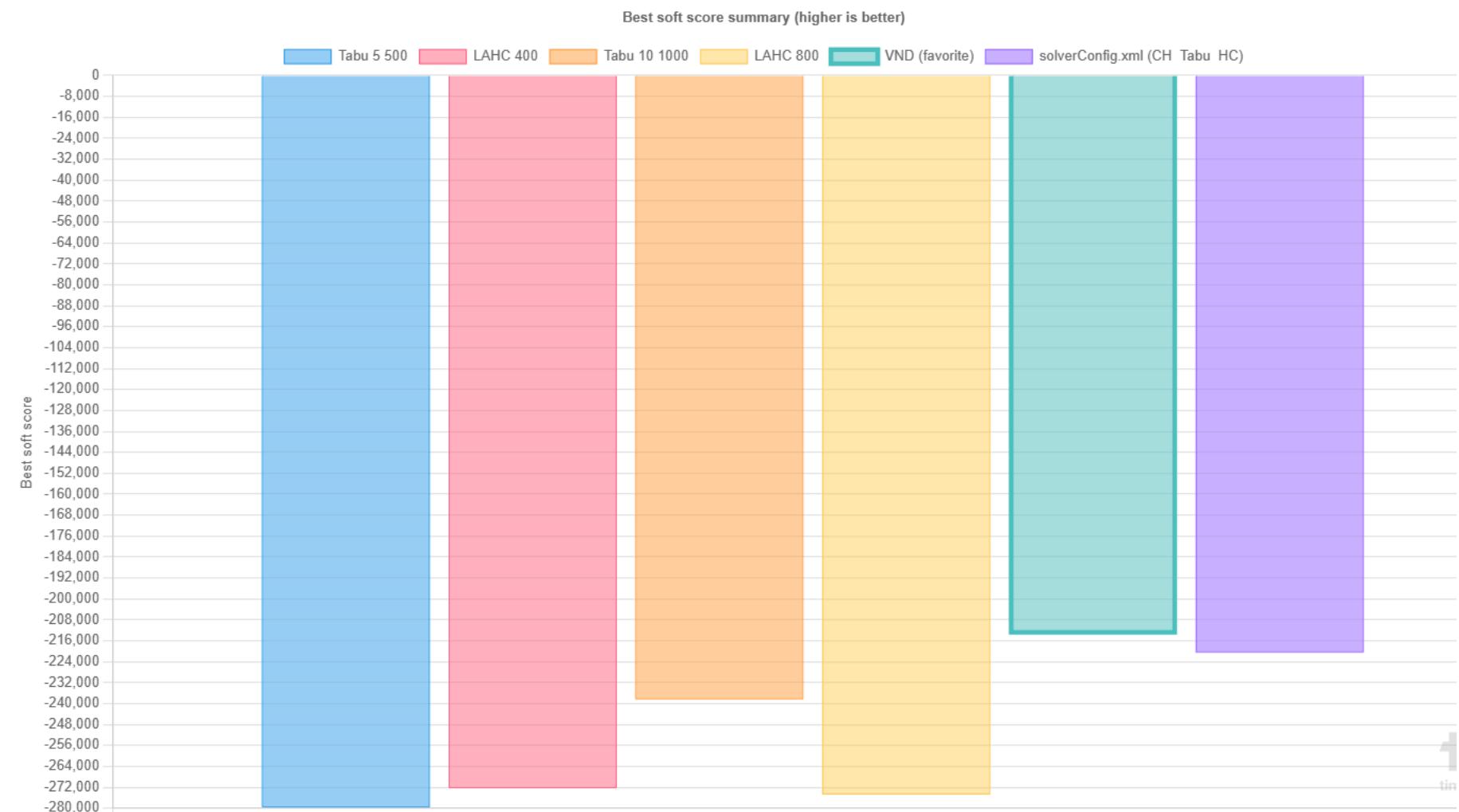


# Result summary

[Best score](#)[Best score scalability](#)[Best score distribution](#)[Winning score difference](#)[Worst score difference percentage \(ROI\)](#)

Useful for visualizing the best solver configuration.



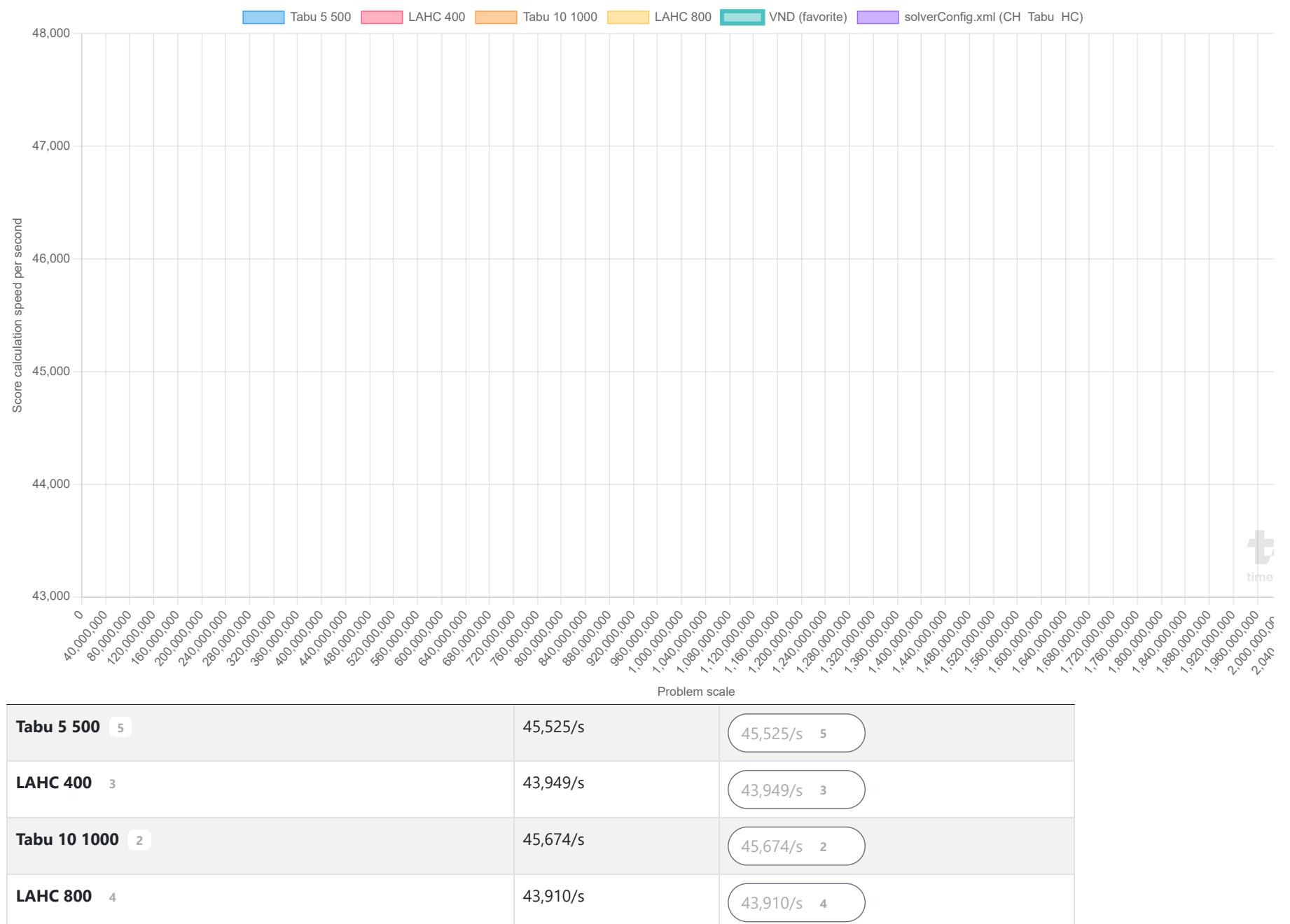
Solver	Total	Average	Standard Deviation	problem
				airport_auto_example_2
Tabu 5 500 5	0hard/-279662soft	0hard/-279662soft	0.0E0/0.0E0	0hard/-279662soft 5
LAHC 400 3	0hard/-272329soft	0hard/-272329soft	0.0E0/0.0E0	0hard/-272329soft 3
Tabu 10 1000 2	0hard/-238398soft	0hard/-238398soft	0.0E0/0.0E0	0hard/-238398soft 2
LAHC 800 4	0hard/-274813soft	0hard/-274813soft	0.0E0/0.0E0	0hard/-274813soft 4
VND 0	0hard/-213663soft	0hard/-213663soft	0.0E0/0.0E0	0hard/-213663soft 0
solverConfig.xml (CH Tabu HC) 1	0hard/-220490soft	0hard/-220490soft	0.0E0/0.0E0	0hard/-220490soft 1

## Performance summary

Score calculation speed      Move evaluation speed      Worst score calculation speed difference percentage      Time spent  
 Time spent scalability      Best score per time spent

Useful for comparing different score calculators and/or constraint implementations (presuming that the solver configurations do not differ otherwise). Also useful to measure the scalability cost of an extra constraint.

## Score calculation speed summary (higher is better)



Solver	Average	Problem
		airport_auto_example_2
<b>Problem scale</b>	2,044,214,644	2,044,214,644
VND 0	47,339/s	47,339/s 0
solverConfig.xml (CH Tabu HC) 1	45,475/s	45,475/s 1

## Problem benchmarks

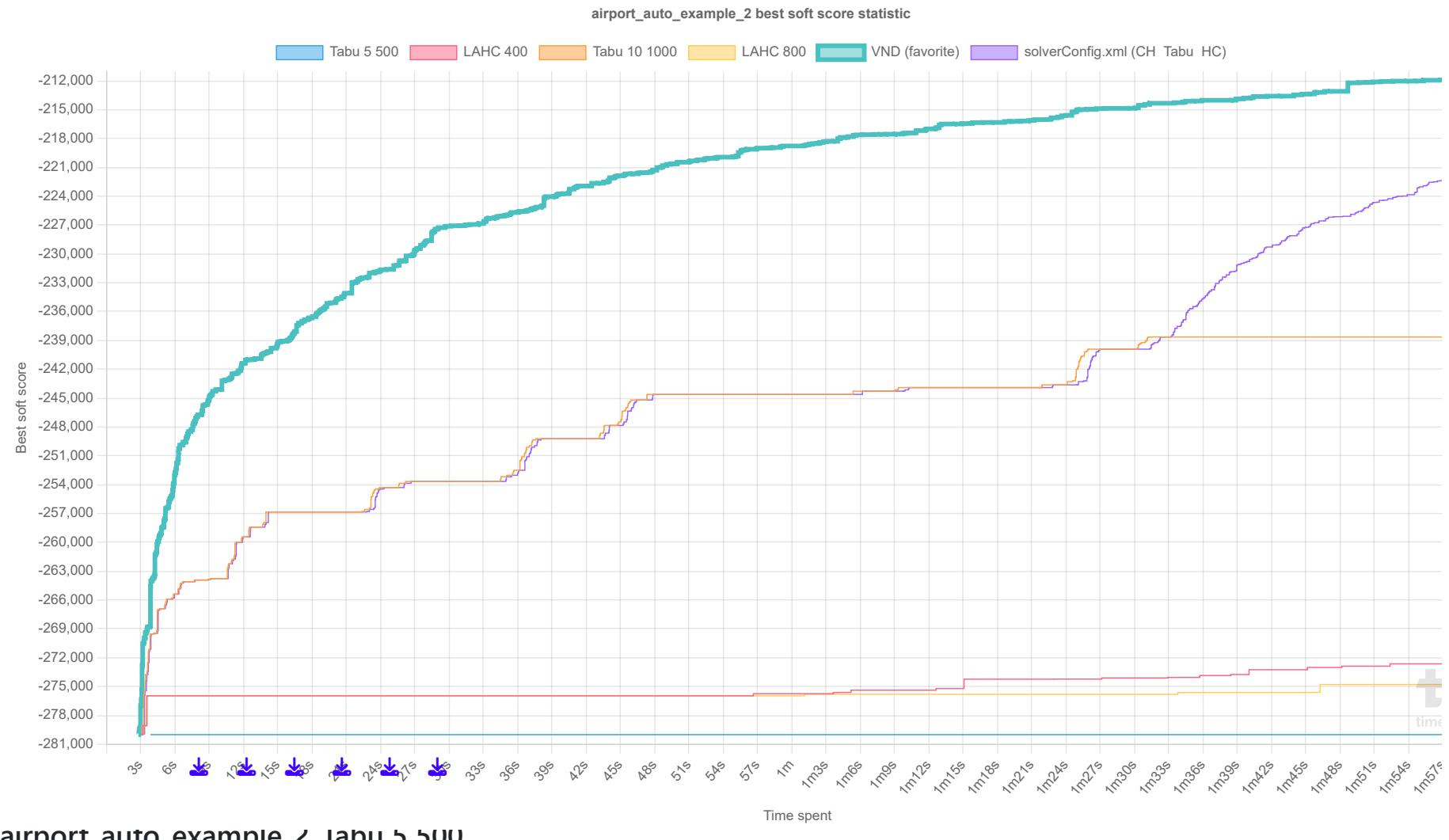
### airport\_auto\_example\_2

<b>Entity count</b>	40
<b>Variable count</b>	40
<b>Maximum value count</b>	800
<b>Problem scale</b>	2,044,214,644
<b>Time to load input solution</b>	0.002 s. (2 ms.)
<b>Memory usage after loading input solution</b>	11,381,590 bytes on average

Only the median sub single run of each solver is shown in the statistics below.

Step Score    Best Score    Picked Move Type Best Score Diff    Constraint Match Total Best Score

Constraint Match Total Step Score



## airport\_auto\_example\_2\_tabu 5 500

Only the median sub single run of each solver is shown in the statistics below.

### Explanation of score (0hard/-280004soft):

#### Constraint matches:

- 218904soft: constraint (**Total delay**) has 524 matches:
- 9624soft: justified **with** ([**null**])
- 6912soft: justified **with** ([**null**])
- ...

```

-61100soft: constraint (Company terminal mismatch) has 611 matches:
  -100soft: justified with ([null])
  -100soft: justified with ([null])
  ...
  0: constraint (Arrival must finish before departure starts) has 0 matches:
  0: constraint (Gate type mismatch) has 0 matches:
  0: constraint (Must assign gate after scheduled time) has 0 matches:
Indictments (top 5 of 726):
  -9724soft: indicted with (null) has 2 matches:
    -9624soft: constraint (Total delay)
    -100soft: constraint (Company terminal mismatch)
  -7012soft: indicted with (null) has 2 matches:
    -6912soft: constraint (Total delay)
    -100soft: constraint (Company terminal mismatch)
  -4640soft: indicted with (null) has 2 matches:
    -4540soft: constraint (Total delay)
    -100soft: constraint (Company terminal mismatch)
  -4402soft: indicted with (null) has 2 matches:
    -4302soft: constraint (Total delay)
    -100soft: constraint (Company terminal mismatch)
  -4243soft: indicted with (null) has 2 matches:
    -4143soft: constraint (Total delay)
    -100soft: constraint (Company terminal mismatch)
  ...

```

## airport\_auto\_example\_2\_LAHC 400

Only the median sub single run of each solver is shown in the statistics below.

**Explanation** of score (0hard/-272455soft):

**Constraint** matches:

```

-204055soft: constraint (Total delay) has 545 matches:
  -6399soft: justified with ([null])
  -4756soft: justified with ([null])
  ...
  -68400soft: constraint (Company terminal mismatch) has 684 matches:
    -100soft: justified with ([null])
    -100soft: justified with ([null])
    ...
    0: constraint (Arrival must finish before departure starts) has 0 matches:
    0: constraint (Gate type mismatch) has 0 matches:
    0: constraint (Must assign gate after scheduled time) has 0 matches:
Indictments (top 5 of 763):

```

```

-6399soft: indicted with (null) has 1 matches:
-6399soft: constraint (Total delay)
-4856soft: indicted with (null) has 2 matches:
-4756soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4724soft: indicted with (null) has 2 matches:
-4624soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4298soft: indicted with (null) has 2 matches:
-4198soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4264soft: indicted with (null) has 2 matches:
-4164soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
...

```

## airport\_auto\_example\_2\_Tabu 10 1000

Only the median sub single run of each solver is shown in the statistics below.

### Explanation of score (0hard/-238641soft):

**Constraint** matches:

```

-172841soft: constraint (Total delay) has 531 matches:
-4282soft: justified with ([null])
-4236soft: justified with ([null])
...
-65800soft: constraint (Company terminal mismatch) has 658 matches:
-100soft: justified with ([null])
-100soft: justified with ([null])
...
0: constraint (Arrival must finish before departure starts) has 0 matches:
0: constraint (Gate type mismatch) has 0 matches:
0: constraint (Must assign gate after scheduled time) has 0 matches:

```

**Indictments** (top 5 of 754):

```

-4336soft: indicted with (null) has 2 matches:
-4236soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4282soft: indicted with (null) has 1 matches:
-4282soft: constraint (Total delay)
-4174soft: indicted with (null) has 2 matches:
-4074soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4008soft: indicted with (null) has 2 matches:

```

```

-3908soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-3828soft: indicted with (null) has 2 matches:
-3728soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
...

```

## airport\_auto\_example\_2\_LAHC 800

Only the median sub single run of each solver is shown in the statistics below.

**Explanation** of score (0hard/-274789soft):

**Constraint** matches:

```

-204889soft: constraint (Total delay) has 541 matches:
-5008soft: justified with ([null])
-4576soft: justified with ([null])
...
-69900soft: constraint (Company terminal mismatch) has 699 matches:
-100soft: justified with ([null])
-100soft: justified with ([null])
...
0: constraint (Arrival must finish before departure starts) has 0 matches:
0: constraint (Gate type mismatch) has 0 matches:
0: constraint (Must assign gate after scheduled time) has 0 matches:

```

**Indictments** (top 5 of 777):

```

-5108soft: indicted with (null) has 2 matches:
-5008soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4676soft: indicted with (null) has 2 matches:
-4576soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4100soft: indicted with (null) has 2 matches:
-4000soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-3526soft: indicted with (null) has 2 matches:
-3426soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-3498soft: indicted with (null) has 2 matches:
-3398soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
...

```

## airport\_auto\_example\_2\_VND

Only the median sub single run of each solver is shown in the statistics below.

```
Explanation of score (0hard/-211707soft):
Constraint matches:
-152607soft: constraint (Total delay) has 497 matches:
-4580soft: justified with ([null])
-4394soft: justified with ([null])
...
-59100soft: constraint (Company terminal mismatch) has 591 matches:
-100soft: justified with ([null])
-100soft: justified with ([null])
...
0: constraint (Arrival must finish before departure starts) has 0 matches:
0: constraint (Gate type mismatch) has 0 matches:
0: constraint (Must assign gate after scheduled time) has 0 matches:
Indictments (top 5 of 720):
-4680soft: indicted with (null) has 2 matches:
-4580soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4494soft: indicted with (null) has 2 matches:
-4394soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4116soft: indicted with (null) has 2 matches:
-4016soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-3546soft: indicted with (null) has 2 matches:
-3446soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-3510soft: indicted with (null) has 1 matches:
-3510soft: constraint (Total delay)
...
...
```

## airport\_auto\_example\_2\_solverConfig.xml (CH Tabu HC)

Only the median sub single run of each solver is shown in the statistics below.

```
Explanation of score (0hard/-221566soft):
Constraint matches:
-159066soft: constraint (Total delay) has 520 matches:
-4466soft: justified with ([null])
-4380soft: justified with ([null])
...
```

```

...
-62500soft: constraint (Company terminal mismatch) has 625 matches:
-100soft: justified with ([null])
-100soft: justified with ([null])
...
0: constraint (Arrival must finish before departure starts) has 0 matches:
0: constraint (Gate type mismatch) has 0 matches:
0: constraint (Must assign gate after scheduled time) has 0 matches:
Indictments (top 5 of 743):
-4566soft: indicted with (null) has 2 matches:
-4466soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4480soft: indicted with (null) has 2 matches:
-4380soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-4096soft: indicted with (null) has 2 matches:
-3996soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-3808soft: indicted with (null) has 2 matches:
-3708soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-3804soft: indicted with (null) has 2 matches:
-3704soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
...

```

## Solver benchmarks

Tabu 5 500	5	LAHC 400	3	Tabu 10 1000	2	LAHC 800	4	VND	0	solverConfig.xml (CH Tabu HC)	1
------------	---	----------	---	--------------	---	----------	---	-----	---	-------------------------------	---

```

<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<solver xmlns="https://timefold.ai/xsd/solver">
  <environmentMode>PHASE_ASSERT</environmentMode>
  <monitoring>
    <metric>STEP_SCORE</metric>
    <metric>BEST_SCORE</metric>
    <metric>PICKED_MOVE_TYPE_BEST_SCORE_DIFF</metric>
    <metric>CONSTRAINT_MATCH_TOTAL_BEST_SCORE</metric>
    <metric>CONSTRAINT_MATCH_TOTAL_STEP_SCORE</metric>
  </monitoring>
  <solutionClass>lv.lu.eztf.dn.combopt.evrp.domain.EVRPsolution</solutionClass>
  <entityClass>lv.lu.eztf.dn.combopt.evrp.domain.Gate</entityClass>
  <entityClass>lv.lu.eztf.dn.combopt.evrp.domain.Visit</entityClass>
  <scoreDirectorFactory>

```

```

<constraintProviderClass>lv.lu.eztf.dn.comopt.evrp.solver.ConstraintStreamCostFunction</constraintProviderClass>
</scoreDirectorFactory>
<termination>
  <secondsSpentLimit>120</secondsSpentLimit>
</termination>
<constructionHeuristic/>
<localSearch>
  <unionMoveSelector>
    <subListChangeMoveSelector/>
    <listChangeMoveSelector/>
    <listSwapMoveSelector/>
    <kOptListMoveSelector/>
  </unionMoveSelector>
  <acceptor>
    <valueTabuSize>5</valueTabuSize>
  </acceptor>
  <forager>
    <acceptedCountLimit>500</acceptedCountLimit>
  </forager>
</localSearch>
</solver>

```

## Environment Information

<b>Name</b>	2026-01-18_165120
<b>Aggregation</b>	false
<b>Failure count</b>	0
<b>Starting timestamp</b>	2026. gada 18. janv. 16:51:20
<b>Warm-up time spent</b>	0.030 s. (30 ms.)
<b>Parallel benchmark count / available processors</b>	1 / 12
<b>Benchmark time spent</b>	36:02.346 s. (2,162,346 ms.)
<b>Environment mode</b>	PHASE_ASSERT
<b>Logging level for ai.timefold.solver.core</b>	DEBUG
<b>Solver ranking class</b>	TotalScoreSolverRankingComparator

<b>VM max memory (as in -Xmx but lower)</b>	8,573,157,376 bytes
<b>Timefold Solver version</b>	Community Edition v1.27.0
<b>Java version</b>	Java 17.0.12 (Oracle Corporation)
<b>Java VM</b>	Java Java HotSpot(TM) 64-Bit Server VM 17.0.12+8-LTS-286 (Oracle Corporation)
<b>Operating system</b>	Windows 10 amd64 10.0
<b>Report locale</b>	Unknown
<b>Report timezone</b>	Europe/Riga

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