BigQuery Flat-Rate and Autoscaling Hybrid Slots Calculator

*Assuming 730 hours per month and 30 days per month

Modify these values for your workload:

Min Slots (Autoscaling Baseline, these are always billed)	100
Max Slots Needed?	200
Average Slots Used?	150

Do NOT Modify Below this Row

Using Only BigQuery Autoscaling Costs

This calculator shows pricing of using autoscaling slots a percentage of the time. This value calculates a percentage of slot usage for the whole month based upon the max slots needed.

Note this differs from the calculator Google provides as it calculates based upon time usage and the baseline not just the baseline.

	10%	20%	25%	33%	50%	75%	100%	
Utilization of Autoscaled Slots								
Baseline	100	100	100	100	100	100	100	
Number of Slots Needed (Not Used in Calculation)	20	40	50	66	100	150	200	Red text means needed slot value is below baseline
Difference from Average (Not Used in Calculation)	-130	-110	-100	-84	-50	0	50	
Numbers of Slots Billed For Full Month	100	100	100	100	100	150	200	
Price per Slot/Hour	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	
Price Per Day	$144.00	$144.00	$144.00	$144.00	$144.00	$216.00	$288.00	
Price Per Month	$4,380.00	$4,380.00	$4,380.00	$4,380.00	$4,380.00	$6,570.00	$8,760.00	
Price Per Year	$52,560.00	$52,560.00	$52,560.00	$52,560.00	$52,560.00	$78,840.00	$105,120.00	

Using Flat-Rate Only Slots

This calculator shows pricing of using flat-rate only for the workload

Flat Rate Slots	200
Monthly Price Per 100 Slots	$2,000.00
Total Price Per Month	$4,000.00
Total Price Per Year	$48,000.00
Price Per Month w/ a Yearly Commit	$3,400.00
Price Per Year w/ a Yearly Commit	$40,800.00

Versus Flat Rate with Flex Slots Used to Scale

This calculator shows pricing of using flat-rate with Flex Slots to scale up for the workload over the course of a month

Note that this scenario is a "mix-and-match" of projects with flat-rate and autoscaling as slots cannot be shared between projects of different billing types even in the same reservations.

	10%	20%	25%	33%	50%	75%	100%
Utilization of Flex Slots During Month							
Baseline (Flat Rate Slots Purchased)	100	100	100	100	100	100	100
Flex Slots Purchased	200	200	200	200	200	200	200
Hours Per Month Flex Slots Used	73	146	182.5	240.9	365	547.5	730
Total Price Per Month	$2,584.00	$3,168.00	$3,460.00	$3,927.20	$4,920.00	$6,380.00	$7,840.00
Total Price Per Year	$31,008.00	$38,016.00	$41,520.00	$47,126.40	$59,040.00	$76,560.00	$94,080.00
Price Per Month w/ a Yearly Commit	$2,284.00	$2,868.00	$3,160.00	$3,627.20	$4,620.00	$6,080.00	$7,540.00
Price Per Year w/ a Yearly Commit	$27,408.00	$34,416.00	$37,920.00	$43,526.40	$55,440.00	$72,960.00	$90,480.00

Autoscaling and Flat-Rate (No Flex Slots) Hybrid Costs

This calculator shows pricing comparisons between autoscaling and flat-rate pricing for the workload over the course of a month

Note that this scenario is a "mix-and-match" of projects with flat-rate and autoscaling as slots cannot be shared between projects of different billing types even in the same reservations.

	10%	25%	50%	75%	100%
Flat Rate Percentage of Slots					
Number of Flat Rate Slots Used	100	100	100	200	200
Monthly Price Per 100 Slots	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00
Number of Baseline Slots (Autoscaling Project)	0	0	0	0	0
Avg Number of Slots Autoscaled	50	50	50	0	0
Number of Max Slots (Autoscaling Project)	100	100	100	0	0
Price per Slot/Hour	$0.06	$0.06	$0.06	$0.06	$0.06
Flat Rate Price Per Month	$2,000.00	$2,000.00	$2,000.00	$4,000.00	$4,000.00
Min Total Price Per Month	$2,000.00	$2,000.00	$2,000.00	$4,000.00	$4,000.00
Avg Total Price Per Month	$2,003.00	$2,003.00	$2,003.00	$4,000.00	$4,000.00
Max Total Price Per Month	$6,380.00	$6,380.00	$6,380.00	$4,000.00	$4,000.00
Min Total Price Per Year	$24,000.00	$24,000.00	$24,000.00	$48,000.00	$48,000.00
Avg Total Price Per Year	$24,036.00	$24,036.00	$24,036.00	$48,000.00	$48,000.00
Max Total Price Per Year	$76,560.00	$76,560.00	$76,560.00	$48,000.00	$48,000.00
Monthly Price Per 100 Slots w/ Yearly Commit	$1,700.00	$1,700.00	$1,700.00	$1,700.00	$1,700.00
Flat Rate Price Per Month w/ Yearly Commit	$1,700.00	$1,700.00	$1,700.00	$3,400.00	$3,400.00
Min Price Per Month w/ a Yearly Commit	$1,700.00	$1,700.00	$1,700.00	$3,400.00	$3,400.00
Avg Price Per Month w/ a Yearly Commit	$1,703.00	$1,703.00	$1,703.00	$3,400.00	$3,400.00
Max Price Per Month w/ a Yearly Commit	$6,080.00	$6,080.00	$6,080.00	$3,400.00	$3,400.00
Min Price Per Year w/ a Yearly Commit	$20,400.00	$20,400.00	$20,400.00	$40,800.00	$40,800.00
Avg Price Per Year w/ a Yearly Commit	$20,436.00	$20,436.00	$20,436.00	$40,800.00	$40,800.00
Max Price Per Year w/ a Yearly Commit	$72,960.00	$72,960.00	$72,960.00	$40,800.00	$40,800.00

BigQuery Autoscaling Public Preview and On-Demand Cost Per Job

Modify these values:						
Job Length (in seconds)	60					
Slots Used by Job	1200					
Bytes Scanned	1000	GB				
Autoscaling Cost	**$12.00**					
On-Demand Cost	**$5.00**					
Flex Slot Cost	**$8.00**					

Price Rates

List price is per slot/hour.	
Autoscaling Public Preview Price	$0.06
Flex Slot (per hour for 100 slots)	$4
Flex Slot (per second per slot)	$0.00011
On-Demand Scan Price (per TB)	$5

Job

A job is an action that runs on BigQuery to perform work such as querying, loading data, copying data, etc. The most common type of job is a query and the two are used quite often in lieu of each other.

Slot

The basic compute construct used in BigQuery to do work for a job. Think of this as a "mini-virtual machine" that joins with many others to perform the actual work for a job.

Reservation

A construct that reserves a set of slots to be utilized for zero or more projects that are added to it.

Commitment

A fixed number of slots that are reserved for a committed duration of time, usually one month or one year, in exchange for a cheaper price.

Admin Project

A project that is designated as the "manager" of BigQuery reservations and commitments

Generally one organization will have a single (or a select few) of these to allow a "single pane-of-glass" for managing the BigQuery resources of the organization.

For flat-rate and autoscaling projects the reservation billing SKUs across the organization will be associated with this project.

Flex Slots

Slots that can be added to a reservation for a short term burst in slot counts. Note they are billed by the second with a minimum billing period of 60 seconds.

Idle Slot

A slot that is currently not being utilized in a job.

Workloads

A workload is a set of jobs that are run inside of a single project.

Slot/Hour

The basic billing metric for BigQuery Autoscaling projects. It is defined as a single slot being utilized in a job for one hour.

Autoscaling Slots

New construct that scales the number of slots up from a baseline slots value to a maximum slots value as needed for a running workload.

Baseline Slots

The minimum amount of slots kept "hot" and active in a BigQuery Autoscaling project. These will be utilized first before autoscaling occurs and are billed as long as the reservation is active.