CSV export

On this page

As of Version 18.4, Magic Model Analyst can export simulation results to a CSV file.

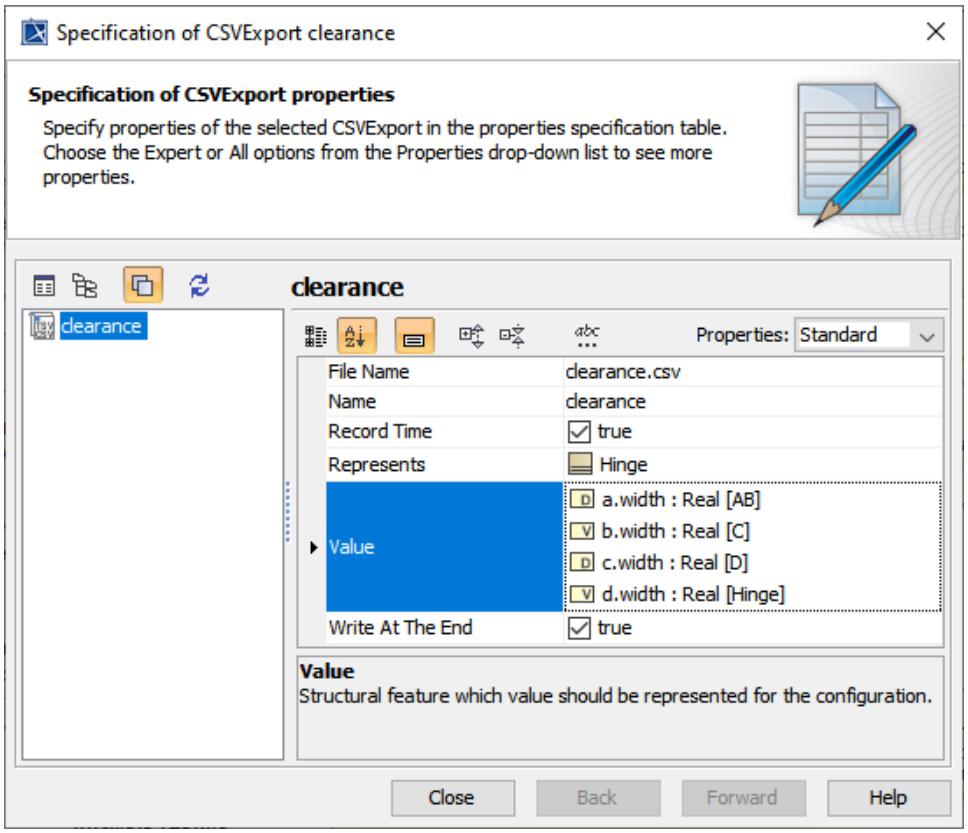
A new configuration, called **CSV Export**, has been added to export simulation results to a CSV file. CSV files take the following properties:

- **File Name**
  The name of the file that the exported results are written into. The path is the same as the project directory (by default). Alternatively, a full path may be specified as *D:\ExportedCSVResults.csv*
- **Record Time**
  If **true** (by default), time will be recorded in the first column of the exported CSV file.
- **Represents**
  Specifies the Classifier represented by the Configuration.
- **Value**
  Specifies the properties of the Classifier (including nested properties) whose values will be recorded and written to the CSV file.
- **Write At The End**
  Records values only once at the end of execution, right before termination, rather than listening and recording value changes during the execution. When **Number of runs** is more than 1 in the main configuration, the values are recorded once in each iteration.

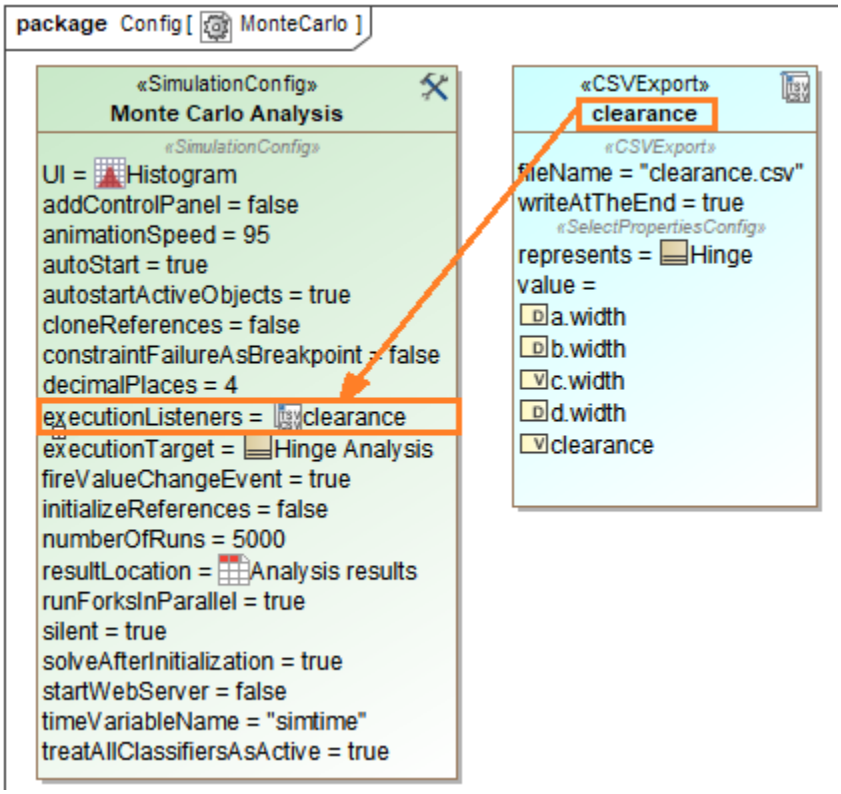
To export simulation results to a CSV file

---

1. Open a sample simulation project from the samples folder of Magic Model Analyst. Here the **HingeMonteCarloAnalysis** sample is used.
2. Drag the **CSV Export** Configuration from the toolbox to the Simulation Configuration diagram.
3. Double-click the **CSV Export** Configuration and fill in values for **File Name**, **Represents**, and **Value** from its Specification window. The **File Name** property is the name of the file in the project's working directory. The **Record Time** property is for recording time in the first column of the exported CSV file. The **Represents** property specifies the Classifier represented by the Configuration, and the **Values** property refers to the values selected which will be written to the exported CSV file. Optionally, you can also set the **Write At The End** property to record values only once at the end of execution before termination. The following figure shows the parameters of CSV Export configuration.



4. Set the created **CSV** export as a tagged value of the **executionListeners** tag definition of the Simulation Configuration. This step is important for the results to be written to file. See the CSV export configuration below:

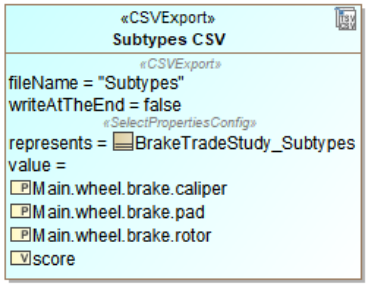


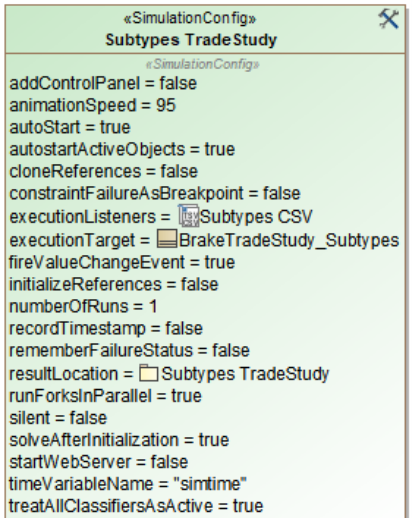
5. Run the simulation and then stop it. The results will be written to the **File Name** specified in Step 3. See the parameters of CSV Export configuration below:

```
time(ms),clearance,d.width,a.width,b.width,c.width
0.0000,0.4825,34.3849,1.9571,1.9546,29.9907
0.0000,0.4258,34.6383,1.9683,1.9703,30.2738
0.0000,1.0696,34.3231,1.9524,1.9630,29.3381
0.0000,1.1681,34.8364,1.9729,1.9542,29.7412
0.0000,0.5619,34.7569,1.9680,1.9702,30.2568
0.0000,1.1400,35.0440,1.9520,1.9714,29.9807
0.0000,1.2639,34.6046,1.9602,1.9578,29.4226
0.0000,0.8996,34.5504,1.9554,1.9690,29.7265
0.0000,1.3454,34.5987,1.9513,1.9770,29.3250
```

Support of Part properties

Not only can CSV export the values of properties with primitive types, e.g., Real, Integer, etc., but it can also export the types of the properties that are not primitive. Selected Part names in the **value** tag will be used as headers, and type names will be used as values of exported CSVs as shown in the figure below.





	A	B	C	D	E
1	time(ms)	score	Main.wheel.brake.caliper	Main.wheel.brake.pad	Main.wheel.brake.rotor
2	0	-40.9345	Boss C12	Saphire 66	Rotus 26
3	0	-42.5565	Cobra C3A	Saphire 66	Rotus 26
4	0	-34.6917	Alphine K7	Saphire 66	Rotus 26
5	0	-38.3437	Boss C12	Saphire 66	Rotus 275
6	0	-39.863	Cobra C3A	Saphire 66	Rotus 275
7	0	-32.496	Alphine K7	Saphire 66	Rotus 275
8	0	-34.685	Boss C12	Saphire 66	Rotus 30
9	0	-36.0593	Cobra C3A	Saphire 66	Rotus 30
10	0	-29.3952	Alphine K7	Saphire 66	Rotus 30
11	0	-40.9345	Boss C12	Proto C9F	Rotus 26
12	0	-42.5565	Cobra C3A	Proto C9F	Rotus 26
13	0	-34.6917	Alphine K7	Proto C9F	Rotus 26
14	0	-38.3437	Boss C12	Proto C9F	Rotus 275
15	0	-39.863	Cobra C3A	Proto C9F	Rotus 275
16	0	-32.496	Alphine K7	Proto C9F	Rotus 275
17	0	-34.685	Boss C12	Proto C9F	Rotus 30
18	0	-36.0593	Cobra C3A	Proto C9F	Rotus 30
19	0	-29.3952	Alphine K7	Proto C9F	Rotus 30
20	0	-40.9345	Boss C12	Titan P3OS	Rotus 26
21	0	-42.5565	Cobra C3A	Titan P3OS	Rotus 26
22	0	-34.6917	Alphine K7	Titan P3OS	Rotus 26
23	0	-38.3437	Boss C12	Titan P3OS	Rotus 275
24	0	-39.863	Cobra C3A	Titan P3OS	Rotus 275
25	0	-32.496	Alphine K7	Titan P3OS	Rotus 275
26	0	-34.685	Boss C12	Titan P3OS	Rotus 30
27	0	-36.0593	Cobra C3A	Titan P3OS	Rotus 30

Selected Part names used as headers and type names used as values of exported CSVs.

Related pages

- Representing data from a CSV file in a line chart
- Exporting plots data to a CSV file