

Raxml repeats benchmarks

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1 Execution time

We run raxml for each dataset with and without the repeats option, and compare the execution times.

Speedup is calculated as follow :

$$speedup = \frac{time_{tipinner}}{time_{repeats}}$$

When we don't indicate times, the cluster cancelled the jobs before the end (after 24h). We then compare the speedup at the last reached step.

Raxml commands used:

```
$ ./raxml-ng-mpi --seed=42 --msa data.phy --model data.part
--simd AVX --threads 16 --redo --repeats on
$ ./raxml-ng-mpi --seed=42 --msa data.phy --model data.part
--simd AVX --threads 16 --redo
```

dataset	taxas	sites	partitions	type	<i>time_{repeats}</i>	<i>time_{tipinner}</i>	speedup
404	404	7444	11	DNA	766s	1131s	1.47
1kite_science2013	144	371434	50	DNA	11400s	20414s	1.8
1kite_hyme	174	2248590	4116	DNA	cancelled	cancelled	1.53
Antl_1.1_nt	40	522173	658	DNA	1402s	2293s	1.63
Antl_1.1_aa	40	762438	659	prot	10161s	14500s	1.4
para_1_nt	193	1514275	3714	DNA	cancelled	cancelled	1.81

2 Load balancing

dataset	taxas	sites	partitions	type	busy ratio repeats	busy ratio tipinner
404	404	7444	11	DNA	1	1
1kite_science2013	144	371434	50	DNA	1	1
1kite_hyme	174	2248590	4116	DNA	1	1
Antl_1.1_nt	40	522173	658	DNA	1	1
Antl_1.1_aa	40	762438	659	prot	1	1
para_1_nt	193	1514275	3714	DNA	1	1