

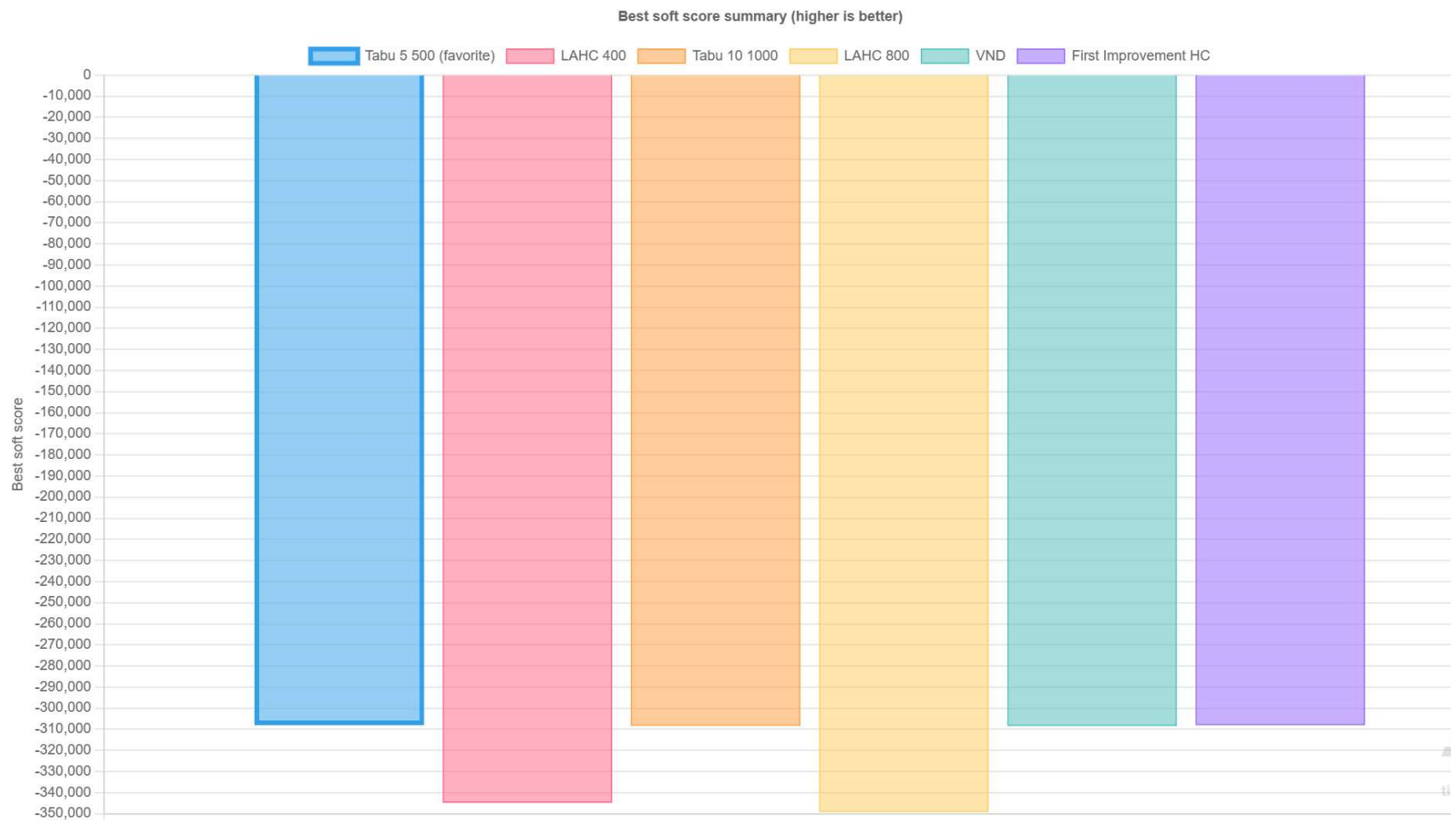
Benchmark Report

Result summary

3 benchmarks have failed!

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

Useful for visualizing the best solver configuration.



airport_auto_example_1

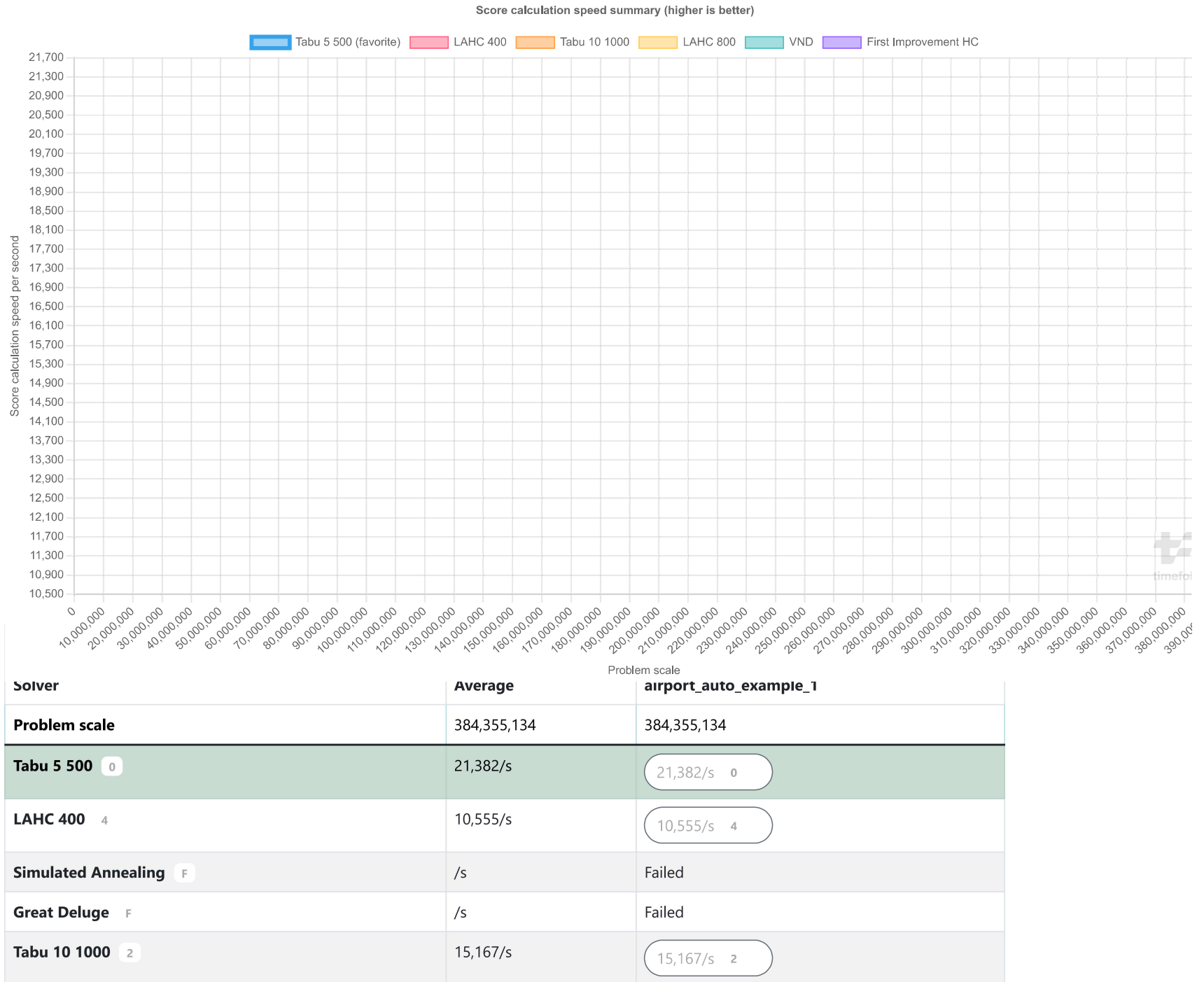
Solver	Total	Average	Standard Deviation	Problem
				airport_auto_example_1
Tabu 5 500 0	0hard/-308006soft	0hard/-308006soft	0.0E0/0.0E0	0hard/-308006soft 0
LAHC 400 4	0hard/-344823soft	0hard/-344823soft	0.0E0/0.0E0	0hard/-344823soft 4
Simulated Annealing F				Failed
Great Deluge F				Failed
Tabu 10 1000 2	0hard/-308333soft	0hard/-308333soft	0.0E0/0.0E0	0hard/-308333soft 2
LAHC 800 5	0hard/-349163soft	0hard/-349163soft	0.0E0/0.0E0	0hard/-349163soft 5
VND 3	0hard/-308462soft	0hard/-308462soft	0.0E0/0.0E0	0hard/-308462soft 3
First Improvement HC 1	0hard/-308091soft	0hard/-308091soft	0.0E0/0.0E0	0hard/-308091soft 1
LAHC 400 Entity-focused F				Failed

Performance summary

Score calculation speed Move evaluation speed Worst score calculation speed difference percentage Time spent

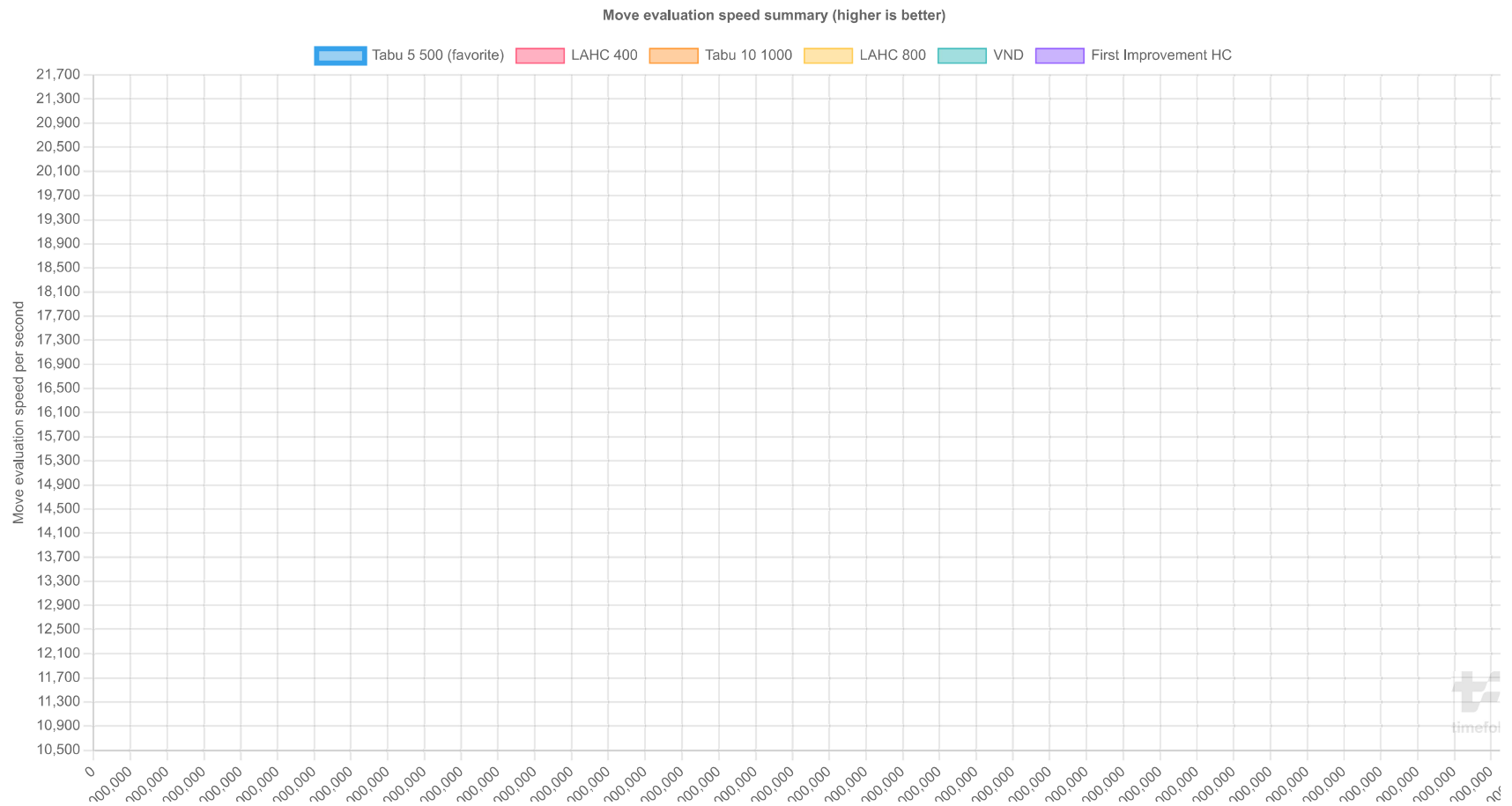
Time spent scalability Best score per time spent

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.



Solver	Average	Problem
		airport_auto_example_1
Problem scale	384,355,134	384,355,134
LAHC 800 5	10,822/s	10,822/s 5
VND 3	21,632/s	21,632/s 3
First Improvement HC 1	20,136/s	20,136/s 1
LAHC 400 Entity-focused F	/s	Failed

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.



Problem scale		
Solver	Average	airport_auto_example_1
Problem scale	384,355,134	384,355,134
Tabu 5 500 0	21,382/s	21,382/s 0
LAHC 400 4	10,555/s	10,555/s 4
Simulated Annealing F	/s	Failed
Great Deluge F	/s	Failed
Tabu 10 1000 2	15,167/s	15,167/s 2
LAHC 800 5	10,822/s	10,822/s 5
VND 3	21,632/s	21,632/s 3
First Improvement HC 1	20,135/s	20,135/s 1
LAHC 400 Entity-focused F	/s	Failed

Problem benchmarks

airport_auto_example_1

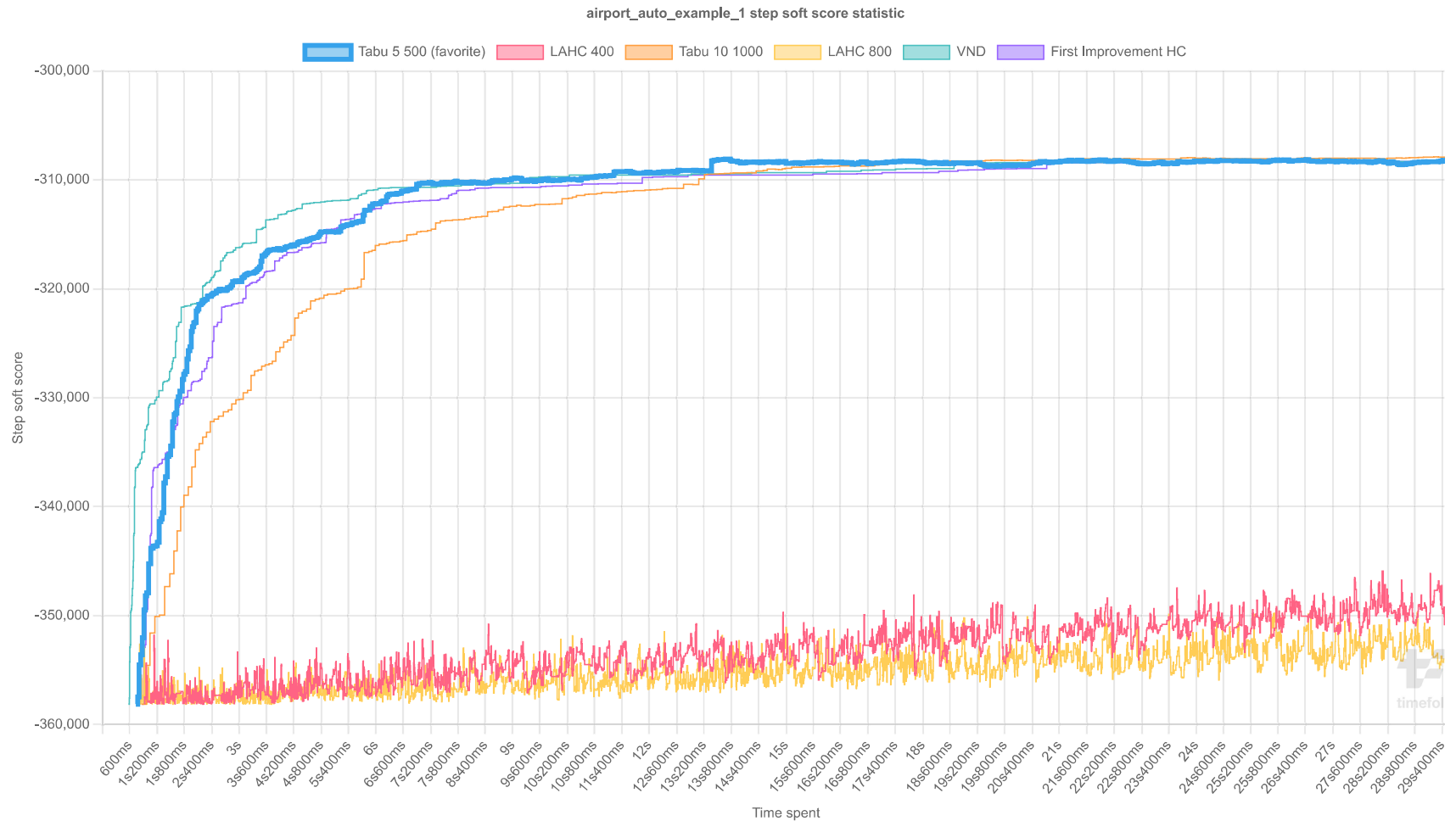
3 benchmarks have failed!

Entity count	6
Variable count	6
Maximum value count	200
Problem scale	384,355,134
Time to load input solution	0.002 s. (2 ms.)
Memory usage after loading input solution	12,023,110 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



CSV files per solver: [↓](#) [↓](#) [↓](#) [↓](#) [↓](#) [↓](#) [↓](#) [↓](#) [↓](#)

airport_auto_example_1_Tabu 5 500

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

Explanation of score (0hard/-308092soft):

Constraint matches:

-293292soft: constraint (Total delay) has 157 matches:
 -11428soft: justified with ([null])
 -10962soft: justified with ([null])
 ...
 -14800soft: constraint (Company terminal mismatch) has 148 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 189):

-11428soft: indicted with (null) has 1 matches:
 -11428soft: constraint (Total delay)
 -10962soft: indicted with (null) has 1 matches:
 -10962soft: constraint (Total delay)
 -9873soft: indicted with (null) has 1 matches:
 -9873soft: constraint (Total delay)
 -8952soft: indicted with (null) has 2 matches:
 -8852soft: constraint (Total delay)
 -100soft: constraint (Company terminal mismatch)
 -8844soft: indicted with (null) has 1 matches:
 -8844soft: constraint (Total delay)
 ...

airport_auto_example_1_LAHC 400

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

Explanation of score (0hard/-345909soft):

Constraint matches:

-330309soft: constraint (Total delay) has 163 matches:
 -13544soft: justified with ([null])
 -10626soft: justified with ([null])
 ...
 -15600soft: constraint (Company terminal mismatch) has 156 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 191):

-13544soft: indicted with (null) has 1 matches:
 -13544soft: constraint (Total delay)

```
-10626soft: indicted with (null) has 1 matches:
  -10626soft: constraint (Total delay)
-9744soft: indicted with (null) has 1 matches:
  -9744soft: constraint (Total delay)
-8364soft: indicted with (null) has 1 matches:
  -8364soft: constraint (Total delay)
-8290soft: indicted with (null) has 1 matches:
  -8290soft: constraint (Total delay)
...
```

airport_auto_example_1_Simulated Annealing

3 benchmarks have failed!

airport_auto_example_1_Great Deluge

3 benchmarks have failed!

airport_auto_example_1_Tabu 10 1000

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

Explanation of score (0hard/-307886soft):

Constraint matches:

```
-293186soft: constraint (Total delay) has 159 matches:
  -10980soft: justified with ([null])
  -10506soft: justified with ([null])
  ...
-14700soft: constraint (Company terminal mismatch) has 147 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 191):

```
-10980soft: indicted with (null) has 1 matches:
  -10980soft: constraint (Total delay)
-10506soft: indicted with (null) has 1 matches:
  -10506soft: constraint (Total delay)
-9873soft: indicted with (null) has 1 matches:
  -9873soft: constraint (Total delay)
-9450soft: indicted with (null) has 1 matches:
  -9450soft: constraint (Total delay)
```



```
-8952soft: indicted with (null) has 2 matches:
-8852soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
...
```

airport_auto_example_1_LAHC 800

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

Explanation of score (0hard/-349015soft):

Constraint matches:

```
-333615soft: constraint (Total delay) has 165 matches:
-11720soft: justified with ([null])
-10680soft: justified with ([null])
...
-15400soft: constraint (Company terminal mismatch) has 154 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 195):

```
-11720soft: indicted with (null) has 1 matches:
-11720soft: constraint (Total delay)
-10680soft: indicted with (null) has 1 matches:
-10680soft: constraint (Total delay)
-10143soft: indicted with (null) has 1 matches:
-10143soft: constraint (Total delay)
-9702soft: indicted with (null) has 2 matches:
-9602soft: constraint (Total delay)
-100soft: constraint (Company terminal mismatch)
-9567soft: indicted with (null) has 1 matches:
-9567soft: constraint (Total delay)
...
```

airport_auto_example_1_VND

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

Explanation of score (0hard/-308334soft):

Constraint matches:

```
-293634soft: constraint (Total delay) has 157 matches:
-10572soft: justified with ([null])
-9996soft: justified with ([null])
```

```

...
-14700soft: constraint (Company terminal mismatch) has 147 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 189):
-10572soft: indicted with (null) has 1 matches:
-10572soft: constraint (Total delay)
-9996soft: indicted with (null) has 1 matches:
-9996soft: constraint (Total delay)
-9972soft: indicted with (null) has 1 matches:
-9972soft: constraint (Total delay)
-9873soft: indicted with (null) has 1 matches:
-9873soft: constraint (Total delay)
-9210soft: indicted with (null) has 1 matches:
-9210soft: constraint (Total delay)
...

```

airport_auto_example_1_First Improvement HC

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

Explanation of score (0hard/-308334soft):

Constraint matches:

```

-293634soft: constraint (Total delay) has 157 matches:
-10572soft: justified with ([null])
-9996soft: justified with ([null])
...
-14700soft: constraint (Company terminal mismatch) has 147 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 189):

```

-10572soft: indicted with (null) has 1 matches:
-10572soft: constraint (Total delay)
-9996soft: indicted with (null) has 1 matches:
-9996soft: constraint (Total delay)
-9972soft: indicted with (null) has 1 matches:
-9972soft: constraint (Total delay)
-9873soft: indicted with (null) has 1 matches:
-9873soft: constraint (Total delay)
-9210soft: indicted with (null) has 1 matches:

```

```
-9210soft: constraint (Total delay)
...
```

airport_auto_example_1_LAHC 400 Entity-focused

3 benchmarks have failed!

Solver benchmarks

Tabu 5 500 0 LAHC 400 4 Simulated Annealing F Great Deluge F Tabu 10 1000 2 LAHC 800 5
VND 3 First Improvement HC 1 LAHC 400 Entity-focused F

```
<?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>30</secondsSpentLimit>
  </termination>
  <constructionHeuristic/>
  <localSearch>
    <unionMoveSelector>
      <subListChangeMoveSelector/>
      <listChangeMoveSelector/>
      <listSwapMoveSelector/>
      <kOptListMoveSelector/>
    </unionMoveSelector>
    <acceptor>
      <valueTabuSize>5</valueTabuSize>
    </acceptor>
    <forager>
      <acceptedCountLimit>500</acceptedCountLimit>
    </forager>
  </localSearch>
</solver>
```

```
</localSearch>
</solver>
```

Environment Information

Name	2026-01-18_132226
Aggregation	false
Failure count	3
Starting timestamp	2026. gada 18. janv. 13:22:26
Warm-up time spent	0.030 s. (30 ms.)
Parallel benchmark count / available processors	1 / 8
Benchmark time spent	09:04.570 s. (544,570 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)	4,217,372,672 bytes
Timefold Solver version	Community Edition v1.27.0
Java version	Java 17.0.16 (Eclipse Adoptium)
Java VM	Java OpenJDK 64-Bit Server VM 17.0.16+8 (Eclipse Adoptium)
Operating system	Windows 11 amd64 10.0
Report locale	Unknown
Report timezone	Europe/Riga

[Timefold](#)[Documentation](#)[Code](#)[Support](#)