Parking Vacancy
Data Specification

Version 1.2

14 January, 2020

Version	Date	Description	Author
1.0	30 June, 2017	Initial Release	DPO
1.1	02 October, 2018	Add Introduction and API guide	DPO
1.2	14 January, 2020	Update the spec accordingly to the changes done by TD	DPO

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1 Introduction

The API integrates the parking vacancy data and basic car park information provided by (1) Transport Department and (2) the Energizing Kowloon East Office (EKEO). The data are open up by participating car park operators including their parking vacancy data and basic car park information, e.g. location, parking fee, opening hour, height restriction.

2 API

2.1 Get car park information and vacancy data

Get all published car parks basic information and vacancy data.

API Type: REST
HTTP Method: GET
Resource URL: https://api.data.gov.hk/v1/carpark-info-vacancy

Resource Information:

Response formats	JSON
Requires authentication	NO
Response encoding	UTF-8

Parameters:

data	Optional. Default is info. Valid values are: **info**: Basic car park information such as location, parking fee, opening hour, height restriction are returned. **vacancy**: Parking vacancy data such as vacancy type, available parking space are returned.
vehicleTypes	Optional. The type of vehicle to be included. Valid values are: **privateCar**: Private Car **LGV**: Light Goods Vehicle **HGV**: Heavy Goods Vehicle **CV**: Container Vehicle **coach**: Coach **motorCycle**: Motor Cycle
carparkIds	Optional. Comma separated IDs of carparks to be included.
extent	Optional. Carparks that are within the bounds of the rectangle are returned. Valid value is comma separated values of left longitude, bottom latitude, right longitude and top latitude of bounding rectangle.
lang	Optional. To define the display language. Default is en_US. Valid values are:

	en_US: English
	zh_TW: Traditional Chinese
	zh_CN: Simplified Chinese (zh_TW data will be returned if the car park does not have zh_CN description)

Response Code:

HTTP code	Definition
200	Success.
400	Bad Request.
500	Internal Server Error
503	The server is currently unavailable

Example Request:

https://api.data.gov.hk/v1/carpark-info-vacancy?data=vacancy&vehicleTypes=privateCar&lang=en_US

Example Response:

```
{
     "results": [{
             "park_Id": "10",
             "privateCar": [{
                     "vacancy_type": "A",
                     "vacancy": 94,
                     "lastupdate": "2018-10-02 11:06:21"
                }
             ]
        }, {
             "park_Id": "12",
             "privateCar": [{
                     "vacancy_type": "A",
                     "vacancyEV": 5,
                     "vacancyDIS": 6,
                     "vacancy": 155,
                     "lastupdate": "2018-10-02 11:01:05"
                }
             ],
```

```
                    "LGV": [{

                            "vacancy_type": "A",

                            "vacancy": 0,

                            "lastupdate": "2018-10-02 11:01:05"

                        }

                    ],

                    "HGV": [{

                            "vacancy_type": "A",

                            "vacancy": 0,

                            "lastupdate": "2018-10-02 11:01:05"

                        }

                    ],

                    "motorCycle": [{

                            "vacancy_type": "A",

                            "vacancy": 0,

                            "lastupdate": "2018-10-02 11:01:05"

                        }

                    ]

                }, {

                    "park_Id": "27",

                    "privateCar": [{

                            "vacancy_type": "A",

                            "vacancyDIS": 1,

                            "vacancy": 12,

                            "lastupdate": "2018-10-02 08:48:52"

                        }

                    ],

                    "motorCycle": [{

                            "vacancy_type": "A",

                            "vacancy": 2,

                            "lastupdate": "2018-10-02 08:48:52"

                        }

                    ]

                },

                {...},

                {...}

            ]

}
```

3 Data Dictionary

3.1 Basic Information of Car Park

Item	Field Name	Type	Mandat.	Definition
1	park_Id	String	Y	The system ID of car park.
2	name	String	Y	The name of car park.
3	nature	String	N	The nature of car park. The possible values are government or commercial.
4	carpark_Type	String	N	The type of car park. The possible values are multi-storey, off-street and metered.
5	address	Object	N	The address of car park.
5.1	unitNo	String	N	Unit No. in specified locale.
5.2	unitDescriptor	String	N	Unit Descriptor in specified locale.
5.3	floor	String	N	Floor in specified locale.
5.4	blockNo	String	N	Block No. in estates in specified locale.
5.5	blockDescriptor	String	N	Block Descriptor in specified locale.
5.6	buildingName	String	N	Building Name in specified locale.
5.7	phase	String	N	Phase in specified locale.
5.8	estateName	String	N	Estate Name in specified locale.
5.9	villageName	String	N	Village Name in specified locale.
5.10	streetName	String	N	Street Name in specified locale.
5.11	buildingNo	String	N	Building No. in specified locale.
5.12	subDistrict	String	Y	Sub-district in specified locale.
5.13	dcDestrict	String	Y	District in specified locale.
5.14	region	String	Y	Region in specified locale.
6	displayAddress	String	Y	Display address of car park.
7	district	String	N	District name.
8	latitude	Number	Y	Latitude of car park.
9	longitude	Number	Y	Longitude of car park.
10	contactNo	String	N	The telephone number of car park.
11	renditionUrls	Object	N	Renditions generated from photo uploaded by car park owner. Empty if car park doesn't have any photo.
11.1	square	String	N	Absolute URL of image rendition in 150x150 center-cropped square.
11.2	thumbnail	String	N	Absolute URL of image rendition in center-cropped rectangle with maximum 320 in width and 250 in height.
11.3	banner	String	N	Absolute URL of image rendition 300x250 center-cropped

				rectangle.
11.4	carpark_photo	String	N	Absolute URL of image of car park's main entrance.
12	website	String	N	The URL of car park website.
13	opening_status	String	N	Current Opening Status: OPEN or CLOSED

14	openingHours	[Object]	N	Array of opening hour rules. Below is an example:
				
				[
				  {
				    "periodStart":"19:00",
				    "periodEnd":"07:00",
				    "excludePublicHoliday":true,
				    "weekdays":[
				      "MON",
				      "TUE",
				      "WED",
				      "THU",
				      "FRI"
				    ]
				  },
				  {
				    "periodStart":"07:00",
				    "periodEnd":"07:00",
				    "excludePublicHoliday":false,
				    "weekdays":[
				      "SAT",
				      "SUN",
				      "PH"
				    ]
				  }
				]
				
				It means car park opens at Mon-Fri 19:00-07:00 and Sat/Sun/PH 07:00-07:00

14.1	periodStart	String	Y	Start time of the opening hour applied. Example value is "08:00".
14.2	periodEnd	String	Y	End time of the opening hour applied. Example value is "24:00".
14.3	excludePublicHoliday	Boolean	Y	Indicates whether the opening hour is applied to public holiday or not.
14.4	weekdays	[String]	Y	Indicates which week days the opening hour applied.

				The possible values are:
				1. MON
				2. TUE
				3. WED
				4. THU
				5. FRI
				6. SAT
				7. SUN
				8. PH

15	gracePeriods	[Object]	N	Array of grace period rules. Below is an example:
				
				[
				   {
				      "minutes":30,
				      "remark":"Car Park A"
				   },
				   {
				      "minutes":15,
				      "remark":"Car Park B"
				   }
				]

15.1	minutes	Number	Y	No of minutes user will park for free.
15.2	remark	String	N	Condition this grace period applies (e.g. non-resident, stage 4, etc.). For localized response, it is the remark text in specified locale.

16	heightLimits	[Object]	N	Array of height limits Below is an example.
				
				[
				   {
				      "height":3.5,
				      "remark":"Private Car/Van"
				   },
				   {
				      "height":4,
				      "remark":"Lorry"
				   }
				]

16.1	height	Number	N	Height limit in meters.
16.2	remark	String	N	Remark text.

17	facilities	[String]	N	Array of supported facilities.
				The possible values are:
				1. evCharger
				2. disabilities
				3. unloading
				4. washing
				5. valet-parking
18	paymentMethods	[String]	N	Array of supported payment methods.
				The possible values are:
				1. cash
				2. octopus
				3. EPS
				4. visa
				5. master
				6. unionpay
				7. alipay
				8. autopay-station
19	privateCar	Object	N	Placeholder of private space and rating information. If the car park doesn't contain any information related to private car, this property would not be provided in response.
				Enclosed elements include:
				space
				vacancy
				hourlyCharges
				dayNightParks
				monthlyCharges
				unloadings
				privileges
20	LGV	Object	N	Placeholder of light goods vehicle space and rating information. If the car park doesn't contain any information related to private car, this property would not be provided in response.
				Enclosed elements include:
				space
				vacancy
				hourlyCharges
				dayNightParks

				monthlyCharges
				unloadings
				privileges
21	HGV	Object	N	Placeholder of heavy goods vehicle space and rating information. If the car park doesn't contain any information related to private car, this property would not be provided in response. Enclosed elements include: space vacancy hourlyCharges dayNightParks monthlyCharges unloadings privileges
22	CV	Object	N	Placeholder of container vehicle space and rating information. If the car park doesn't contain any information related to private car, this property would not be provided in response. Enclosed elements include: space vacancy hourlyCharges dayNightParks monthlyCharges unloadings privileges
23	coach	Object	N	Placeholder of coach space and rating information. If the car park doesn't contain any information related to private car, this property would not be provided in response. Enclosed elements include: space vacancy hourlyCharges dayNightParks monthlyCharges unloadings

				privileges
24	motorCycle	Object	N	Placeholder of motor cycle space and rating information. If the car park doesn't contain any information related to private car, this property would not be provided in response. Enclosed elements include: space vacancy hourlyCharges dayNightParks monthlyCharges privileges
25	creationDate	String	N	Creation time. (YYYY-MM-DD HH:MM:SS)
26	modifiedDate	String	N	Last modified time. (YYYY-MM-DD HH:MM:SS)
27	publishedDate	String	N	Publication time. (YYYY-MM-DD HH:MM:SS)
28	lang	String	Y	The display language of the car park information. The possible values are: en_US zh_TW zh_CN
Enclosed elements for Item 19(privateCar), 20(LGV), 21(HGV), 22(CV), 23(coach) and 24(motorcycle).				
1	space	Number	Y	Total parking space for this type of vehicle including both electronic and non-electronic vehicles.
2	spaceDIS	Number	Y	Total Parking space for this electronic vehicle type assigned to disabled persons.
3	spaceEV	Number	Y	Total Parking space for this electronic vehicle type only.
4	spaceUNL	Number	Y	Total unloading space for this electronic vehicle type.
5	hourlyCharges	[Object]	N	Array of hourly charge rules.
5.1	type	String	Y	The possible values are: 1. hourly 2. half-hourly
5.2	weekdays	[String]	Y	Indicates which week days the rule applied. The possible values are: 1. MON 2. TUE

				3. WED
				4. THU
				5. FRI
				6. SAT
				7. SUN
				8. PH
5.3	excludePublicHoliday	Boolean	Y	Indicates whether the rule is applied to public holiday or not.
5.4	periodStart	String	Y	Start time of the rule applied. Example value is "08:00".
5.5	periodEnd	String	Y	End time of the rule applied. Example value is "24:00".
5.6	price	Number	Y	The rate in Hong Kong dollars.

5.7	usageThresholds	[Object]	N	Array of usage thresholds which the user is charged per usage basis. Below is an example:
				[
				   {
				    "hours":2,
				    "price":30
				   }
				]
				It means the user is charged \$30/hr in the first two hours. Starting from 3rd hour, user is charged at normal price.

5.7.1	hours	Number	Y	The usage threshold in term of hours.
5.7.2	price	Number	Y	The price that user is charged within usage threshold.
5.8	covered	String	Y	Indicates whether the parking space is covered or not. The possible values are: 1. covered 2. semi-covered 3. open-air 4. mixed
5.9	remark	String	N	Condition this rule applies (e.g. non-resident, stage 4, etc.). For localized response, it is the remark text in specified locale.
6	dayNightParks	[Object]	N	Array of day night parks rules
6.1	type	String	Y	The possible values are: 1. day-park 2. night-park 3. 6-hours-park

				4. 12-hours-park
				5. 24-hours-park
6.2	weekdays	[String]	Y	Indicates which week days the rule applied. The possible values are: 1. MON 2. TUE 3. WED 4. THU 5. FRI 6. SAT 7. SUN 8. PH
6.3	excludePublicHoliday	Boolean	Y	Indicates whether the rule is applied to public holiday or not.
6.4	periodStart	String	Y	Start time of the rule applied. Example value is "08:00".
6.5	periodEnd	String	Y	End time of the rule applied. Example value is "24:00".
6.6	validUntil	String	Y	The possible values are: 1. no-restrictions 2. same-day 3. following-day
6.7	validUntilEnd	String	N	End time until which x hours parking is valid. Example value is "24:00". For example, if the type is "12-hours-park", validUtil is "same-day" and validUntilEnd is 24:00", it means that the max charge is for each 12 hours, calculated from time of entry until 24:00 on the same day. Below is an example: [{ "type":"24-hours-park", "price":85, "validUntil":"same-day", "validUntilEnd":"24:00", "remark":null, "periodStart":"00:00", "periodEnd":"24:00", "excludePublicHoliday":true, "weekdays":[

				"MON", "TUE", "WED", "THU", "FRI"] }]
6.8	price	Number	Y	The rate in Hong Kong dollars.
6.9	covered	String	Y	Indicates whether the parking space is covered or not. The possible values are: 1. covered 2. semi-covered 3. open-air 4. mixed
6.10	remark	String	N	Condition this rule applies (e.g. non-resident, stage 4, etc.). For localized response, it is the remark text in specified locale.
7	monthlyCharges	[Object]	N	Array of monthly charge rules.
7.1	type	String	Y	The type of monthly charge plans. The possible values are: 1. monthly-park 2. monthly-day-park 3. monthly-night-park 4. bimonthly-park 5. bimonthly-day-park 6. bimonthly-night-park 7. quarterly-park 8. quarterly-day-park 9. quarterly-night-park 10. yearly-park 11. yearly-day-park 12. yearly-night-park
7.2	price	Number	Y	The rate in Hong Kong dollars.
7.3	ranges	[Object]	N	Array of time periods in which monthly charge rule applies particularly for day/night parking. Below is an example:

				``
				[
				  {
				    "weekdays":[
				    "MON",
				    "TUE",
				    "WED",
				    "THU",
				    "FRI"
				    ],
				    "excludePublicHoliday":false,
				    "periodStart":"19:00",
				    "periodEnd":"09:00"
				  },
				  {
				    "weekdays":[
				    "SAT",
				    "SUN",
				    "PH"
				    ],
				    "excludePublicHoliday":false,
				    "periodStart":"00:00",
				    "periodEnd":"24:00"
				  }
				]
				`` It means monthly charges applied to Mon-Fri 19:00-09:00, Sat/Sun/PH 24hrs.

7.3.1	weekdays	[String]	Y	Indicates which week days the rule applied. The possible values are: 1. MON 2. TUE 3. WED 4. THU 5. FRI 6. SAT 7. SUN 8. PH
7.3.2	excludePublicHoliday	Boolean	Y	Indicates whether the rule is applied to public holiday or not.

7.3.3	periodStart	String	Y	Start time of the rule applied. Example value is "08:00".
7.3.4	periodEnd	String	Y	End time of the rule applied. Example value is "24:00".
7.4	covered	String	Y	Indicates whether the parking space is covered or not. The possible values are: 1. covered 2. semi-covered 3. open-air 4. mixed
7.5	reserved	String	Y	Indicates whether the parking space is reserved or not. The possible values are: 1. reserved 2. non-reserved
7.6	remark	String	N	Condition this rule applies (e.g. non-resident, stage 4, etc.). For localized response, it is the remark text in specified locale.
8	unloadings	[Object]	N	Array of loading/unloading rules.
8.1	type	String	Y	The possible values are: 1. hourly 2. half-hourly
8.2	price	Number	Y	The rate in Hong Kong dollars.
8.3	usageThresholds	[Object]	N	Array of usage thresholds which the user is charged per usage basis. Below is an example: [{ "hours":2, "price":30 }] It means the user is charged $30/hr in the first two hours. Starting from 3rd hour, user is charged at normal price.
8.3.1	hours	Number	Y	The usage threshold in term of hours.
8.3.2	price	Number	Y	The price that user is charged within usage threshold
8.4	remark	String	N	Condition this rule applies (e.g. non-resident, stage 4, etc.). For localized response, it is the remark text in specified locale.
9	privileges	[Object]	N	Array of privilege rule objects.

9.1	weekdays	[String]	Y	Indicates which week days the rule applied. The possible values are: 1. MON 2. TUE 3. WED 4. THU 5. FRI 6. SAT 7. SUN 8. PH
9.2	excludePublicHoliday	Boolean	Y	Indicates whether the rule is applied to public holiday or not.
9.3	periodStart	String	Y	Start time of the rule applied. Example value is "08:00".
9.4	periodEnd	String	Y	End time of the rule applied. Example value is "24:00"
9.5	description	String	Y	Description of this privilege. For localized response, it is the remark text in specified locale.

3.2 Parking Vacancy Data

Item	Field Name	Type	Mandat.	Definition
1	park_Id	String	Y	The system ID of car park.
2	privateCar	[Object]	N	Placeholder of private car vacancy information. Enclosed elements include: vacancyDIS vacancyEV vacancyUNL vacancy_type vacancy lastupdate category
3	LGV	[Object]	N	Placeholder of light goods vehicle vacancy information. Enclosed elements include: vacancyDIS vacancyEV vacancyUNL vacancy_type vacancy lastupdate category
4	HGV	[Object]	N	Placeholder of heavy goods vehicle vacancy information. Enclosed elements include: vacancyDIS vacancyEV vacancyUNL vacancy_type vacancy lastupdate category
5	CV	[Object]	N	Placeholder of container vehicle vacancy information. Enclosed elements include: vacancyDIS vacancyEV vacancyUNL vacancy_type vacancy lastupdate

				category
6	coach	[Object]	N	Placeholder of coach vacancy information.
				Enclosed elements include:
				vacancyDIS
				vacancyEV
				vacancyUNL
				vacancy_type
				vacancy
				lastupdate
				category
7	motorCycle	[Object]	N	Placeholder of motor cycle vacancy information.
				Enclosed elements include:
				vacancyDIS
				vacancyEV
				vacancyUNL
				vacancy_type
				vacancy
				lastupdate
				category
Enclosed elements for Item 2(privateCar), 3(LGV), 4(HGV), 5(CV), 6(coach) and 7(motorcycle).				
1	vacancyDIS	Number	N	Available parking space for this electronic vehicle type assigned to disabled persons.
2	vacancyEV	Number	N	Available parking space for this electronic vehicle type only.
3	vacancyUNL	Number	N	Available unloading space for this electronic vehicle type.
4	vacancy_type	String	Y	A - Parking space availability with actual number.
				B - Parking space availability without actual number.
				C - Car park closed.
5	vacancy	Number	Y	Available parking space for this type of vehicle including both electronic and non-electronic vehicles.
				When Vacancy Type is A:
				● 0 means car park is full (滿); and
				● -1 means "No data provided by the car park operator (停車場經營者未能提供數據)"
				When Vacancy Type is B:
				● 0 means car park is full (滿);
				● 1 means parking space available (有車位); and
				● -1 means "No data provided by the car park operator (停車場經營者未能提供數據)".

				When Vacancy Type is C, it always returns 0 (關閉).
6	lastupdate	String	Y	Last update date from car park owner. (YYYY-MM-DD HH:MM:SS)
7	category	String	N	The possible values are: HOURLY, DAILY, MONTHLY