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API docs

Flight Status Query V3.0

An interface for dynamic flight status information retrieval in five different ways.

produced by

VariFlight

With a vision of "living on time", a
global leading aviation data intelligence
company

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This documentation is intended to provide developers with a comprehensive understanding of our API endpoints, methods, requests, and responses, enabling them to effectively access data provided by VariFlight.

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Introduction

This article describes how to use the Flight Status Query API, version 3.0.

This API is a standard flight status query interface, using UTF-8 coding method.

Through the API, you can query the global flight dynamics data by VariFlight.

Notes

Rule of removing number zero about Flight Number:

VariFlight will adopt this rule when the queried flight number have the first digit or several digit with number zero (the first two digit is airline code). For example: the flight number is CA0013, then our API will return the flight data of CA13.

Returned content:

The returned content of interface should have a URL Decoding. And the returned flight time are all local flight time.

Authentication

The interface uses both token and IP for concurrent verification.

Token generation algorithm:

In the URL, all request parameters (excluding the token) are sorted in ascending order by KEY, the parameter names are connected in lowercase with the '&' symbol, then connected with the value of the **registration code**, and then encrypted twice using MD5 (32-bit lowercase) encryption.

Registration code: Please obtain the registration code from the administrator of VariFlight. It is necessary for verification during the request process by both parties. Please be careful not to disclose it to the public.

Example (PHP):

```
ksort($data);
    foreach($data as $k=>$v){
        $strtomd5[]=$k.'='.$v;
    }
    $token= md5(md5(implode('&', $strtomd5).$appsecurity));
```

Note: \$appsecurity=registration code

API Endpoints

The base URL for all requests is:

```
http://open-al.variflight.com/api/flight?
```

The way to request: **GET**

The format of return: **JSON**

The API supports five types of queries:

1. **Flight number + Flight date** (no segment)
2. **Departure airport code & Arrival airport code + Flight date** (no flight number)
3. **Departure city code & Arrival city code + Flight date** (no flight number)
4. **Airport code + Flight date + Mark of departure and arrival** (total DEP&ARR data of a certain airport today)

5. **Airport code + Flight date + Mark of departure or arrival +Fixed time** (total DEP/ARR flights within a fixed time axis of a certain airport)

Query 1: Flight number + Flight date

Request parameters:

- `fnum` : Flight number
- `date` : Flight date (yyyy-mm-dd)
- `appid` : APPID
- `token` : Token
- `lang` : Required parameter and the value is 'en'

Example URL:

```
http://open-al.variflight.com/api/flight?appid=10821&fnum=MH611&date=2019-10-01&lang=en&token=$token
```

How to spell token:

Step1: Input parameters

```
appid=10821&fnum=MH611&date=2019-10-01&lang=en
```

Step2: Encrypted string with lower case parameters sort

```
$str= 'appid=10821&date=2019-10-01&fnum=MH611&lang=en'
```

Step3: Use Registration code

```
$appsecurity= '5d79ad869b27b'
```

Step4: Spell token

```
token=md5(md5($str.$appsecurity))
```

In this example, token= 8f292f723eaddca98c701e54dae77e42

Note: '.' symbol is the connectors in PHP

Query 2: Departure airport code & Arrival airport code + Flight date

Request parameters:

dep	: Departure airport code
arr	: Arrival airport code
date	: Flight date (yyyy-mm-dd)
appid	: APPID
token	: Token
lang	: Required parameter and the value is 'en'

Example URL:

```
http://open-al.variflight.com/api/flight?date=2019-10-01&appid=10821&dep=LHR&arr=FRA&lang=en&token=$token
```

How to spell token:

Step1: Input parameters

```
appid=10821&dep=LHR&arr=FRA&date=2019-10-01&lang=en
```

Step2: Encrypted string with lower case parameters sort

```
$str= 'appid=10821&arr=FRA&date=2019-10-01&dep=LHR&lang=en'
```

Step3: Use Registration code

```
$appsecurity= '5d79ad869b27b'
```

Step4: Spell token

```
token=md5(md5($str.$appsecurity))
```

In this example, token= 68183ad7bb835238a44d95e5021bd7a9

Note: '.' symbol is the connectors in PHP

Query 3: Departure city code & Arrival city code + Flight date

Request parameters:

- `depcity` : Departure city three-letter code
- `arrcity` : Arrival city three-letter code
- `date` : Flight date (yyyy-mm-dd)
- `appid` : APPID
- `token` : Token
- `lang` : Required parameter and the value is 'en'

Example URL:

```
http://open-al.variflight.com/api/flight?date=2019-10-01&appid=10821&depcity=LON&arrcity=FRA&lang=en&token=$token
```

How to spell token:

Step1: Input parameters

```
appid=10821&depcity=LON&arrcity=FRA&date=2019-10-01&lang=en
```

Step2: Encrypted string with lower case parameters sort

```
$str= 'appid=10821&arrcity=FRA&date=2019-10-01&depcity=LON&lang=en'
```

Step3: Use Registration code

```
$appsecurity= '5d79ad869b27b'
```

Step4: Spell token

```
token=md5(md5($str.$appsecurity))
```

In this example, token= d519fcda0bc059bdc5b71cea46a6be54

Note: '.' symbol is the connectors in PHP

Query 4: Airport code + Flight date + Departure/Arrival status

Request parameters:

- airport** : Airport code
- status** : DEP (Departure) ; ARR (Arrival)
- page** : page number, defaults to 1. (Optional parameter)
- perpage** : The number of data entries per page defaults to 20. When it exceeds 100, it defaults back to 100 (Optional parameter)
- date** : Flight date (yyyy-mm-dd)
- appid** : APPID
- token** : Token
- lang** : Required parameter and the value is 'en'

Example URL:

```
http://open-al.variflight.com/api/flight?appid=10821&airport=LHR&date=2019-10-01&status=DEP&lang=en&token=$token
```

or

```
http://open-al.variflight.com/api/flight?appid=10821&airport=LHR&date=2019-10-01&status=DEP&page=1&perpage=10&lang=en&token=$token
```

How to spell token:

Step1: Input parameters

```
appid=10821&airport=LHR&date=2019-10-01&status=DEP&lang=en
```

Step2: Encrypted string with lower case parameters sort

```
$str= 'airport=LHR&appid=10821&date=2019-10-01&lang=en&status=DEP'
```

Step3: Use Registration code

```
$appsecurity= '5d79ad869b27b'
```

Step4: Spell token

```
token=md5(md5($str.$appsecurity))
```

In the first example URL, token= 440020adbc2800274f15c61c1818cb17

In the second example URL, token= 9843dc1faa13fd586452925a6cb03826

Note: '.' symbol is the connectors in PHP

Query 5: Airport code + Flight date + Departure/Arrival status +Fixed time(total DEP/ARR flights within a fixed time axis of a certain airport)

Request parameters:

airport : Airport code

status : DEP (Departure) ; ARR (Arrival)

stratAt : Start time (hh:mm)

endAt : End time (hh:mm)

page : page number, defaults to 1. (Optional parameter)

perpage : The number of data entries per page defaults to 20. When it exceeds 100, it defaults back to 100 (Optional parameter)

date : Flight date (yyyy-mm-dd)

appid : APPID

token : Token

lang : Required parameter and the value is 'en'

Example URL:

```
http://open-al.variflight.com/api/flight?appid=10821&airport=LHR&date=2019-10-01&status=DEP&lang=en&startAt=11:00&endAt=13:00&token=$token
```

or

```
http://open-al.variflight.com/api/flight?appid=10821&airport=LHR&date=2019-10-01&status=DEP&lang=en&startAt=11:00&endAt=13:00&page=1&perpage=10&token=$token
```

How to spell token:

Step1: Input parameters

```
appid=10821&airport=LHR&date=2019-10-01&status=DEP&lang=en&startAt=11:00&endAt=13:00
```

Step2: Encrypted string with lower case parameters sort

```
$str='airport=LHR&appid=1082&1date=2019-10-01&endAt=13:00&lang=en&startAt=11:00&status=DEP'
```

Step3: Use Registration code

```
$appsecurity= '5d79ad869b27b'
```

Step4: Spell token

```
token=md5(md5($str.$appsecurity))
```

In the first example URL, token= a6ecabd39cfbfc6a284ea886ec47315e

In the second example URL, token= 91fa1f38512df23185d4e1a23c3c7c76

Note: '.' symbol is the connectors in PHP

Error Responses

Return parameter	Description
1	Wait for auditing
2	The visiting ip have not been joined in White List
3	Lack of parameters or parameter identification failed
4	No data permissions
10	No data
0	User does not exist
11	Unknown error

Return Parameter Examples

This section presents two examples of return parameters

Example 1: Failed return

```
{
  error_code: 3,
  error: " Lack of parameter or parameter identification failed "
}
```

Example 2: Successful return

```
[
  {
    "FlightNo": "CZ3161",
```

```
"fservice": "J",
"FlightCompany": "China Southern Airlines ",
"FlightDepcode": "CAN",
"FlightArrcode": "PEK",
"FlightDeptimePlanDate": "2015-12-01 20:00:00",
"FlightArrtimePlanDate": "2015-12-01 23:10:00",
"FlightDeptimeReadyDate": "2015-12-01 20:01:00",
"FlightArrtimeReadyDate": "2015-12-02 02:20:00",
"FlightDeptimeDate": "2015-12-01 20:20:00",
"FlightArrtimeDate": "",
"FlightIngateTime": "",
"FlightOutgateTime": "",
"CheckinTable": "C28,D28,E28",
"BoardGate": "B223",
"BaggageID": "11",
"BoardState": "",
"FlightState": "diversion",
"FlightHTerminal": "B",
"FlightTerminal": "T2",
"org_timezone": "28800",
"dst_timezone": "28800",
"ShareFlightNo": "",
"StopFlag": "0",
"ShareFlag": "0",
"LegFlag": "0",
"FlightDep": "Guangzhou",
"FlightArr": "Beijing",
"OntimeRate": "30.00%",
```

```

"alternate_info": [
  {
    "AlternateStatus": "arrival ",
    "AlternateDepCity": "Hohhot BaiTa",
    "AlternateArrCity": "Beijing Capital ",
    "AlternateDepAirport": "HET",
    "AlternateArrAirport": "PEK",
    "AlternateDeptimePlan": "2015-12-01 00:00:00",
    "AlternateArrtimePlan": "2015-12-01 00:00:00",
    "AlternateDeptime": "2015-12-01 01:25:00",
    "AlternateArrtime": "2015-12-01 02:16:00",
    "AlternateDepTimezone": "28800",
    "AlternateArrTimezone": "28800"
  }
],
"deptel": "020-36066999",
"arrtel": "010-96158",
"airlinetel": "95539",
"generic": "Airbus A321-200",
"FlightYear": 7.3,
"FlightWaitData": 0,
"FlightDepAirport": "Guangzhou BaiYun ",
"FlightArrAirport": "Beijing Capital ",
"DepWeather": "cloudyIII75I23/22",
"ArrWeather": "foggyIII313I2/-3",
"FlightDuration": "",
"distance": "1876"
"DepAirportLat": "24.543064",

```

```

"DepAirportLon": "118.13418",
"DepTerminalLat": "24.550356",
"DepTerminalLon": "118.153719",
"ArrAirportLat": "40.078537",
"ArrAirportLon": "116.5871",
"ArrTerminalLat": "40.086705",
"ArrTerminalLon": "116.600726",
"StopAirportCode": "HET",
"StopCity": "Hohhot"
},
{
"FlightNo": "CZ3161",
"fservice": "J",
"FlightCompany": "China Southern Airlines ",
"FlightDepcode": "CAN",
"FlightArrcode": "HET",
"FlightDeptimePlanDate": "2015-12-01 20:00:00",
"FlightArrtimePlanDate": "2015-12-02 00:00:00",
"FlightDeptimeReadyDate": "",
"FlightArrtimeReadyDate": "2015-12-02 00:00:00",
"FlightDeptimeDate": "2015-12-01 20:20:00",
"FlightArrtimeDate": "2015-12-01 23:58:00",
"FlightIngateTime": "",
"FlightOutgateTime": "",
"CheckinTable": "C、D、E island",
"BoardGate": "",
"BaggageID": "",
"BoardState": ""

```

```
"FlightState": "arrival",
"FlightHTerminal": "",
"FlightTerminal": "",
"org_timezone": "28800",
"dst_timezone": "28800",
"ShareFlightNo": "",
"StopFlag": "0",
"ShareFlag": "0",
"LegFlag": "1",
"FlightDep": "Guangzhou",
"FlightArr": "Hohhot",
"OntimeRate": "",
"deptel": "020-36066999",
"arrtel": "0471-96777",
"airlinetel": "95539",
"generic": "Airbus A321-200",
"FlightYear": 7.3,
"FlightWaitData": 0,
"FlightDepAirport": "Guangzhou Baiyun ",
"FlightArrAirport": "Hohhot BaiTa ",
"DepWeather": "cloudyIII75I23/22",
"ArrWeather": "light snowIII11I-2/-12",
"FlightDuration": "",
"distance": "2080"
"DepAirportLat": "24.543064",
"DepAirportLon": "118.13418",
"DepTerminalLat": "24.550356",
"DepTerminalLon": "118.153719",
```

```

"ArrAirportLat": "40.078537",
"ArrAirportLon": "116.5871",
"ArrTerminalLat": "40.086705",
"ArrTerminalLon": "116.600726",
"StopAirportCode": "",
"StopCity": ""

},
{
  "FlightNo": "CZ3161",
  "fservice": "J",
  "FlightCompany": "China Southern Airlines ",
  "FlightDepcode": "HET",
  "FlightArrcode": "PEK",
  "FlightDeptimePlanDate": "2015-12-01 00:00:00",
  "FlightArrtimePlanDate": "2015-12-01 00:00:00",
  "FlightDeptimeReadyDate": "2015-12-01 01:05:00",
  "FlightArrtimeReadyDate": "2015-12-01 02:20:00",
  "FlightDeptimeDate": "2015-12-01 01:25:00",
  "FlightArrtimeDate": "2015-12-01 02:16:00",
  "FlightIngateTime": "",
  "FlightOutgateTime": "",
  "CheckinTable": "C",
  "BoardGate": "",
  "BaggageID": "",
  "BoardState": "",
  "FlightState": "arrival",
  "FlightHTerminal": "",

```

```
"FlightTerminal": "T2",  
"org_timezone": "28800",  
"dst_timezone": "28800",  
"ShareFlightNo": "",  
"StopFlag": "0",  
"ShareFlag": "0",  
"LegFlag": "1",  
"FlightDep": "Hohhot",  
"FlightArr": "Beijing",  
"OntimeRate": "",  
"deptel": "0471-96777",  
"arrtel": "010-96158",  
"airlinetel": "95539",  
"generic": "Airbus A321-200",  
"FlightYear": "7.3",  
"FlightWaitData": 0,  
"FlightDepAirport": "Hohhot BaiTa",  
"FlightArrAirport": "Beijing Capital",  
"DepWeather": "light snowIII11-2/-12",  
"ArrWeather": "foggyIII31312/-3",  
"FlightDuration": "",  
"distance": "444"  
"DepAirportLat": "24.543064",  
"DepAirportLon": "118.13418",  
"DepTerminalLat": "24.550356",  
"DepTerminalLon": "118.153719",  
"ArrAirportLat": "40.078537",  
"ArrAirportLon": "116.5871",
```

```

    "ArrTerminalLat": "40.086705",
    "ArrTerminalLon": "116.600726",
    "StopAirportCode": "",
    "StopCity": ""
  }
]

```

Return Parameter Details

Return parameter	Description
FlightNo	Flight number
fservice	Type of aircraft (J: passenger; F: cargo)
FlightCompany	Airline name
FlightDepcode	Departure airport code
FlightArrcode	Arrival airport code
FlightDeptimePlanDate	Scheduled departure time (yyyy-mm-dd hh:mm:ss)
FlightArrtimePlanDate	Scheduled arrival time (yyyy-mm-dd hh:mm:ss)
FlightDeptimeReadyDate	Estimated departure time (yyyy-mm-dd hh:mm:ss)
FlightArrtimeReadyDate	Estimated arrival time (yyyy-mm-dd hh:mm:ss)
FlightDeptimeDate	Actual departure time (yyyy-mm-dd hh:mm:ss)
FlightArrtimeDate	Actual arrival time (yyyy-mm-dd hh:mm:ss)

FlightIngateTime	On-block actual time (yyyy-mm-dd hh:mm:ss)
FlightOutgateTime	Off-block actual time (yyyy-mm-dd hh:mm:ss)
VeryZhunReadyDeptime Date	Variflight estimated departure time (yyyy-mm-dd hh:mm:ss)
VeryZhunReadyArrtimeD ate	Variflight estimated arrival time (yyyy-mm-dd hh:mm:ss)
CheckinTable	Check-in counter
BoardGate	Boarding gate
BaggageID	Baggage turntable
BoardState	Boarding status (check-in, check-in closed, boarding, last call, gate closed)
FlightState	Flight status (schedule/delay/cancel/diversion/return/departure/arri val/diverted flight departure/diverted flight cancel/diverted flight arrival/returned flight departure/returned flight cancel/returned flight arrival/cancel in advance/circling/circled/climbing/cruising/descending/ landing)
FlightHTerminal	Terminal-departure
FlightTerminal	Terminal-arrival
dst_timezone	Time zone of destination
org_timezone	Time zone of origin
ShareFlightNo	Code share flight number (actual operating flight number)
stopFlag	Stop flag (0: non-stop, 1: one stop, n: number of stops)

shareFlag	Code share flag (0: non-share; 1: share)
LegFlag	Segment flag (0: plan segment; 1: diverted segment; 2: returned segment)
FlightDep	Departure city name
FlightArr	Arrival city name
OntimeRate	Historical punctuality rate
deptel	Telephone number of departure airport
arrtel	Telephone number of arrival airport
airlinetel	Telephone number of airline
generic	Aircraft type
FlightYear	Aircraft age
FlightWaitData	Flight queue data
FlightDepAirport	Departure airport name
FlightArrAirport	Arrival airport name
FlightCancelTime	Flight cancel time (update time)
FillFlightNo	Substituted flight number (only for cancel flight)
alternate_info	Diversion information
AlternateStatus	Diverted flight status
AlternateDepCity	Diverted departure airport name
AlternateArrCity	Diverted arrival airport name
AlternateDepAirport	Diverted departure airport code
AlternateArrAirport	Diverted arrival airport code
AlternateDeptimePlan	Diverted scheduled departure time (yyyy-mm-dd hh-mm-ss)
AlternateArrtimePlan	Diverted scheduled arrival time (yyyy-mm-dd hh-mm-ss)

AlternateDeptime	Diverted actual departure time (yyyy-mm-dd hh-mm-ss)
AlternateArrtime	Diverted actual arrival time (yyyy-mm-dd hh-mm-ss)
AlternateDepTimezone	Diverted departure timezone
AlternateArrTimezone	Diverted arrival timezone
DepWeather	Weather of departure airport (weather, visibility, wind, PM2.5, temperature)
ArrWeather	Weather of arrival airport (weather, visibility, wind, PM2.5, temperature)
FlightDuration	Duration of flight
distance	Flight distance
DepAirportLat	Latitude of departure airport
DepAirportLon	Longitude of departure airport
DepTerminalLat	Latitude of departure airport terminal
DepTerminalLon	Longitude of departure airport terminal
ArrAirportLat	Latitude of arrival airport
ArrAirportLon	Longitude of arrival airport
ArrTerminalLat	Latitude of arrival airport terminal
ArrTerminalLon	Longitude of arrival airport terminal
StopAirportCode	Stopover airport code
StopCity	Stopover city name