

Comparing Basic with default configuration vs None under different system settings

Summary of results:

- 1) None outperforms Basic in a uniform distribution of insert-only operations that includes multiple split events
- 2) Basic outperforms None in a mixed workload with zipfian distribution
- 3) None is slightly better than Basic in read-only zipfian workload
- 4) not using mslab improves performance in zipfian distribution workloads and has a negative effect with insert-only uniform workload
- 5) g1gc underperforms in all cases; this could be due to lack of tuning

It is important to note that each configuration was tested once, each of these runs can be an outlier - a good or bad outlier

		2.0 default (cms, mslab, CCM 10% active, 5 segments)		no-mslab (CAM)		no-mslab g1gc	
		BASIC	NONE	BASIC	NONE	BASIC	NONE
insert 25M rows* 10 fields*100B =25GB uniform distribution (sequential hashed write all values no pre-split 8GB heap	overall run-time	2,095,333	1,835,468	2,350,357	2,505,268	2,452,062	2,684,244
	overall throughput	11,931	13,620	10,636	9,978	10,195	9,313
	insert average latency	995	874	1,115	1,195	1,169	1,280
	insert min latency	433	432	406	456	450	459
	insert max latency	68,550,655	1,071,103	88,604,671	68,550,655	69,074,943	68,681,727
	insert 95th percentile latency	1,154	1,177	1,150	1,285	1,287	1,387
	insert 99th percentile latency	1,385	1,400	1,430	1,533	1,612	1,690
workload a 50% read 50% write zipfian distribution 25M operations read all values write single value	overall run-time	2,515,696	3,209,361	2,461,106	2,415,550	3,097,416	3,008,346
	overall throughput	9,937	7,789	10,158	10,349	8,071	8,310
	read average latency	1,569	2,163	1,558	1,476	1,937	1,841
	read min latency	311	316	273	279	336	307
	read max latency	2,527,231	3,532,799	2,467,839	4,036,607	857,599	477,183
	read 95th percentile latency	2,287	3,619	2,327	2,291	2,887	2,791
	read 99th percentile latency	3,315	5,527	3,277	3,319	4,383	4,299
	write average latency	829	903	787	824	1,021	1,031
	write min latency	343	361	357	357	389	395
	write max latency	2,527,231	3,530,751	2,465,791	4,032,511	192,639	195,967
	write 95th percentile latency	1,022	1,147	999	1,027	1,290	1,299
	write 99th percentile latency	1,384	1,568	1,383	1,370	1,734	1,703
workload c read-only zipfian distribution 25M operations read all values	overall run-time	3,490,378	3,441,121	3,379,112	3,223,859	4,061,444	4,057,356
	overall throughput	7,162	7,265	7,398	7,754	6,155	6,161
	read average latency	1,668	1,644	1,615	1,541	1,941	1,940
	read min latency	290	289	279	267	294	298
	read max latency	266,495	3,409,919	252,031	4,399,103	168,191	165,247
	read 95th percentile latency	2,377	2,291	2,361	2,413	2,911	2,875
	read 99th percentile latency	3,343	3,133	3,241	3,379	4,371	4,435