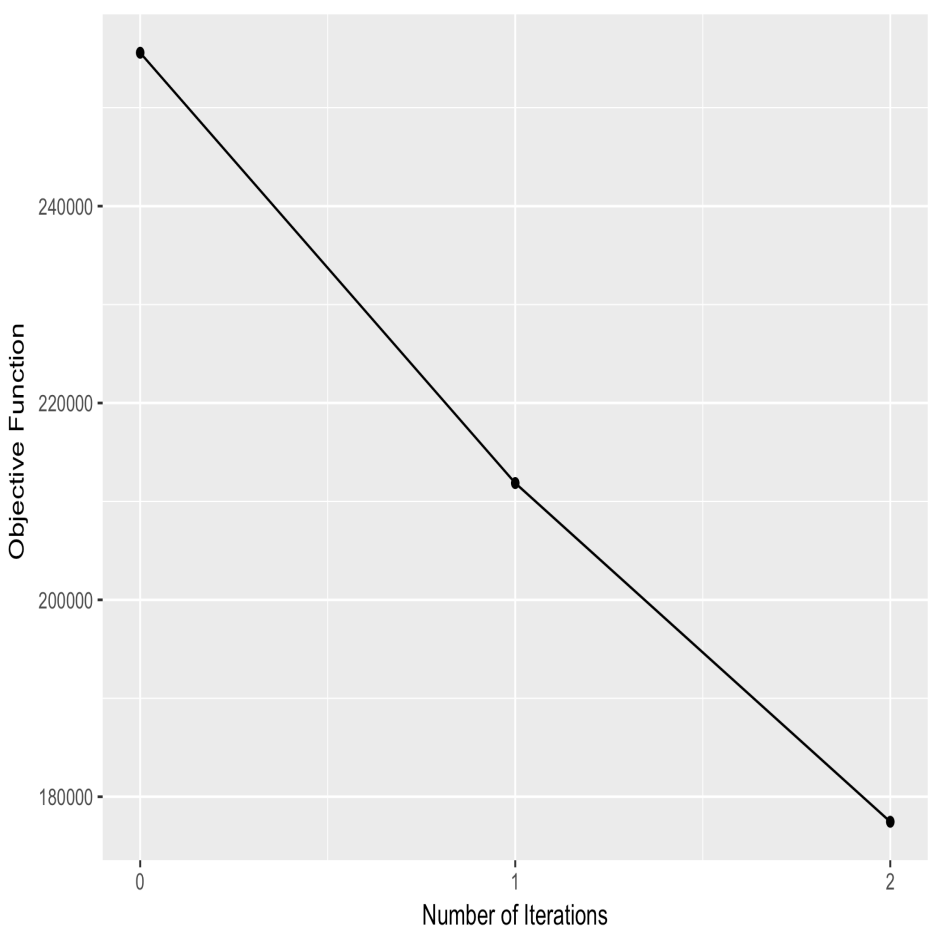
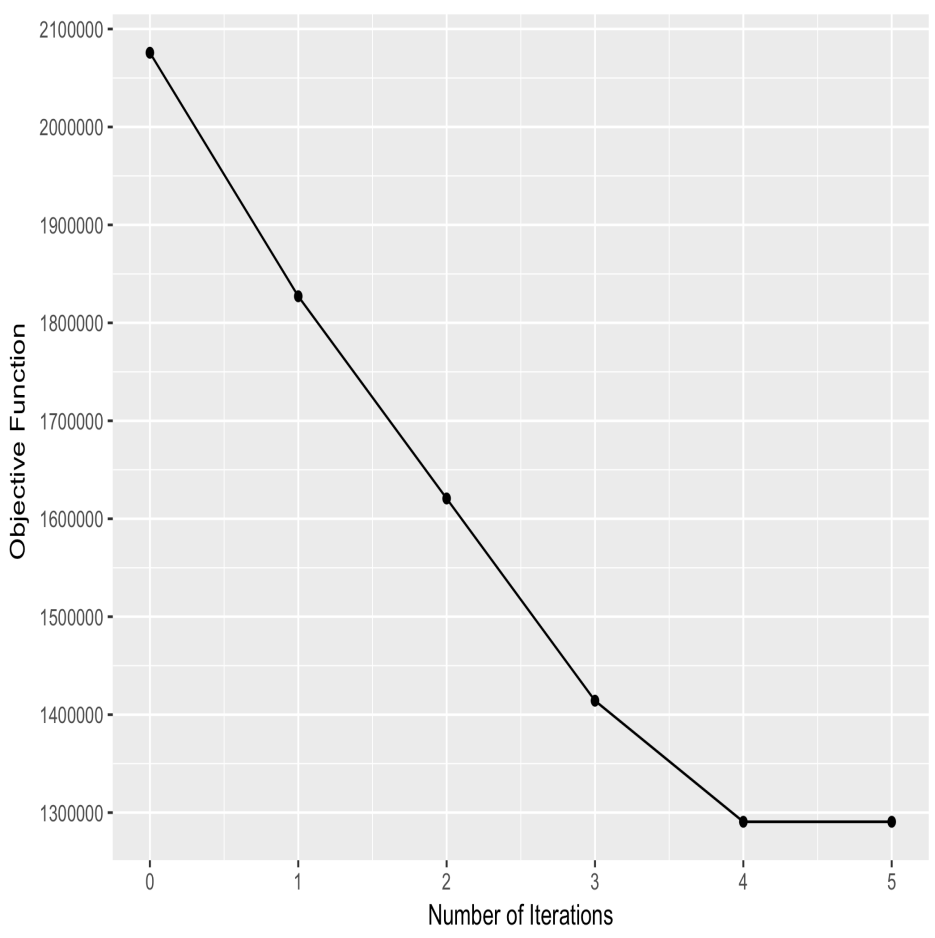
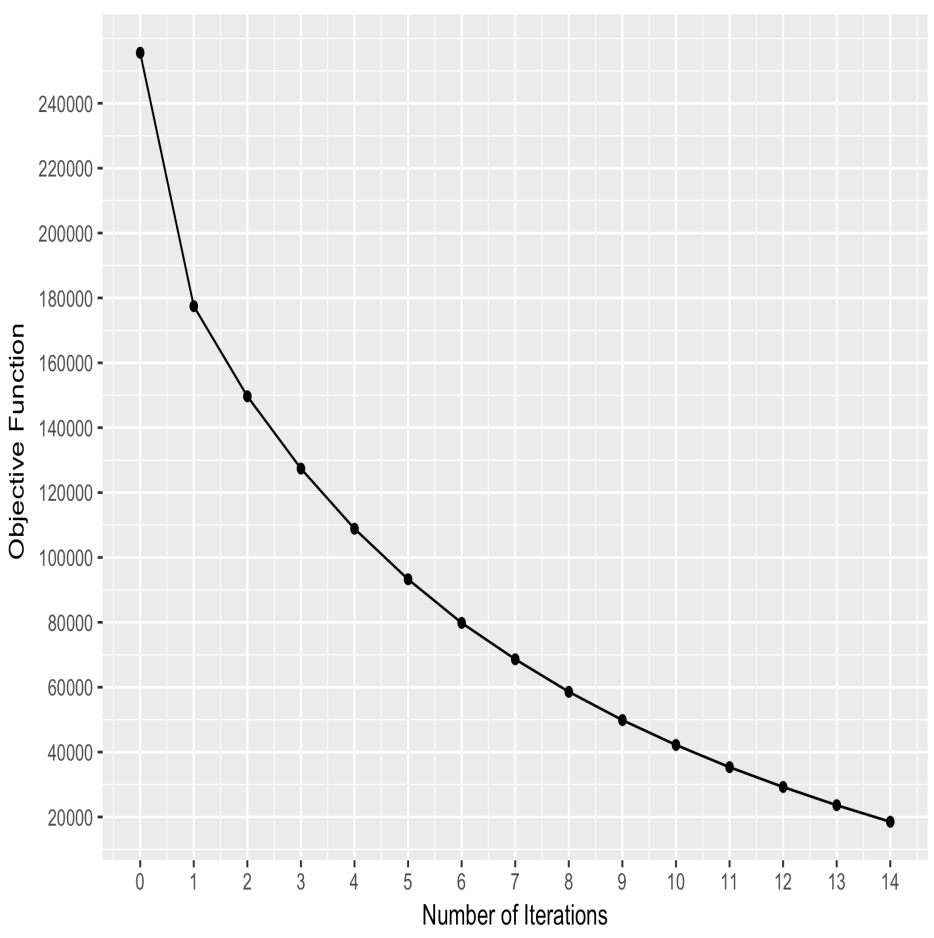
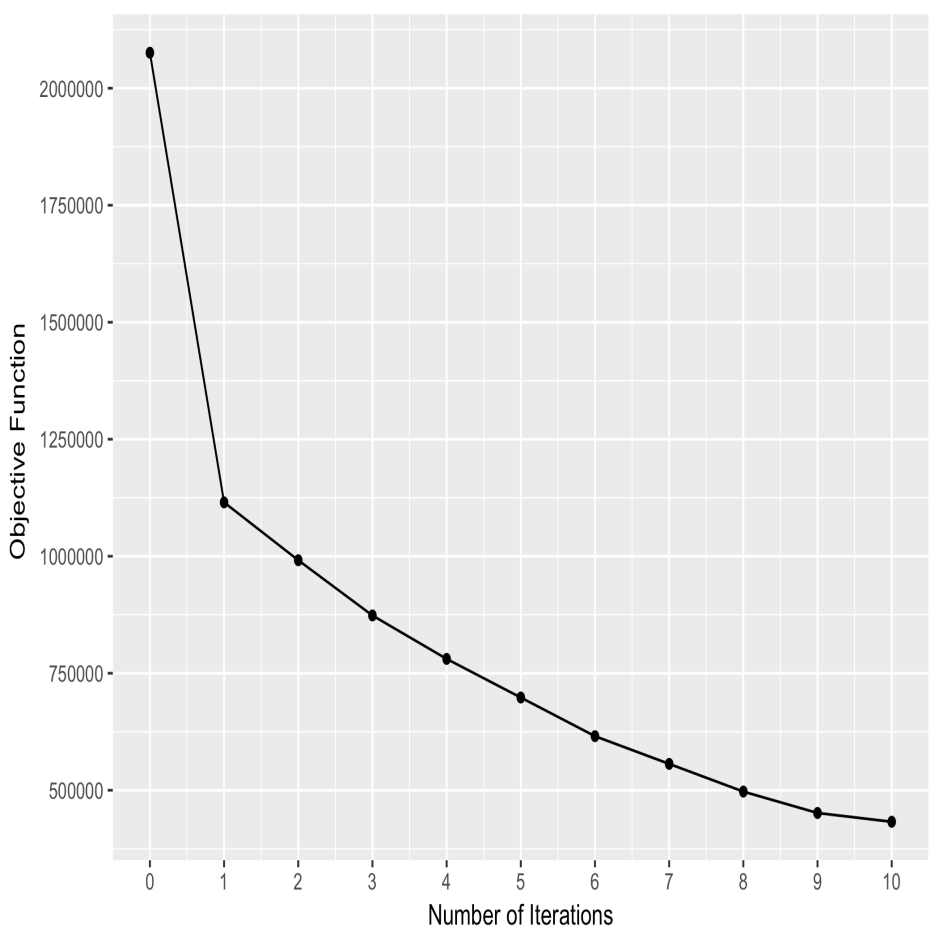
TEST OBJECTIVE FUNCTION - ALTERNING





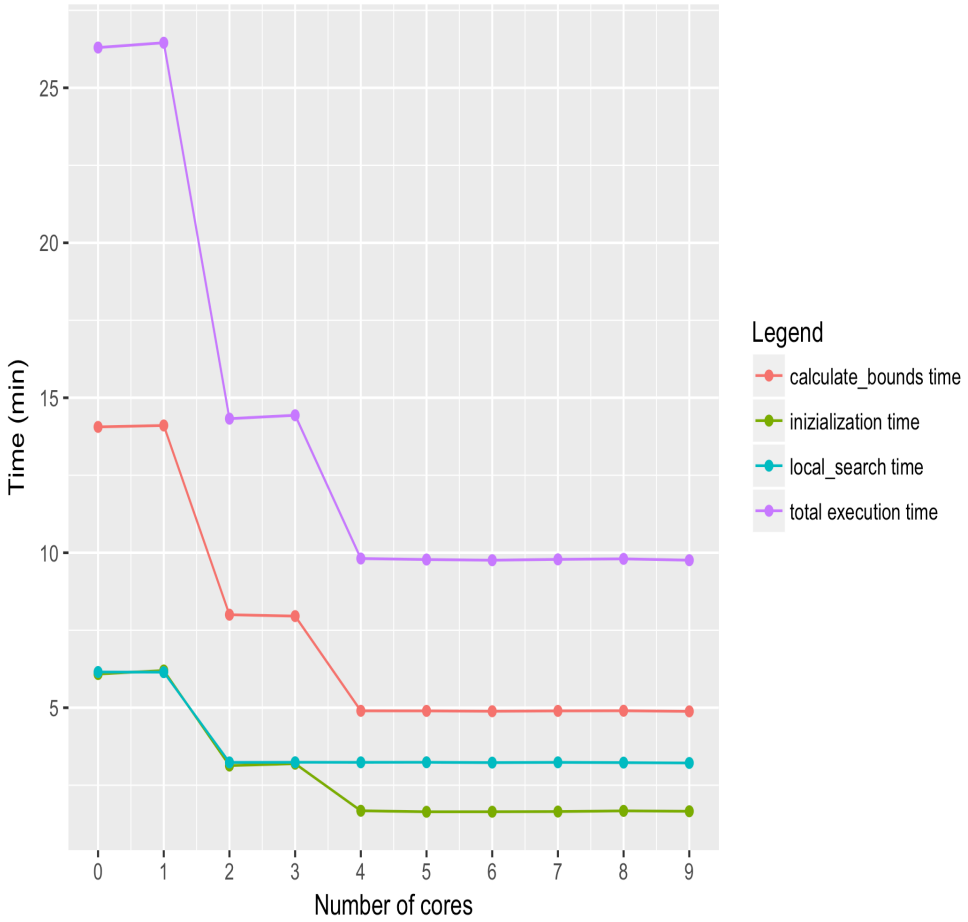
TEST OBJECTIVE FUNCTION - SEPARING

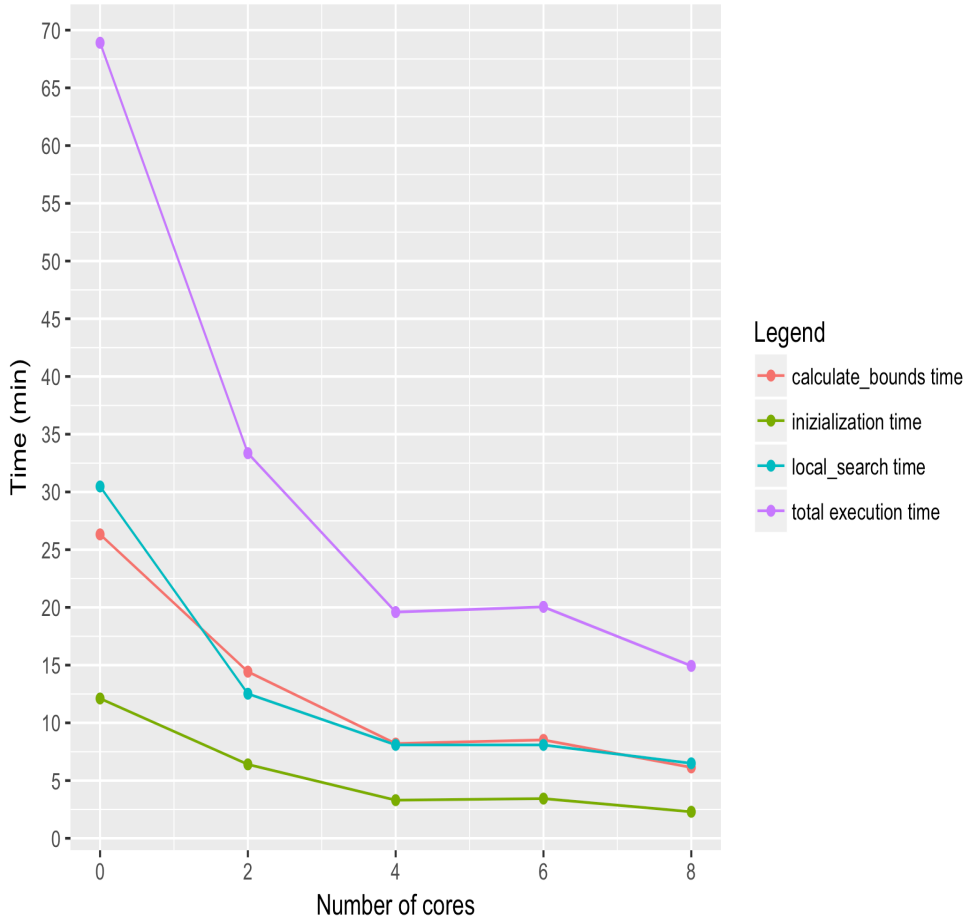




TEST TIME PERFORMANCE - ALTERNING

Cache off



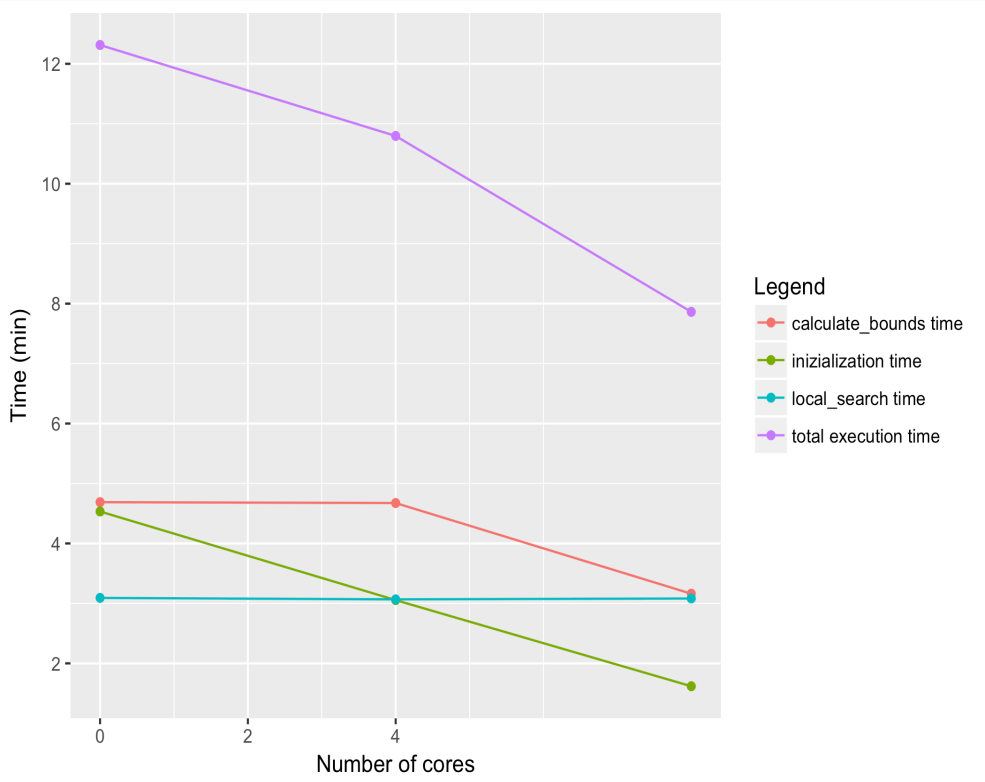


Even starting from an empty cache this scenario is pessimistic, since there are probably some repetitions in invoking dagSim.

Nevertheless time measurements are acceptable.

TEST TIME PERFORMANCE - ALTERNING

A realistic scenario: **50% cache**

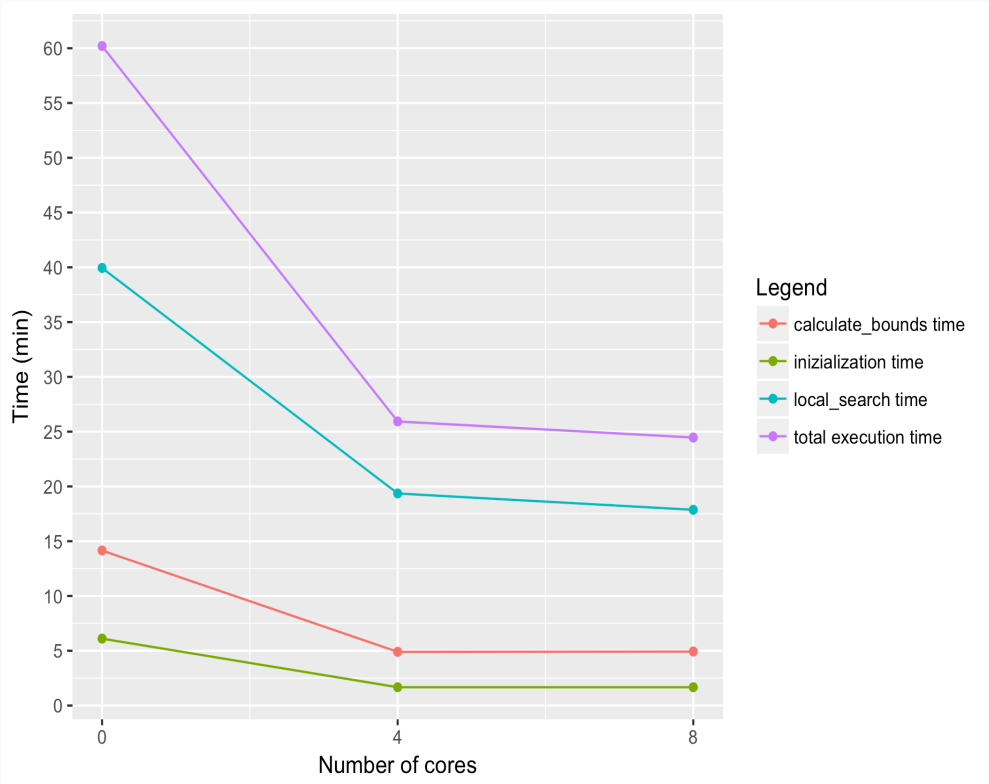


TEST TIME PERFORMANCE - SEPARING

Many repetitions⇒ very long times with cache off ($\simeq$ 41 minutes with 4 cores and 4 applications)

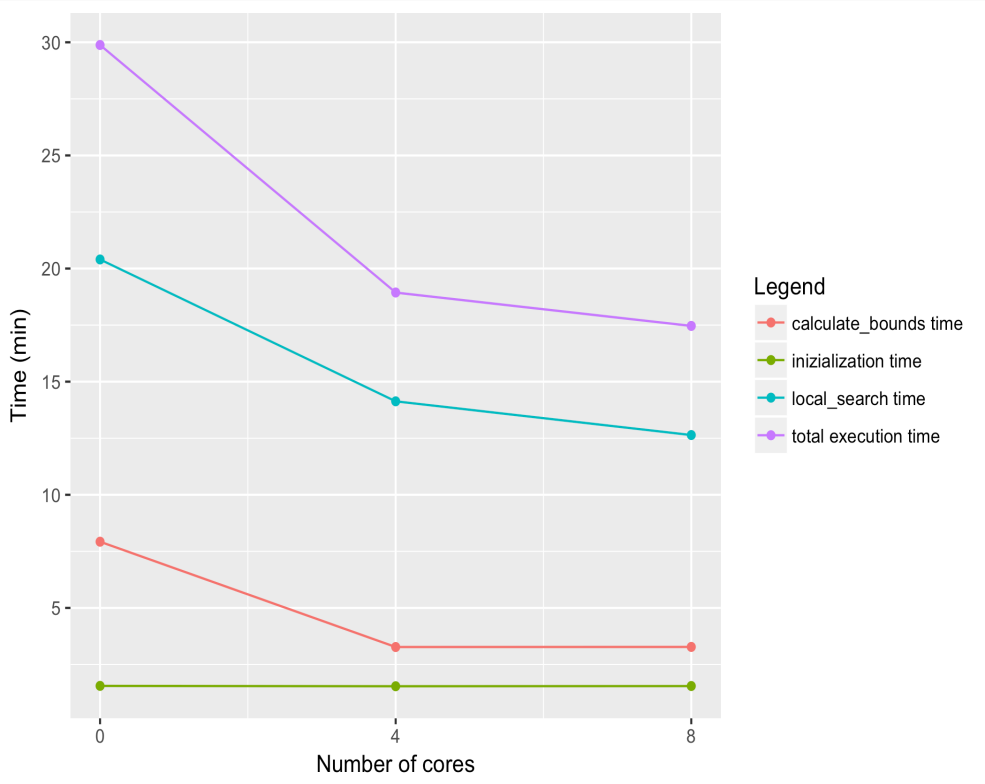
To represent the worst scenario is more meaningful to turn on the cache and start from an empty database.

0% cache

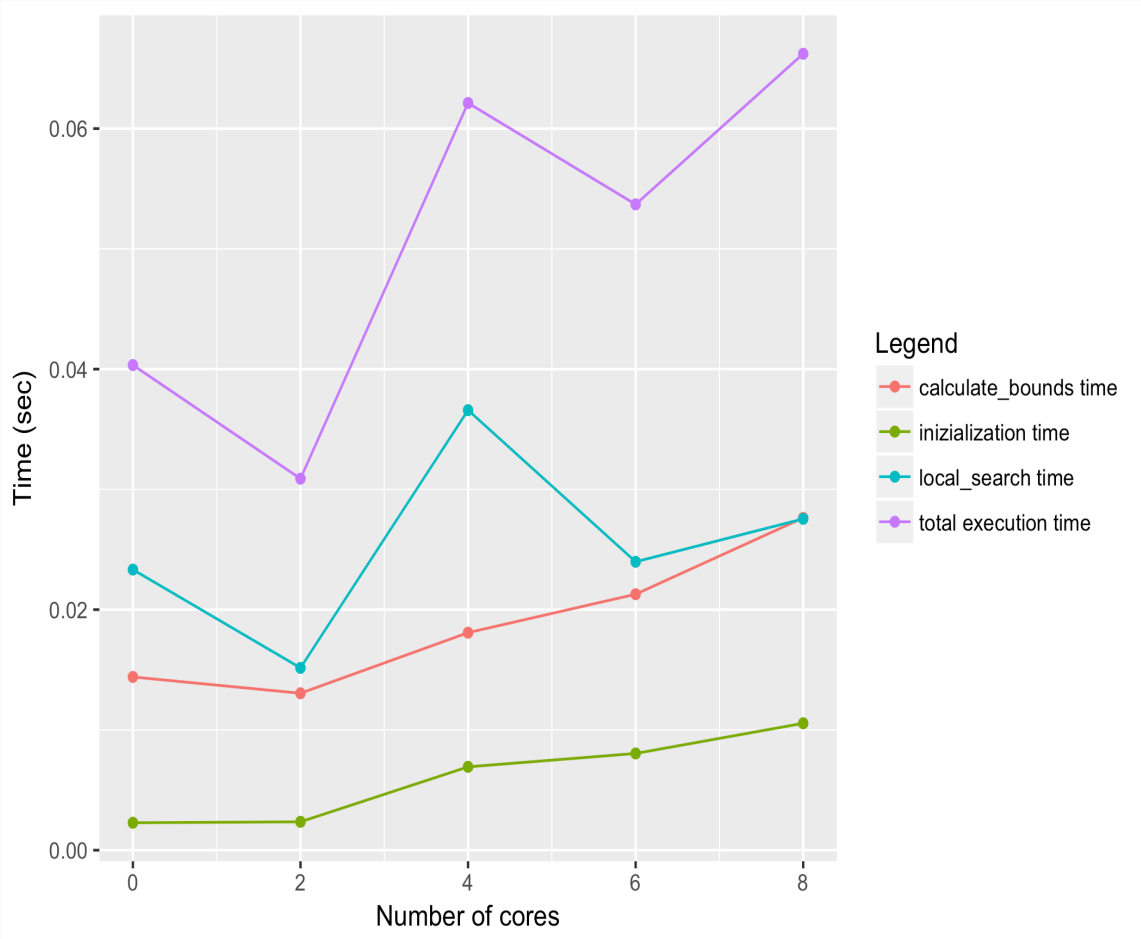


TEST TIME PERFORMANCE - SEPARING

A realistic scenario: **50% cache**



TEST TIME PERFORMANCE - FULL CACHE



BIBLIOGRAPHY

References

- *"D3.2 - Big Data Application Performance models and run-time Optimization Policies", Danilo Ardagna, Enrico Barbierato (Polimi), Jussara M. Almeida, Ana Paula Couto Silva (UFMG)*