

빅데이터 플랫폼 아키텍처 설계

빅데이터 입출력구조 설계하기

스마트카 상태 정보 External 테이블 생성 및 조회

스마트카 상태정보 External 테이블
생성

```
1 create external table if not exists SmartCar_Status_Info (  
2 reg_date string,  
3 car_number string,  
4 tire_fl string,  
5 tire_fr string,  
6 tire_bl string,  
7 tire_br string,  
8 light_fl string,  
9 light_fr string,  
10 light_bl string,  
11 light_br string,  
12 engine string,  
13 break string,  
14 battery string  
15 )  
16 partitioned by( wrk_date string )  
17 row format delimited  
18 fields terminated by ','  
19 stored as textfile  
20 location '/pilot/collect/car-batch-log/'
```

스마트카 상태정보 External 테이블
조회

```
1 SELECT * FROM smartcar_status_info;
```

스마트카 상태정보 External 테이블 조회결과

쿼리 기록	저장된 쿼리	결과 (200+)				
#	smartcar_status_info.reg_date	smartcar_status_info.car_number	smartcar_status_info.tire_fl	smartcar_status_info.tire_fr	smartcar_status_info.tire_bl	smartcar
1	20220413000000	X0001	72	88	96	91
2	20220413000004	X0001	80	94	89	92
3	20220413000008	X0001	86	82	72	97
4	20220413000012	X0001	70	87	73	92
5	20220413000016	X0001	83	88	98	91
6	20220413000020	X0001	98	100	81	81
7	20220413000024	X0001	91	99	97	94
8	20220413000028	X0001	71	83	90	84
9	20220413000032	X0001	98	98	74	96
10	20220413000036	X0001	90	75	84	98
11	20220413000040	X0001	94	78	91	77
12	20220413000044	X0001	96	87	81	96
13	20220413000048	X0001	73	100	95	97
14	20220413000052	X0001	100	99	86	92
15	20220413000056	X0001	80	90	70	85
16	20220413000100	X0001	91	88	79	88
17	20220413000104	X0001	83	76	89	96
18	20220413000108	X0001	99	95	75	98
19	20220413000112	X0001	76	78	88	91
20	20220413000116	X0001	97	92	88	89
21	20220413000120	X0001	92	70	86	98
22	20220413000124	X0001	86	87	76	99
23	20220413000128	X0001	96	85	70	89
24	20220413000132	X0001	83	76	98	97
25	20220413000136	X0001	80	72	90	91

스마트카 운행 정보 External 테이블 생성 및 조회

스마트카 운행정보 External 테이블 생성

```
1 CREATE EXTERNAL TABLE SmartCar_Drive_Info(  
2   r_key string,  
3   r_date string,  
4   car_number string,  
5   speed_pedal string,  
6   break_pedal string,  
7   steer_angle string,  
8   direct_light string,  
9   speed string,  
10  area_number string)  
11 STORED BY 'org.apache.hadoop.hive.hbase.HBaseStorageHandler'  
12 WITH SERDEPROPERTIES (  
13   "hbase.columns.mapping" = "cf1:Date,  
14     cf1:carNum,  
15     cf1:AccStep,  
16     cf1:BrkStep,  
17     cf1:WheelStep,  
18     cf1:DirLightStep,  
19     cf1:Speed,  
20     cf1:AreaNum")  
21 TBLPROPERTIES(  
22   "hbase.table.name" = "DriverCarInfo");
```

스마트카 운행정보 External 테이블 조회

```
1 SELECT * FROM smartcar_drive_info;
```

스마트카 운행정보 External 테이블 조회결과

쿼리 기록

저장된 쿼리

결과 (100+)

		smartcar_drive_info.r_key	smartcar_drive_info.r_date	smartcar_drive_info.car_number	smartcar_drive_info.speed_pedal	smartcar_drive_info.break_pedal	sr
<div><div></div><div></div><div></div></div>	1	1649837732441-KrFTqbQsCu-0	20220413000504	NULL	1	0	R
	2	1649837732467-KrFTqbQsCu-1	20220413000306	NULL	0	0	L
	3	1649837732473-KrFTqbQsCu-2	20220413000306	NULL	1	0	F
	4	1649837732473-KrFTqbQsCu-3	20220413000324	NULL	0	3	F
	5	1649837732473-KrFTqbQsCu-4	20220413000450	NULL	1	0	F
	6	1649837732473-KrFTqbQsCu-5	20220413000256	NULL	3	0	F
	7	1649837732474-KrFTqbQsCu-6	20220413000302	NULL	1	0	R
	8	1649837732481-KrFTqbQsCu-7	20220413000426	NULL	0	2	R
	9	1649837732481-KrFTqbQsCu-8	20220413000438	NULL	3	0	F
	10	1649837732481-KrFTqbQsCu-9	20220413000300	NULL	0	2	F
	11	1649837896413-KrFTqbQsCu-10	20220413000000	NULL	0	0	F
	12	1649837896413-KrFTqbQsCu-11	20220413000000	NULL	2	0	F
	13	1649837896413-KrFTqbQsCu-12	20220413000000	NULL	4	0	F
	14	1649837896414-KrFTqbQsCu-13	20220413000002	NULL	0	1	F
	15	1649837896414-KrFTqbQsCu-14	20220413000000	NULL	3	0	R
	16	1649837896414-KrFTqbQsCu-15	20220413000002	NULL	4	0	F
	17	1649837896414-KrFTqbQsCu-16	20220413000000	NULL	3	0	F
	18	1649837896414-KrFTqbQsCu-17	20220413000002	NULL	1	0	F
	19	1649837896414-KrFTqbQsCu-18	20220413000000	NULL	3	0	F
	20	1649837896414-KrFTqbQsCu-19	20220413000000	NULL	3	0	F
	21	1649837896414-KrFTqbQsCu-20	20220413000004	NULL	5	0	F
	22	1649837896414-KrFTqbQsCu-21	20220413000002	NULL	0	1	R
	23	1649837896414-KrFTqbQsCu-22	20220413000004	NULL	0	0	F
	24	1649837896415-KrFTqbQsCu-23	20220413000000	NULL	3	0	L

스마트카 상태 정보 조회

```
1 SELECT wrk_date, car_number, count(*) from smartcar_status_info
2 GROUP BY car_number, wrk_date ORDER BY wrk_date, car_number;
```

위리 기록		저장된 위리	결과 (110)	
	wrk_date		car_number	_c2
1	20220413		A0005	21601
2	20220413		C0007	21601
3	20220413		D0006	21601
4	20220413		F0009	21601
5	20220413		N0003	21601
6	20220413		O0008	21601
7	20220413		T0004	21601
8	20220413		X0001	21601
9	20220413		Y0002	21601
10	20220413		Y0010	21601
11	20220414		A0002	21601
12	20220414		A0013	21601
13	20220414		A0022	21601
14	20220414		A0085	21601
15	20220414		B0009	21601
16	20220414		B0044	21601
17	20220414		B0064	21601
18	20220414		C0031	21601
19	20220414		C0057	21601
20	20220414		C0059	21601
21	20220414		C0062	21601
22	20220414		C0068	21601
23	20220414		C0069	21601
24	20220414		C0093	21601
25	20220414		D0001	21601

스마트카 상태정보 car_number, wrk_date 컬럼 그룹핑 하여
wrk_date, car_number 컬럼에 대해 오름차순 정렬 후
wrk_date, car_number 컬럼 및 모든 카운트 조회.



일자별 차량별 총 건수 출력

스마트카 운행 정보 조회

```
1 SELECT substring(r_date, 0, 8) as `적재일`, count(*) as `건수` from smartcar_drive_info  
2 GROUP BY substring(r_date, 0, 8);
```

쿼리 기록

저장된 쿼리

결과 (2)

	적재일	건수
1	20220413	1384957
2	20220414	241367

스마트카 운행정보 r_date 컬럼 8자리까지 자른것
(연월일)을 `적재일`,
r_date 그룹핑한것 `건수`로 설정해서 총 건수 출력

적재일별 건수 출력