

5.13

只遍历数据：

db遍历rows, parse 遍历unit

```
3
(base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py db
db use time : 0.08040618896484375
(base) nvidia@nvidia:~/caofangyu/sqlite$ echo 3 | sudo tee /proc/sys/vm/drop_caches
3
(base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py parse
parse use time : 0.22032856941223145
(base) nvidia@nvidia:~/caofangyu/sqlite$
```

只进行seek：

```
base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py db
b use time : 0.08304691314697266
base) nvidia@nvidia:~/caofangyu/sqlite$ echo 3 | sudo tee /proc/sys/vm/drop_caches
3
base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py parse
parse use time : 0.2737588882446289
base) nvidia@nvidia:~/caofangyu/sqlite$
```

进行到f.read():

```
3
(base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py db
db use time : 3.466994047164917
(base) nvidia@nvidia:~/caofangyu/sqlite$ echo 3 | sudo tee /proc/sys/vm/drop_caches
3
(base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py parse
parse use time : 3.8028042316436768
(base) nvidia@nvidia:~/caofangyu/sqlite$
```

正常解析：

```
(base) nvidia@nvidia:~/caofangyu/sqlite$ vim xunhuan.py
(base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py db
db use time : 3.6961023807525635
(base) nvidia@nvidia:~/caofangyu/sqlite$ echo 3 | sudo tee /proc/sys/vm/drop_caches      ^C
(base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py parse^C
(base) nvidia@nvidia:~/caofangyu/sqlite$ echo 3 | sudo tee /proc/sys/vm/drop_caches
3
(base) nvidia@nvidia:~/caofangyu/sqlite$ python xunhuan.py parse
parse use time : 3.992767333984375
(base) nvidia@nvidia:~/caofangyu/sqlite$
```

arm3测试sqlite性能影响

test_sql:

22.7% - 24%

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
2323	zhengtu	20	0	45.049g	303716	45676	S	39.5	0.9	0:08.22	play_bag
8006	zhengtu	20	0	1534872	21124	5212	S	23.6	0.1	0:03.01	record_bag
2260	zhengtu	20	0	20144	10236	3748	R	0.3	0.0	0:00.30	top
1	root	20	0	3656	2664	2376	S	0.0	0.0	0:00.04	entrypoint.sh
123	root	20	0	10416	2320	1600	S	0.0	0.0	0:00.00	sshd
140	syslog	20	0	150340	3320	2804	S	0.0	0.0	0:00.37	rsyslogd
154	root	20	0	7932	3240	2780	S	0.0	0.0	0:00.00	sudo
155	zhengtu	20	0	7016	3116	2548	S	0.0	0.0	0:00.02	bash
180	zhengtu	20	0	11396	6408	3616	S	0.0	0.0	0:05.49	zsh
768	zhengtu	20	0	13.565g	2.917g	19312	S	0.0	9.4	8:57.72	java
1757	zhengtu	20	0	10748	5988	3704	S	0.0	0.0	0:01.51	zsh
2127	zhengtu	20	0	10736	5888	3616	S	0.0	0.0	0:01.42	zsh
2308	zhengtu	20	0	18592	10036	3960	S	0.0	0.0	0:00.02	bash
7981	zhengtu	20	0	18588	11072	3928	S	0.0	0.0	0:00.03	bash
13707	zhengtu	20	0	10984	6300	3896	S	0.0	0.0	0:01.69	zsh

只存储localization:

19.6%左右，存在向下跳变，有时候降到9%，play_bag也一起降

不存sqlite：（使用master：

5f15268321fd005650b79e357dd8e3566a30b96c）

18%-20% 性能与只存储localization时接近

添加配置文件后：

存储的数据类型1

(REMOTE_CONTROL, DRIVING_RECORD, TAKE_OVER_DRIVING_RECORD , PLANNING_INFO, LOCALIZATION, MONITOR)

结果

18%-20%左右。

```
-> % top | grep record_bag
9179 zhengtu 20 0 1533852 20212 4704 S 20.0 0.1 0:01.83 record_bag
9179 zhengtu 20 0 1534876 21284 4704 S 20.3 0.1 0:02.44 record_bag
9179 zhengtu 20 0 1539996 26784 4704 S 18.3 0.1 0:02.99 record_bag
9179 zhengtu 20 0 1539996 26876 4704 S 19.6 0.1 0:03.58 record_bag
9179 zhengtu 20 0 1539996 27000 4704 S 19.3 0.1 0:04.16 record_bag
9179 zhengtu 20 0 1539996 27184 4704 S 19.6 0.1 0:04.75 record_bag
9179 zhengtu 20 0 1539996 27216 4704 S 19.6 0.1 0:05.34 record_bag
9179 zhengtu 20 0 1551260 37988 4704 S 18.9 0.1 0:05.91 record_bag
9179 zhengtu 20 0 1551260 38200 4704 S 18.3 0.1 0:06.46 record_bag
9179 zhengtu 20 0 1551260 38260 4704 S 8.6 0.1 0:06.72 record_bag
9179 zhengtu 20 0 1551260 39296 5528 S 10.3 0.1 0:07.03 record_bag
9179 zhengtu 20 0 1551260 39360 5528 S 20.3 0.1 0:07.64 record_bag
9179 zhengtu 20 0 1551260 39428 5528 S 19.3 0.1 0:08.22 record_bag
9179 zhengtu 20 0 1551260 39428 5528 S 18.9 0.1 0:08.79 record_bag
9179 zhengtu 20 0 1551260 39452 5528 S 18.3 0.1 0:09.34 record_bag
9179 zhengtu 20 0 1551260 39468 5528 S 19.0 0.1 0:09.91 record_bag
9179 zhengtu 20 0 1551260 39468 5528 S 18.6 0.1 0:10.47 record_bag
9179 zhengtu 20 0 1551260 39488 5528 S 18.9 0.1 0:11.04 record_bag
9179 zhengtu 20 0 1551260 39496 5528 S 18.9 0.1 0:11.61 record_bag
9179 zhengtu 20 0 1551260 39496 5528 S 18.6 0.1 0:12.17 record_bag
9179 zhengtu 20 0 1551260 39500 5528 S 18.3 0.1 0:12.72 record_bag
9179 zhengtu 20 0 1551260 39556 5528 S 18.6 0.1 0:13.28 record_bag
9179 zhengtu 20 0 1572764 60164 5528 S 17.3 0.2 0:13.80 record_bag
9179 zhengtu 20 0 1572764 60168 5528 S 18.9 0.2 0:14.37 record_bag
9179 zhengtu 20 0 1572764 60196 5528 S 18.3 0.2 0:14.92 record_bag
9179 zhengtu 20 0 1572764 60388 5528 S 18.6 0.2 0:15.48 record_bag
9179 zhengtu 20 0 1572764 60584 5528 S 18.9 0.2 0:16.05 record_bag
9179 zhengtu 20 0 1572764 60620 5528 S 18.9 0.2 0:16.62 record_bag
9179 zhengtu 20 0 1572764 60680 5528 S 17.6 0.2 0:17.15 record_bag
9179 zhengtu 20 0 1572764 60680 5528 S 8.6 0.2 0:17.41 record_bag
9179 zhengtu 20 0 1572764 60692 5528 S 11.3 0.2 0:17.75 record_bag
9179 zhengtu 20 0 1572764 60716 5528 S 19.7 0.2 0:18.34 record_bag
9179 zhengtu 20 0 1572764 60748 5528 S 18.9 0.2 0:18.91 record_bag
9179 zhengtu 20 0 1572764 60748 5528 S 18.6 0.2 0:19.47 record_bag
9179 zhengtu 20 0 1572764 60768 5528 S 18.6 0.2 0:20.03 record_bag
9179 zhengtu 20 0 1572764 60780 5528 S 18.9 0.2 0:20.60 record_bag
9179 zhengtu 20 0 1572764 60780 5528 S 18.9 0.2 0:21.17 record_bag
9179 zhengtu 20 0 1572764 60780 5528 S 19.6 0.2 0:21.76 record_bag
9179 zhengtu 20 0 1572764 60780 5528 S 19.0 0.2 0:22.33 record_bag
9179 zhengtu 20 0 1572764 60780 5528 S 18.9 0.2 0:22.90 record_bag
```

删除一些数据量大的数据

环境：arm3 使用bag: data/bag/howo38_2022_04_22_08_50_11_13.msg

删除的数据类型：COMPRESSED_CAMERA_HEAD_LEFT_PROTO,
COMPRESSED_CAMERA_HEAD_RIGHT_PROTO,LIDAR_PACKET_MAIN,
LIDAR_PACKET_HEAD_MID,LIDAR_PACKET_HEAD_RIGHT,LIDAR_PACKET
_TAIL_MID,LIDAR_PACKET_TOP_MID

依据：

```
GNSS_RAW_DATA: 31msgsg, 0.00007MB
GNSS_INS: 5674msgsg, 1.43MB
VISION_LANE: 600msgsg, 48.8MB
LIDAR_OBSTACLES: 518msgsg, 1.55MB
COMPRESSED_CAMERA_HEAD_LEFT_PROTO: 600msgsg, 355MB
COMPRESSED_CAMERA_HEAD_RIGHT_PROTO: 600msgsg, 369MB
LIDAR_PACKET_MAIN: 537msgsg, 194MB
LIDAR_PACKET_HEAD_MID: 538msgsg, 195MB
MESSAGE_SERVICE_STATUS: 1080msgsg, 2.51MB
TRAILER_DETECTION: 3660msgsg, 0.712MB
MODULE_STATUS: 801msgsg, 0.0637MB
LIDAR_PACKET_HEAD_RIGHT: 538msgsg, 195MB
LIDAR_PACKET_TAIL_MID: 538msgsg, 97.3MB
REMOTE_CONTROL: 55msgsg, 0.00551MB
TASK_STATE: 516msgsg, 0.0231MB
CRANE_DETECTION: 540msgsg, 1.67MB
LIDAR_PACKET_TOP_MID: 537msgsg, 97.1MB
REMOTE_ENVIRONMENT: 582msgsg, 3.52MB
CLIMATE: 1msgsg, 3.15e-05MB
RELAY_COMMAND: 1msgsg, 4.48e-05MB
ANTENNA_EXECUTION_INFO: 61msgsg, 0.00382MB
PLANNING_INFO: 516msgsg, 0.301MB
DRIVING_RECORD: 5msgsg, 0.000458MB
ANTENNA_HANDLE_CONTROL: 60msgsg, 0.00401MB
ANTI_FATIGUE: 60msgsg, 0.00195MB
EVENT_INFO: 172msgsg, 0.0369MB
V2I_TX: 516msgsg, 1.05MB
V2I_RX: 296msgsg, 2.82MB
SYNC_TIME_GAP: 600msgsg, 0.0275MB
ACTIVE_SAFETY_TRAJECTORY: 593msgsg, 65.4MB
PROCESS_STATUS: 1124msgsg, 0.255MB
```

结果

22%-24%

27693	zhengtu	20	0	1622944	108840	5616	S	22.6	0.3	0:30.78	record_bag
27693	zhengtu	20	0	1622944	108840	5616	S	22.9	0.3	0:31.47	record_bag
27693	zhengtu	20	0	1622944	108840	5616	S	23.6	0.3	0:32.18	record_bag
27693	zhengtu	20	0	1622944	108840	5616	S	23.6	0.3	0:32.89	record_bag
27693	zhengtu	20	0	1622944	108840	5616	S	23.3	0.3	0:33.59	record_bag
27693	zhengtu	20	0	1622944	108840	5616	S	15.0	0.3	0:34.04	record_bag
27693	zhengtu	20	0	1622944	108968	5616	S	9.0	0.3	0:34.31	record_bag
27693	zhengtu	20	0	1622944	109088	5616	S	20.0	0.3	0:34.91	record_bag
27693	zhengtu	20	0	1622944	109092	5616	S	23.3	0.3	0:35.61	record_bag
27693	zhengtu	20	0	1622944	109092	5616	S	23.6	0.3	0:36.32	record_bag
27693	zhengtu	20	0	1622944	109096	5616	S	23.6	0.3	0:37.03	record_bag
27693	zhengtu	20	0	1622944	109096	5616	S	22.9	0.3	0:37.72	record_bag
27693	zhengtu	20	0	1622944	109104	5616	S	23.9	0.3	0:38.44	record_bag
27693	zhengtu	20	0	1622944	109104	5616	S	24.3	0.3	0:39.17	record_bag
27693	zhengtu	20	0	1622944	109104	5616	S	23.9	0.3	0:39.89	record_bag
27693	zhengtu	20	0	1622944	109104	5616	S	22.6	0.3	0:40.57	record_bag
27693	zhengtu	20	0	1622944	109104	5616	S	22.9	0.3	0:41.26	record_bag
27693	zhengtu	20	0	1622944	109104	5616	S	22.6	0.3	0:41.94	record_bag
27693	zhengtu	20	0	1622944	109104	5616	S	23.3	0.3	0:42.64	record_bag
27693	zhengtu	20	0	1622944	109112	5616	S	21.6	0.3	0:43.29	record_bag
27693	zhengtu	20	0	1622944	109112	5616	S	23.7	0.3	0:44.00	record_bag
27693	zhengtu	20	0	1622944	109112	5616	S	23.3	0.3	0:44.70	record_bag
27693	zhengtu	20	0	1622944	109112	5616	S	23.6	0.3	0:45.41	record_bag
27693	zhengtu	20	0	1622944	109112	5616	S	23.3	0.3	0:46.11	record_bag
27693	zhengtu	20	0	1622944	109116	5616	S	23.3	0.3	0:46.81	record_bag
27693	zhengtu	20	0	1622944	109124	5616	S	14.6	0.3	0:47.25	record_bag
27693	zhengtu	20	0	1622944	109124	5616	S	11.6	0.3	0:47.60	record_bag
27693	zhengtu	20	0	1622944	109124	5616	S	20.6	0.3	0:48.22	record_bag
27693	zhengtu	20	0	1622944	109176	5616	S	19.3	0.3	0:48.80	record_bag
27693	zhengtu	20	0	1622944	109220	5616	S	24.3	0.3	0:49.53	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	23.3	0.3	0:50.23	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	22.9	0.3	0:50.92	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	23.6	0.3	0:51.63	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	24.6	0.3	0:52.37	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	23.9	0.3	0:53.09	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	23.3	0.3	0:53.79	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	23.4	0.3	0:54.01	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	22.6	0.3	0:54.69	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	22.9	0.3	0:55.38	record_bag
27693	zhengtu	20	0	1622944	109224	5616	S	22.7	0.3	0:56.06	record_bag

存储的数据类型2

保存的数据类型：(1的基础上增加event_info)

(REMOTE_CONTROL, DRIVING_RECORD, TAKE_OVER_DRIVING_RECORD, PLANNING_INFO, LOCALIZATION, MONITOR, EVENT_INFO)

结果

18%-20%左右，增加一个event_info影响不大。

exp grep record bag										
8019	zhengtu	20	0	1099468	18268	5428	S	18.8	0.1	0:01.69 record
8019	zhengtu	20	0	1099468	19228	5428	S	20.3	0.1	0:02.30 record
8019	zhengtu	20	0	1101516	20428	5428	S	19.6	0.1	0:02.89 record
8019	zhengtu	20	0	1102540	21540	5428	S	18.9	0.1	0:03.46 record
8019	zhengtu	20	0	1103564	22756	5428	S	19.3	0.1	0:04.04 record
8019	zhengtu	20	0	1104588	24220	5428	S	19.6	0.1	0:04.63 record
8019	zhengtu	20	0	1104588	24256	5428	S	19.3	0.1	0:05.21 record
8019	zhengtu	20	0	1114832	25828	5428	S	19.3	0.1	0:05.79 record
8019	zhengtu	20	0	1114832	25976	5428	S	18.7	0.1	0:06.35 record
8019	zhengtu	20	0	1130192	40712	5428	S	18.6	0.1	0:06.91 record
8019	zhengtu	20	0	1130192	40740	5428	S	18.9	0.1	0:07.48 record
8019	zhengtu	20	0	1130192	41012	5428	S	19.3	0.1	0:08.06 record
8019	zhengtu	20	0	1130192	41028	5428	S	19.3	0.1	0:08.64 record
8019	zhengtu	20	0	1130192	41172	5428	S	19.3	0.1	0:09.22 record
8019	zhengtu	20	0	1130192	41188	5428	S	20.6	0.1	0:09.84 record
8019	zhengtu	20	0	1130192	41676	5428	S	19.3	0.1	0:10.42 record
8019	zhengtu	20	0	1130192	41704	5428	S	17.3	0.1	0:10.94 record
8019	zhengtu	20	0	1130192	41804	5428	S	9.3	0.1	0:11.22 record
8019	zhengtu	20	0	1130192	41812	5428	S	11.6	0.1	0:11.37 record
8019	zhengtu	20	0	1130192	41812	5428	S	16.6	0.1	0:11.87 record
8019	zhengtu	20	0	1130192	41960	5428	S	18.9	0.1	0:12.44 record
8019	zhengtu	20	0	1130192	41960	5428	S	20.2	0.1	0:12.81 record
8019	zhengtu	20	0	1130192	41960	5428	S	19.3	0.1	0:13.39 record
8019	zhengtu	20	0	1130192	41960	5428	S	19.6	0.1	0:13.98 record
8019	zhengtu	20	0	1130192	41960	5428	S	19.3	0.1	0:14.56 record
8019	zhengtu	20	0	1130192	41980	5428	S	18.9	0.1	0:15.13 record
8019	zhengtu	20	0	1130192	42000	5428	S	19.3	0.1	0:15.71 record
8019	zhengtu	20	0	1130192	42044	5428	S	19.3	0.1	0:16.29 record
8019	zhengtu	20	0	1130192	42044	5428	S	18.3	0.1	0:16.70 record
8019	zhengtu	20	0	1130192	42044	5428	S	19.3	0.1	0:17.28 record
8019	zhengtu	20	0	1130192	42060	5428	S	19.0	0.1	0:17.85 record
8019	zhengtu	20	0	1135312	46308	5428	S	17.9	0.1	0:18.39 record
8019	zhengtu	20	0	1135312	46360	5428	S	19.3	0.1	0:18.97 record
8019	zhengtu	20	0	1135312	46368	5428	S	19.3	0.1	0:19.55 record
8019	zhengtu	20	0	1135312	46716	5428	S	18.3	0.1	0:20.10 record
8019	zhengtu	20	0	1135312	46752	5428	S	20.3	0.1	0:20.71 record
8019	zhengtu	20	0	1135312	47140	5428	S	19.3	0.1	0:21.29 record
8019	zhengtu	20	0	1135312	47148	5428	S	19.3	0.1	0:21.87 record
8019	zhengtu	20	0	1135312	47232	5428	S	9.0	0.1	0:22.14 record
8019	zhengtu	20	0	1135312	47408	5492	S	11.0	0.1	0:22.47 record

删除一些数据数量多的数据

环境：arm3 使用bag: data/bag/howo38_2022_04_22_08_50_11_13.msg

删除的数据类型：所有次数大于1000的数据

CHASSIS, CHASSIS_DETAIL, CONTROL_COMMAND, CONTROL_DEBUG,
CONTROL_STATUS, GNSS_INS, MESSAGE_SERVICE_STATUS,
TRAILER_DETECTION,PROCESS_STATUS,
MONITOR_RESULT,COMMUNICATION_DETECT,COMMUNICATION_DET
ECT_RESULT,RAW_IMU

```
CHASSIS: 5130msgs, 0.967MB
CHASSIS_DETAIL: 5107msgs, 2.29MB
CONTROL_COMMAND: 1840msgs, 0.154MB
CONTROL_DEBUG: 2528msgs, 4.01MB
LOCALIZATION: 5718msgs, 1.06MB
MONITOR: 98msgs, 0.012MB
FUSION_MAP: 516msgs, 21.6MB
PLANNING_TRAJECTORY: 515msgs, 57MB
CONTROL_STATUS: 2560msgs, 0.329MB
SYSTEM_STATUS: 60msgs, 0.0741MB
RAW_IMU: 5809msgs, 0.609MB
EPOCH_OBSERVATION: 60msgs, 0.115MB
GNSS_BEST_POSE: 300msgs, 0.028MB
GNSS_RAW_DATA: 5msgs, 0.00567MB
GNSS_INS: 5674msgs, 1.43MB
VISION_LANE: 600msgs, 48.8MB
LIDAR_OBSTACLES: 518msgs, 1.55MB
COMPRESSED_CAMERA_HEAD_LEFT_PROTO: 600msgs, 355MB
COMPRESSED_CAMERA_HEAD_RIGHT_PROTO: 600msgs, 369MB
LIDAR_PACKET_MAIN: 537msgs, 194MB
LIDAR_PACKET_HEAD_MID: 538msgs, 195MB
MESSAGE_SERVICE_STATUS: 1080msgs, 2.51MB
TRAILER_DETECTION: 3660msgs, 0.712MB
MODULE_STATUS: 801msgs, 0.0637MB
LIDAR_PACKET_HEAD_RIGHT: 538msgs, 195MB
LIDAR_PACKET_TAIL_MID: 538msgs, 97.3MB
REMOTE_CONTROL: 55msgs, 0.00551MB
TASK_STATE: 516msgs, 0.0231MB
CRANE_DETECTION: 540msgs, 1.67MB
LIDAR_PACKET_TOP_MID: 537msgs, 97.1MB
REMOTE_ENVIRONMENT: 582msgs, 3.52MB
CLIMATE: 1msgs, 3.15e-05MB
RELAY_COMMAND: 1msgs, 4.48e-05MB
ANTENNA_EXECUTION_INFO: 61msgs, 0.00282MB
```

结果

18%-22%

```
> % top | grep record_bag
9084 zhengtu 20 0 1530784 22848 5456 S 18.8 0.1 0:00.80 record_bag
9084 zhengtu 20 0 1532832 24012 5456 S 22.6 0.1 0:01.48 record_bag
9084 zhengtu 20 0 1534880 26008 5456 S 20.9 0.1 0:02.11 record_bag
9084 zhengtu 20 0 1534880 26676 5456 S 20.6 0.1 0:02.73 record_bag
9084 zhengtu 20 0 1535904 27344 5456 S 19.6 0.1 0:03.32 record_bag
9084 zhengtu 20 0 1536928 28424 5456 S 20.3 0.1 0:03.93 record_bag
9084 zhengtu 20 0 1537952 29536 5456 S 19.9 0.1 0:04.53 record_bag
9084 zhengtu 20 0 1538976 30888 5456 S 20.9 0.1 0:05.16 record_bag
9084 zhengtu 20 0 1540000 31716 5456 S 20.3 0.1 0:05.77 record_bag
9084 zhengtu 20 0 1540000 31756 5456 S 20.0 0.1 0:06.37 record_bag
9084 zhengtu 20 0 1557408 48040 5456 S 13.0 0.1 0:06.76 record_bag
9084 zhengtu 20 0 1557408 48048 5456 S 9.6 0.1 0:07.05 record_bag
9084 zhengtu 20 0 1557408 48236 5456 S 17.6 0.1 0:07.58 record_bag
9084 zhengtu 20 0 1557408 48704 5456 S 19.9 0.1 0:08.18 record_bag
9084 zhengtu 20 0 1557408 48728 5456 S 19.6 0.1 0:08.77 record_bag
9084 zhengtu 20 0 1557408 48732 5456 S 20.3 0.1 0:09.38 record_bag
9084 zhengtu 20 0 1557408 49168 5456 S 20.6 0.2 0:10.00 record_bag
9084 zhengtu 20 0 1557408 49204 5456 S 19.9 0.2 0:10.60 record_bag
9084 zhengtu 20 0 1557408 49212 5456 S 20.7 0.2 0:11.22 record_bag
9084 zhengtu 20 0 1557408 49236 5456 S 20.3 0.2 0:11.83 record_bag
9084 zhengtu 20 0 1557408 49260 5456 S 19.6 0.2 0:12.42 record_bag
9084 zhengtu 20 0 1557408 49260 5456 S 19.9 0.2 0:13.02 record_bag
9084 zhengtu 20 0 1557408 49260 5456 S 19.6 0.2 0:13.61 record_bag
9084 zhengtu 20 0 1557408 49260 5456 S 19.3 0.2 0:14.19 record_bag
9084 zhengtu 20 0 1557408 49260 5456 S 19.9 0.2 0:14.79 record_bag
9084 zhengtu 20 0 1557408 49260 5456 S 19.6 0.2 0:15.38 record_bag
9084 zhengtu 20 0 1557408 49276 5456 S 20.3 0.2 0:15.99 record_bag
9084 zhengtu 20 0 1557408 49276 5456 S 20.9 0.2 0:16.62 record_bag
9084 zhengtu 20 0 1557408 49464 5456 S 20.6 0.2 0:17.24 record_bag
9084 zhengtu 20 0 1568672 59004 5456 S 18.3 0.2 0:17.79 record_bag
9084 zhengtu 20 0 1585056 76376 5456 S 13.3 0.2 0:18.19 record_bag
9084 zhengtu 20 0 1585056 76376 5456 S 10.0 0.2 0:18.49 record_bag
9084 zhengtu 20 0 1585056 76396 5456 S 17.9 0.2 0:19.03 record_bag
9084 zhengtu 20 0 1585056 76468 5456 S 20.9 0.2 0:19.66 record_bag
9084 zhengtu 20 0 1585056 76636 5456 S 20.3 0.2 0:20.27 record_bag
9084 zhengtu 20 0 1585056 76660 5456 S 20.3 0.2 0:20.88 record_bag
9084 zhengtu 20 0 1585056 76888 5456 S 20.3 0.2 0:21.49 record_bag
9084 zhengtu 20 0 1585056 76928 5456 S 19.9 0.2 0:22.09 record_bag
9084 zhengtu 20 0 1585056 76932 5456 S 21.6 0.2 0:22.74 record_bag
```

提交的配置

环境：arm3 使用bag: data/bag/howo38_2022_04_22_08_50_11_13.msg
(此bag没有TAKE_OVER_DRIVING_RECORD消息，其他的都有)

保存的数据类型：第二行为2的基础上新增的数据类型

REMOTE_CONTROL, DRIVING_RECORD, TAKE_OVER_DRIVING_RECORD
, PLANNING_INFO, LOCALIZATION, MONITOR, EVENT_INFO,

TRAILER_DETECTION, FUSION_MAP, REMOTE_ENVIRONMENT,
TOS_COMMAND

结果

18%-20%

30890	zhengtu	20	0	1424208	74100	5464	S	18.9	0.2	0:30.93	record_bag
30890	zhengtu	20	0	1424208	74104	5464	S	19.6	0.2	0:31.52	record_bag
30890	zhengtu	20	0	1424208	74108	5464	S	20.3	0.2	0:32.13	record_bag
30890	zhengtu	20	0	1424208	74112	5464	S	18.4	0.2	0:32.34	record_bag
30890	zhengtu	20	0	1424208	74112	5464	S	0.0	0.2	0:32.34	record_bag
30890	zhengtu	20	0	1424208	74112	5464	S	18.9	0.2	0:32.91	record_bag
30890	zhengtu	20	0	1424208	74112	5464	S	18.6	0.2	0:33.25	record_bag
30890	zhengtu	20	0	1424208	74112	5464	S	18.7	0.2	0:33.81	record_bag
30890	zhengtu	20	0	1424208	74112	5464	S	17.9	0.2	0:34.35	record_bag
30890	zhengtu	20	0	1424208	74112	5464	S	18.3	0.2	0:34.90	record_bag
30890	zhengtu	20	0	1424208	74132	5464	S	18.6	0.2	0:35.46	record_bag
30890	zhengtu	20	0	1424208	74144	5464	S	17.9	0.2	0:36.00	record_bag
30890	zhengtu	20	0	1424208	74152	5464	S	19.3	0.2	0:36.58	record_bag
30890	zhengtu	20	0	1424208	74152	5464	S	18.3	0.2	0:37.13	record_bag
30890	zhengtu	20	0	1424208	74152	5464	S	19.3	0.2	0:37.71	record_bag
30890	zhengtu	20	0	1424208	74152	5464	S	18.6	0.2	0:38.27	record_bag
30890	zhengtu	20	0	1424208	74152	5464	S	16.9	0.2	0:38.78	record_bag
30890	zhengtu	20	0	1424208	74152	5464	S	8.7	0.2	0:39.04	record_bag
30890	zhengtu	20	0	1424208	74152	5464	S	12.6	0.2	0:39.42	record_bag
30890	zhengtu	20	0	1424208	74176	5464	S	19.9	0.2	0:40.02	record_bag
30890	zhengtu	20	0	1424208	74176	5464	S	18.9	0.2	0:40.59	record_bag
30890	zhengtu	20	0	1424208	74176	5464	S	18.7	0.2	0:41.15	record_bag
30890	zhengtu	20	0	1424208	74176	5464	S	19.3	0.2	0:41.73	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	18.9	0.2	0:42.30	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	19.9	0.2	0:42.90	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	18.6	0.2	0:43.46	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	18.3	0.2	0:44.01	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	18.9	0.2	0:44.58	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	18.3	0.2	0:45.13	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	17.9	0.2	0:45.67	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	19.0	0.2	0:46.24	record_bag
30890	zhengtu	20	0	1424208	74180	5464	S	18.9	0.2	0:46.81	record_bag
30890	zhengtu	20	0	1424208	74188	5464	S	18.6	0.2	0:47.37	record_bag
30890	zhengtu	20	0	1424208	74188	5464	S	18.9	0.2	0:47.94	record_bag
30890	zhengtu	20	0	1424208	74188	5464	S	19.3	0.2	0:48.52	record_bag
30890	zhengtu	20	0	1424208	74260	5464	S	18.3	0.2	0:49.07	record_bag
30890	zhengtu	20	0	1424208	74280	5464	S	15.6	0.2	0:49.54	record_bag
30890	zhengtu	20	0	1424208	74280	5464	S	8.3	0.2	0:49.79	record_bag
30890	zhengtu	20	0	1424208	74280	5464	S	13.0	0.2	0:50.18	record_bag
30890	zhengtu	20	0	1424208	74284	5464	S	19.3	0.2	0:50.76	record_bag
30890	zhengtu	20	0	1424208	74284	5464	S	18.3	0.2	0:51.31	record_bag
30890	zhengtu	20	0	1424208	74296	5464	S	18.6	0.2	0:51.87	record_bag
30890	zhengtu	20	0	1424208	74300	5464	S	18.6	0.2	0:52.43	record_bag
30890	zhengtu	20	0	1424208	74340	5464	S	19.3	0.2	0:53.01	record_bag
30890	zhengtu	20	0	1424208	74340	5464	S	18.9	0.2	0:53.58	record_bag
30890	zhengtu	20	0	1424208	74340	5464	S	18.7	0.2	0:54.14	record_bag
30890	zhengtu	20	0	1424208	74340	5464	S	18.3	0.2	0:54.69	record_bag
30890	zhengtu	20	0	1424208	74340	5464	S	18.6	0.2	0:55.25	record_bag
30890	zhengtu	20	0	1424208	74340	5464	S	18.9	0.2	0:55.82	record_bag

#