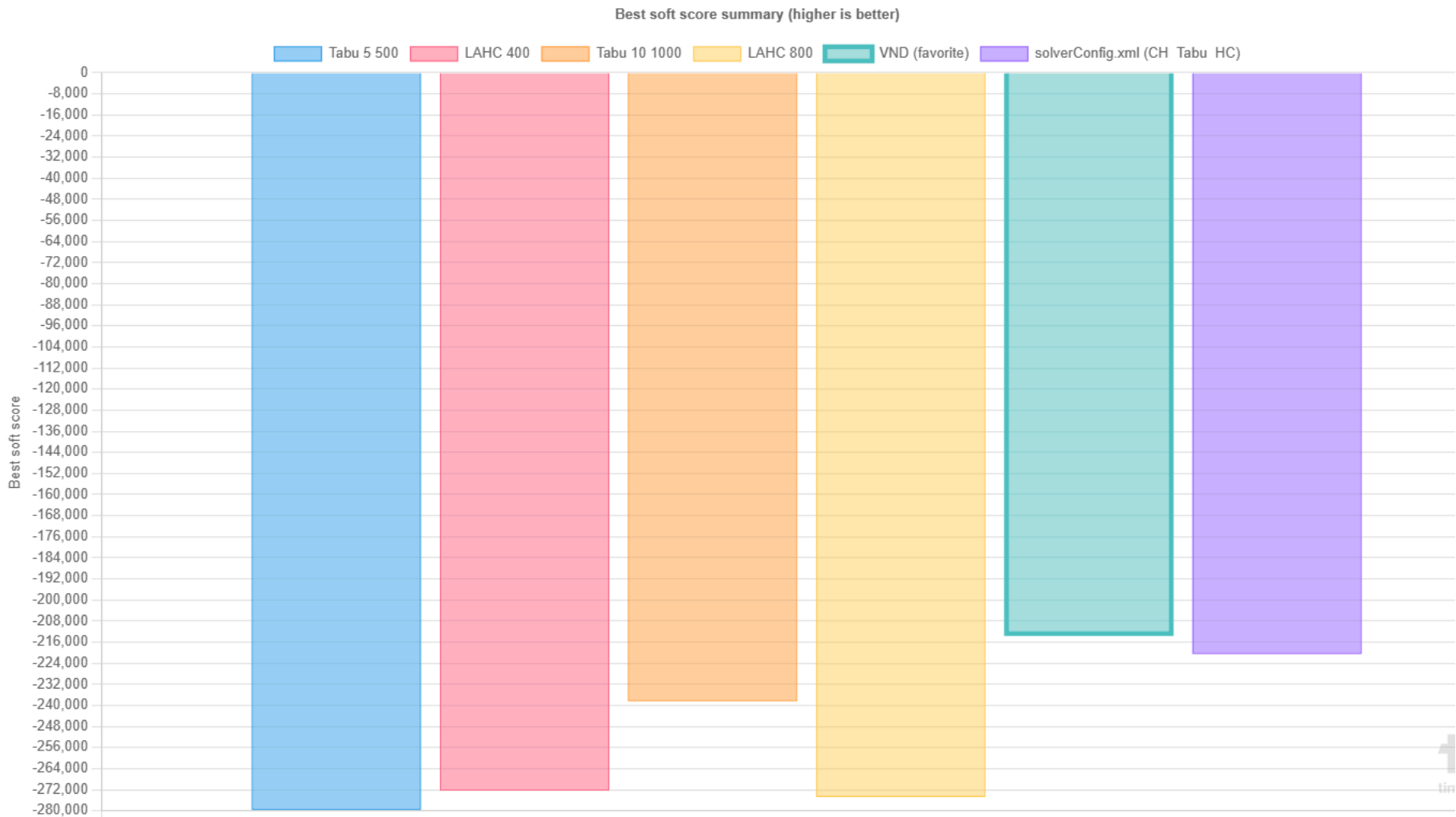


# Result summary

Best score   Best score scalability   Best score distribution   Winning score difference  
Worst score difference percentage (ROI)

Useful for visualizing the best solver configuration.



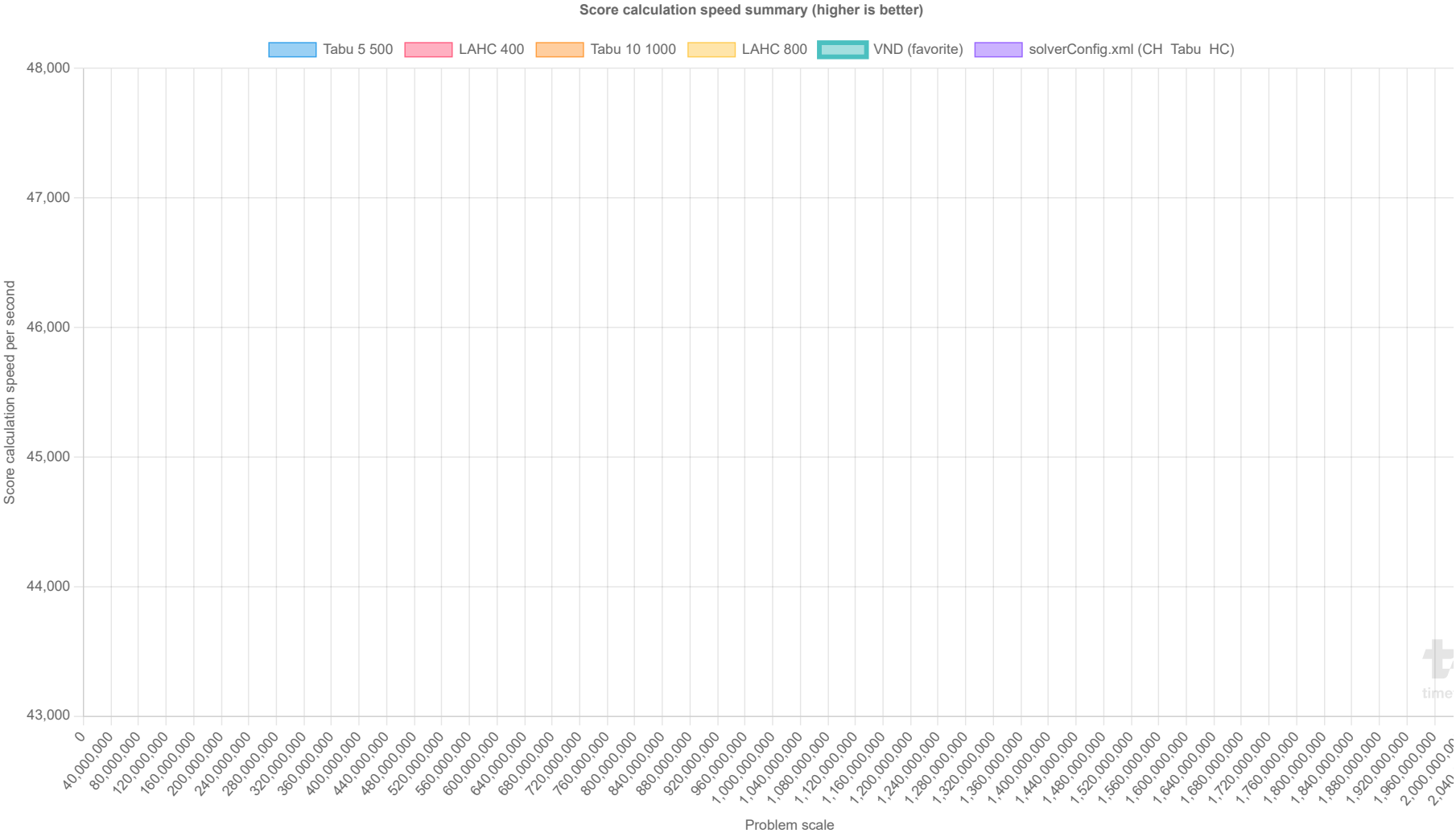
Solver	Total	Average	Standard Deviation	problem
				airport_auto_example_2
Tabu 5 500 5	0hard/-279662soft	0hard/-279662soft	0.0E0/0.0E0	0hard/-279662soft 5
LAHC 400 3	0hard/-272329soft	0hard/-272329soft	0.0E0/0.0E0	0hard/-272329soft 3
Tabu 10 1000 2	0hard/-238398soft	0hard/-238398soft	0.0E0/0.0E0	0hard/-238398soft 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.



Tabu 5 500 5	45,525/s	45,525/s 5
LAHC 400 3	43,949/s	43,949/s 3
Tabu 10 1000 2	45,674/s	45,674/s 2
LAHC 800 4	43,910/s	43,910/s 4

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

## Problem benchmarks

### airport\_auto\_example\_2

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

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

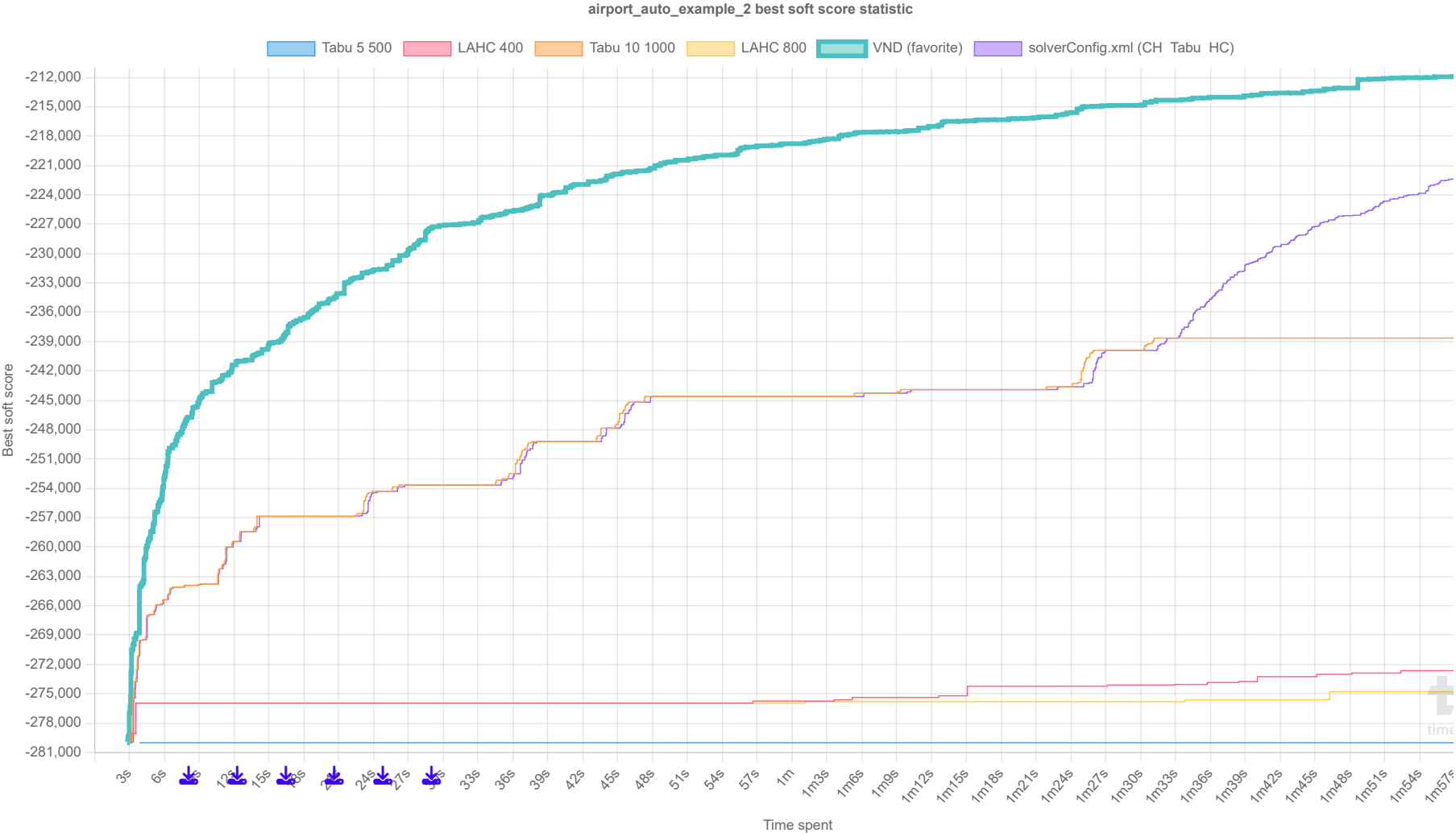
Step Score

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.combopt.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

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

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