



Snowflake Cost Calculator

The Cost Calculator is meant to help determine the optimal warehouse size for a given query/project. The section contains:

- Excel template that contains all of the necessary formulas to accurately determine the time and costs associates with any given query/project and reveal the most optimal warehouse size for the given query/project
- Data dictionary explaining each column that can be found within the excel template
- Cost Calculator details, further explaining how the excel template works, including the formulas that can be found within the excel template

Data Dictionary

Column Name	Column Description
WH Size	Size of the Snowflake Warehouse. Warehouse size can range from as small as X-Small to as large as 4X-Large
Credits / Hour	The number of credits that will be used per hour of query runtime
Credits / Sec	The number of credits that will be used per second of query runtime (Snowflake charges by second, NOT by hour)

Query Runtime (Min)	The number of minutes a query takes to run completely. (Ex. A query took 7 min 49 sec to run on a Medium sized warehouse. We would enter 7 as the value for this column)
Query Runtime (Sec)	The number of seconds , after the number of minutes, a query takes to run completely. (Ex. A query took 7 min 49 sec to run on a Medium sized warehouse. We would enter 49 as the value for this column)
Total Query Runtime (Sec)	A calculated field that calculates the total runtime of a query in seconds. (Ex. A query took 7 min 49 sec to run on a Medium sized warehouse. Therefore, the formula would be $(7 * 60) + 49$, which equals 469, therefore we would enter 469 as the value for this column)
Spillage	Does the query contain spilling (This can be found in History > Query ID > Profile > Profile Overview)
Credit Usage	A calculated field that calculates the total number of credits that a query consumes every time that it is executed. (Ex. A query took 7 min 49 sec to run on a Medium sized warehouse. Therefore, the formula would be $469 * 0.0011$, which equals 0.5159. We would enter 0.5159 as the value for this column)
Cost	A calculated field that calculates the total cost of a query every time that it is executed. (Ex. A query took 7 min 49 sec to run on a Medium sized warehouse. Therefore, the formula would be $0.5159 * 2$, which equals 1.0318. We would enter 1.03 as the value for this column)
Time Chg	A calculated field that calculates the time difference between running a query on a particular warehouse size compared to another. (Ex. a query executed on a Medium sized warehouse took a total of 1,931 seconds. The same query executed on a Large sized warehouse took a total of 1,212 seconds. Therefore, the formula would be $(1,212 / 1,931) - 1$, which equals -0.3723. We would enter -37.23% as the value for this column (This means that the query takes 37.23% less time to run on a Large sized warehouse than it would take to run on a Medium sized warehouse)
Cost Chg	A calculated field that calculates the cost difference between running a query on a particular warehouse size compared to another. (Ex. a query executed on a Medium sized warehouse took a total of 1,931 seconds and costs \$4.29 each time that it is executed. The same query executed on a Large sized warehouse took a total of 1,212

seconds and costs \$5.39 each time that it is executed. Therefore, the formula would be $(5.39 / 4.29) - 1$, which equals 0.2564. We would enter 25.64% as the value for this column (This means that the query costs 25.64% more to run on a Large sized warehouse than it would cost to run on a Medium sized warehouse)

Cost Calculator Details

WH Size	Credits / Hour	Credits / Second	Query Runtime (Min)	Query Runtime (Sec)	Total Query Runtime (Sec)	Spillage	Credit Usage	Cost
XS	1	0.0003	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	$= (\text{Query Runtime (Min)} * 60) + \text{Query Runtime (Sec)}$	Y or N	$= \text{Total Query Runtime (Sec)} * \text{Credits Per Second}$	$= \text{Usage (Seconds or Execution Time)}$
S	2	0.0006	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	$= (\text{Query Runtime (Min)} * 60) + \text{Query Runtime (Sec)}$	Y or N	$= \text{Total Query Runtime (Sec)} * \text{Credits Per Second}$	$= \text{Usage (Seconds or Execution Time)}$
M	4	0.0011	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	$= (\text{Query Runtime (Min)} * 60) + \text{Query Runtime (Sec)}$	Y or N	$= \text{Total Query Runtime (Sec)} * \text{Credits Per Second}$	$= \text{Usage (Seconds or Execution Time)}$

L	8	0.0022	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	= (Query Runtime (Min) * 60) + Query Runtime (Sec)	Y or N	= Total Query Runtime (Sec) * Credits Per Second	= U: (S or (E
XL	16	0.0044	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	= (Query Runtime (Min) * 60) + Query Runtime (Sec)	Y or N	= Total Query Runtime (Sec) * Credits Per Second	= U: (S or (E
2XL	32	0.0088	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	= (Query Runtime (Min) * 60) + Query Runtime (Sec)	Y or N	= Total Query Runtime (Sec) * Credits Per Second	= U: (S or (E
3XL	64	0.0178	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	= (Query Runtime (Min) * 60) + Query Runtime (Sec)	Y or N	= Total Query Runtime (Sec) * Credits Per Second	= U: (S or (E

4XL	128	0.0356	Enter the number of minutes that the query took to complete	Enter the number of seconds that the query took to complete	= (Query Runtime (Min) * 60) + Query Runtime (Sec)	Y or N	= Total Query Runtime (Sec) * Credits Per Second	= U: (S or (E

