MapR-DB Tablet consistency Check

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This post assumes you have /abizer table created and its empty for us to now use below utility to load the table.

1) /opt/mapr/server/tools/loadtest -mode put -numfamilies 1 -numcols 8 -numrows 115450 -table /abizer

```
23:44:31   0 secs   47391 rows   47391 rows/s   0ms latency   74ms maxLatency
23:44:32   1 secs   69275 rows   21884 rows/s   0ms latency   62ms maxLatency
23:44:33   2 secs   85854 rows   16579 rows/s   1ms latency   332ms maxLatency
23:44:34   3 secs   91451 rows    5597 rows/s   3ms latency   326ms maxLatency
23:44:35   4 secs   99718 rows    8267 rows/s   2ms latency   370ms maxLatency
23:44:36   5 secs  104277 rows    4559 rows/s   4ms latency   665ms maxLatency
23:44:37   6 secs  106115 rows    1838 rows/s  11ms latency   161ms maxLatency
23:44:38   7 secs  115450 rows    9335 rows/s   5ms latency   343ms maxLatency
Overall Rate 14425.84 rows/s, Latency 1ms
```

2) Now check the size and other attributes of table

```
maprcli table info -path /abizer -json
{
"timestamp":1481356005057,
"timeofday":"2016-12-09 11:46:45.057 GMT-0800",
"status":"OK",
"total":4,
"data":[
 {
 "path":"/abizer",
 "numregions":4,
 "totallogicalsize":866525184,
 "totalphysicalsize":538484736,
 "totalcopypendingsize":261562368,
 "totalrows":173733,
 "totalnumberofspills":522,
 "totalnumberofsegments":219,
 "autosplit":true,
 "bulkload":false,
 "insertionorder":true,
 "tabletype":"binary",
 "regionsizemb":4096,
 "audit":false,
 "maxvalueszinmemindex":100,
 "adminaccessperm":"u:root",
 "createrenamefamilyperm":"u:root",
 "bulkloadperm":"u:root",
 "packperm":"u:root",
 "deletefamilyperm":"u:root",
 "replperm":"u:root",
 "splitmergeperm":"u:root",
 "defaultappendperm":"u:root",
 "defaultcompressionperm":"u:root",
 "defaultmemoryperm":"u:root",
 "defaultreadperm":"u:root",
 "defaultversionperm":"u:root",
 "defaultwriteperm":"u:root",
 "uuid":"315a20f5-ad00-3638-3229-03afb04b5800"
 }
 ]
}
```

3) Now since we know there are 4 regions lets check details of 4 regions (Regions also called Tablet) in the table with respective details.

```
maprcli table region list -path /abizer -json
 {
 "timestamp":1481356069293,
 "timeofday":"2016-12-09 11:47:49.293 GMT-0800",
 "status":"OK",
 "total":4,
 "data":[
 {
 "primarymfs":"node10.maprlab.local:5660",
 "secondarymfs":"",
 "startkey":"-INFINITY",
 "endkey":"user3051486366437214287",
 "lastheartbeat":0,
 "fid":"2248.32.131418",
 "logicalsize":215515136,
 "physicalsize":133914624,
 "copypendingsize":127434752,
 "numberofrows":42943,
 "numberofrowswithdelete":0,
```

```
     "numberofspills":147,
     "numberofsegments":52
  },
  {
     "primarymfs":"node10.maprlab.local:5660",
     "secondarymfs":"",
     "startkey":"user3051486366437214287",
     "endkey":"user5105987298073629634",
     "lastheartbeat":0,
     "fid":"2247.32.131310",
     "logicalsize":216645632,
     "physicalsize":134545408,
     "copypendingsize":0,
     "numberofrows":43089,
     "numberofrowswithdelete":0,
     "numberofspills":149,
     "numberofsegments":53
  },
  {
     "primarymfs":"node10.maprlab.local:5660",
     "secondarymfs":"",
     "startkey":"user5105987298073629634",
     "endkey":"user720538676648464684",
     "lastheartbeat":0,
     "fid":"2251.32.131262",
     "logicalsize":217849856,
     "physicalsize":135897088,
     "copypendingsize":0,
     "numberofrows":44198,
     "numberofrowswithdelete":0,
     "numberofspills":112,
     "numberofsegments":56
  },
  {
     "primarymfs":"node10.maprlab.local:5660",
     "secondarymfs":"",
     "startkey":"user720538676648464684",
     "endkey":"INFINITY",
     "lastheartbeat":0,
     "fid":"2250.32.131186",
     "logicalsize":216514560,
     "physicalsize":134127616,
     "copypendingsize":134127616,
     "numberofrows":43503,
     "numberofrowswithdelete":0,
     "numberofspills":114,
     "numberofsegments":58
  }
  ]
}
```

4) To get Info/details of local tablets per node alternatively can also be viewed by mrconfig commands.

/opt/mapr/server/mrconfig dbinfo tablets

```
---------------------
|From Instance 5660::|
---------------------
tablet 2250.32.131186 nref 0 npartitions 1 logicalMB 206 physicalMB 127 rows 43503 splitState None attrAutoSplit 1 tabletSplitThreshSizeMB 6144 partitionSplitT
updateError 0
tablet 2251.32.131262 nref 0 npartitions 1 logicalMB 207 physicalMB 129 rows 44198 splitState None attrAutoSplit 1 tabletSplitThreshSizeMB 6144 partitionSplitT
updateError 0
tablet 2247.32.131310 nref 0 npartitions 2 logicalMB 206 physicalMB 128 rows 43089 splitState None attrAutoSplit 1 tabletSplitThreshSizeMB 6144 partitionSplitT
updateError 0
tablet 2248.32.131418 nref 0 npartitions 2 logicalMB 205 physicalMB 127 rows 42943 splitState None attrAutoSplit 1 tabletSplitThreshSizeMB 6144 partitionSplitT
updateError 0
```

5) Lets say we believe "2251.32.131262" fid has some issues and we want to review the stats of the fid in question, below command can give the info needed.

```
[root@node10 ~]# maprcli debugdb statTablet -fid 2251.32.131262 -json
{
  "timestamp":1481356575116,
  "timeofday":"2016-12-09 11:56:15.116 GMT-0800",
  "status":"OK",
  "total":1,
  "data":[
  {
     "numPhysicalBlocks":16589,
     "numLogicalBlocks":26593,
     "numRows":44198,
     "numRowsWithDelete":0,
     "numRemoteBlocks":0,
     "numSpills":112,
     "numSegments":56
  }
```

 ]

}

6) To check the consistency of the tablet we can run below command which check and reports details related to tablet. The startkey and endkey needs to be from ou
/abizer -json" for the region/Tablet in question.

 If this fails for any reason we need to check /opt/mapr/logs/mfs.log-5 on the master node for the tablet and see if we see the error reported to debug further but norm
see clean output as below.

[root@node10 ~]# maprcli debugdb checkTablet -fid 2251.32.131262 -tracefile /tmp/tablet-2251.32.131262 -startkey 'user5105987298073629634' -endkey 'user720!

TabletRangeCheck done

```
[root@node10 ~]# cat /tmp/tablet-2251.32.131262
Tablet 2251.32.131262
Segmap 2251.607.132412
spill 2251.266.131730 parent 2251.265.131728 idx 0 size 2048000
keymap 2251.266.131730 parent 2251.265.131728 idx 0 offset 12 len 31471
cf 2251.266.131730 parent 2251.265.131728 idx 0 family 1 offset 524288 len 2110718
cf 2251.266.131730 parent 2251.265.131728 idx 0 family 2 offset 2686976 len 1048712
Spillmap 2251.265.131728 parent 2251.607.132412
spill 2251.390.131978 parent 2251.383.131964 idx 0 size 2088960
keymap 2251.390.131978 parent 2251.383.131964 idx 0 offset 12 len 32489
cf 2251.390.131978 parent 2251.383.131964 idx 0 family 1 offset 524288 len 2185207
cf 2251.390.131978 parent 2251.383.131964 idx 0 family 2 offset 2752512 len 1050456
Spillmap 2251.383.131964 parent 2251.607.132412
spill 2251.546.132290 parent 2251.383.131964 idx 1 size 1474560
keymap 2251.546.132290 parent 2251.383.131964 idx 1 offset 12 len 19507
cf 2251.546.132290 parent 2251.383.131964 idx 1 family 1 offset 524288 len 1138369
cf 2251.546.132290 parent 2251.383.131964 idx 1 family 2 offset 1703936 len 1138798
[root@node10 ~]#
```

Above file proves everything is fine with the tablet and there are no inconsistencies found.

Posted by Abizer Adenwala at 9:47 AM   G+