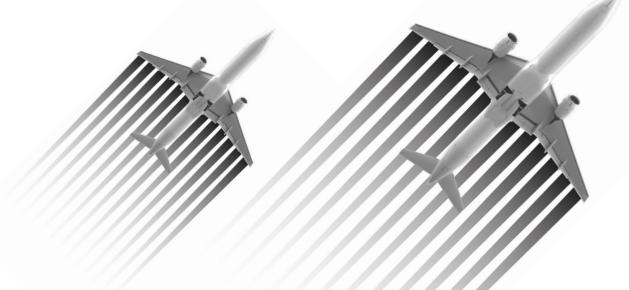


OAG HISTORICAL DAILY FLIGHTS REPORTS

Integration Guide



MAKE SMARTER MOVES

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1. Introduction

OAG Historical Daily Flight Reports are reports for a selected set of past flights filtered by geography, airlines, airports and/or other criteria. They are used for analysing on-time performance and trends on key statistics such as time aloft, and other events. The reports are delivered as flat files for customers to easily import into a spreadsheet or database application for review and/or incorporating into high-level analyses with other corporate data.

The Historical Daily Flight Reports include a variety of information about each flight, such as:

Flight Number: airline code, flight number

Departure/Arrival Airports: departure and arrival airport codes, country codes, terminals, gates, baggage assignments

Flight Times: scheduled, estimated and actual departure and arrival gate and runway times; or flight cancelled identifier

Additional Flight Characteristics: tail number, equipment type, service type, regional or code-share operator, sequence number for multi-leg flight, previous flight number

The Historical Daily Flight Reports are based on OAG's extensive real-time flight information, which contains data from hundreds of sources, globally. Such sources include schedule data, airline direct feeds, in-air position feeds or radar data, and airport feeds. Data from all of these sources is normalized and aggregated to provide customers with the most accurate picture of each flight on any given day.

2. Report Configuration

The reports are configurable to suit the varying needs of our customers. They may be configured in the following ways:

- Specifying the scope of flights
- Specifying which data elements to include
- Requesting additional custom calculated fields

Scope of Flights

The flights in the report may be filtered in the following manner:

- 1. By country (Flights whose scheduled departure airport or scheduled arrival airport are in the target country).
- 2. Include only flights for specified airlines.
- 3. Include only flights for specified airports.
- 4. Include/exclude marketing code-share flights (if exclude then only the operating flights will be in the report)
- 5. Include/exclude Unscheduled flights (e.g. flights that fly a final leg to the scheduled destination after being diverted to an alternate airport, last-minute flights added on the day of departure)
- 6. [US and Canada only] Include/exclude Private Aviation flights (flights for privately owned/operated aircrafts)



Data Fields

The data elements that may be included in a Historical Daily Flight Report are listed in Section 6, under Glossary of Terms. Please speak with your OAG contact about any custom calculated fields you would like added.

Customers work with the OAG implementation team to provide their configuration requirements.

3. Report Delivery

The Historical Daily Flight Reports are tab-delimited, ASCII-encoded files, compressed in gzip format (see http://www.gzip.org/zlib/rfc-gzip.html for details). Please see instructions below for opening them.

Customers access the daily report file through OAG FTP site.

Instructions to open output file:

- 1. There are many open source utility programs to open gzip files, such as http://www.7-zip.org/. Use one of these to unzip the file.
- 2. Once the gzip is unzipped, the customer shall save it as a text file.
- 3. Open Excel program on your computer. Click File > Open > Open Text File.
- 4. Follow the Excel Wizard steps to import the data into Excel.

4. Time Period Covered

Some customers request Historical Flight Reports for a specific time period in the past (e.g. all of 2016 or first 3 months of 2019), other customers request reports for each day moving forward from today, and yet others request both. OAG can service all these requests.

When customers request reports that span multiple days/months in the past, a report for each of the days in the time period is put on the FTP site at once, so if there are 60 days in the time period, then 60 daily reports will be posted. When customers request reports for each day moving forward from today, a report is put on the FTP site each day for the previous day's flights.

All reports will remain available on the FTP site for at least 90 days after they are created.

5. Sample Report

Below is a sample report broken into 2 sections in this document only, for ease of reading. In the real report there is one record per flight leg and all its associated field values.

Please note: This sample shows a limited number of fields (as the columns). There are more fields that can be selected as part of a customer's configuration. Please see Section 6 for the list of possible standard fields to select from. Also, as stated above, customer calculated fields may be added.

| FlightId | AirlineCode | FlightNumber | SchedDepApt | SchedArrApt | SchedDepUtc | SchedArrUtc | SchedDepLocal | SchedArrLocal |
|------------------------|-------------|--------------|-------------|-------------|-----------------|-----------------|-----------------|-----------------|
| B61001BUFJFK1904270103 | B6 | 1001 | BUF | JFK | 4/27/2019 1:03 | 4/27/2019 2:36 | 4/26/2019 21:03 | 4/26/2019 22:36 |
| B61002FLLJFK1904270155 | B6 | 1002 | FLL | JFK | 4/27/2019 1:55 | 4/27/2019 4:42 | 4/26/2019 21:55 | 4/27/2019 0:42 |
| B61004HAVMCO1904261410 | B6 | 1004 | HAV | MCO | 4/26/2019 14:10 | 4/26/2019 15:38 | 4/26/2019 10:10 | 4/26/2019 11:38 |
| B61006LGBSEA1904270010 | B6 | 1006 | LGB | SEA | 4/27/2019 0:10 | 4/27/2019 2:54 | 4/26/2019 17:10 | 4/26/2019 19:54 |
| B61007SEALGB1904261300 | B6 | 1007 | SEA | LGB | 4/26/2019 13:00 | 4/26/2019 15:40 | 4/26/2019 6:00 | 4/26/2019 8:40 |
| B61009BOSNAS1904261402 | B6 | 1009 | BOS | NAS | 4/26/2019 14:02 | 4/26/2019 17:26 | 4/26/2019 10:02 | 4/26/2019 13:26 |
| B6100LAXFLL1904270520 | B6 | 100 | LAX | FLL | 4/27/2019 5:20 | 4/27/2019 10:19 | 4/26/2019 22:20 | 4/27/2019 6:19 |
| B61010SDQJFK1904260849 | B6 | 1010 | SDQ | JFK | 4/26/2019 8:49 | 4/26/2019 12:52 | 4/26/2019 4:49 | 4/26/2019 8:52 |
| B61011BOSORD1904262144 | B6 | 1011 | BOS | ORD | 4/26/2019 21:44 | 4/27/2019 0:46 | 4/26/2019 17:44 | 4/26/2019 19:46 |
| B61012ORDBOS1904261345 | B6 | 1012 | ORD | BOS | 4/26/2019 13:45 | 4/26/2019 16:03 | 4/26/2019 8:45 | 4/26/2019 12:03 |
| B61013JFKLGB1904262125 | B6 | 1013 | JFK | LGB | 4/26/2019 21:25 | 4/27/2019 3:59 | 4/26/2019 17:25 | 4/26/2019 20:59 |
| B61017JAXFLL1904261100 | B6 | 1017 | JAX | FLL | 4/26/2019 11:00 | 4/26/2019 12:15 | 4/26/2019 7:00 | 4/26/2019 8:15 |

| DepTerminal | DepGate | ArrTerminal | ArrGate | Baggage | ServiceType | AircraftType | Unscheduled | DepCountryCode | ArrCountryCode | TailNumber |
|-------------|---------|-------------|---------|---------|-------------|--------------|-------------|----------------|----------------|------------|
| | 7 | 5 | 7 | 2 | J | E190 | | US | US | N236JB |
| 3 | F3 | 5 | 12 | 3 | J | A321 | | US | US | N973JT |
| 3 | | A | 25 | 4 | J | E190 | | CU | US | N238JB |
| | 10 | | B15 | | J | A320 | | US | US | N652JB |
| | B15 | | 6 | | J | A320 | | US | US | N508JL |
| с | C5 | 2 | | | J | A320 | | US | BS | N645JB |
| 5 | 55A | 3 | E4 | 8 | J | A321 | | US | US | N923JB |
| | B3 | 5 | 27 | 7 | J | A321 | | DO | US | N999JQ |
| С | C12 | 3 | L2A | | J | E190 | | US | US | N348JB |
| 3 | L2A | С | C18 | 2 | J | E190 | | US | US | N258JB |
| 5 | 28 | | 6 | | J | A320 | | US | US | N768JB |
| ٨ | 12 | 2 | E0 | 7 | 1 | E100 | | 110 | LIG. | N100 ID |

6. Glossary of Terms

The following is a list of all the standard fields that may be included in a Historical Daily Flight Report. Customers may choose any subset of these to include in their report, as well as request additional custom calculated fields.

| Field | Description | Values |
|-----------------|----------------------------------|--------|
| FlightId | Alphanumeric key for the flight | |
| AirlineCode | Airline code | |
| FlightNumber | Flight number | |
| SchedDepAirport | Scheduled departure airport code | |
| SchedArrAirport | Schedule arrival airport code | |
| SchedDepUtc | Schedule departure time (UTC) | |
| SchedArrUtc | Schedule arrival time (UTC) | |
| SchedDepLocal | Schedule departure time (local) | |
| SchedArrLocal | Schedule arrival time (local) | |

| | | 1 |
|-------------------------|---|--|
| Diversion Status | If this is a diverted flight, indicates whether this | O – Original |
| | record represents the Original flight, the | D – Diverted |
| | Diverted flight, or the Recovery flight. | R – Recovery |
| RecovFlightId | If a Recovery Exists for diverted flight, this is its FlightId | |
| OpAirlineCode | Airline code for operating flight (only if codeshare) | |
| OpFlightNumber | Flight number for operating flight (only if codeshare) | |
| AltDepAirport | Alternate departure airport code (recovery flight) | |
| AltArrAirport | Alternate arrival airport code (diverted flight) | |
| DepTerminal | Departure terminal | |
| DepGate | Departure gate | |
| ArrTerminal | Arrival terminal | |
| ArrGate | Arrival gate | |
| Baggage | Baggage claim | |
| ServiceType | Service type | IATA Service Type values, typically 'J' for commercial passenger service. |
| AircraftType | Aircraft type | |
| Unscheduled | Was this flight in the schedule? | "Y" if not in published schedule; empty otherwise |
| DepCountryCode | Countryld for departure airport | IATA 2-Char Country Codes |
| ArrCountryCode | Countryld for arrival airport | IATA 2-Char Country Codes |
| TailNumber | Tail number | |
| RegAirlineCode | Airline code for regional carrier | |
| RegFlightNumber | Flight number for regional carrier | |

| Field | Description | Values |
|----------------------|--|--------------------------------------|
| NumLegs | Number of flight legs | |
| SeqNumber | Sequence number of this flight leg | |
| OrigDate | Scheduled Origination date (local time) | |
| OrigDateUtc | Scheduled Origination date (utc time) | |
| PrevFltAlCode | Airline code for the previous flight for this aircraft | |
| PrevFltNumber | Flight number for the previous flight for this aircraft | |
| PrevFltSchedArrLocal | Scheduled arrival time (local) for the previous flight for this aircraft | |
| PrevFltSchedArrUtc | Scheduled arrival time (utc) for the previous flight for this aircraft | |
| OutGateLocal | Time flight departed the gate (local) | |
| OutGateUtc | Time flight departed the gate (utc) | |
| OutGateAccuracy | Estimated/Actual | "A" = Actual "E" = Estimated |
| OutGateSource | Airline/airport or FAA | "A" = Airline Data "F" = FAA data |
| InAirLocal | Time flight took off (local) | |
| InAirUtc | Time flight took off (utc) | |
| InAirAccuracy | Estimated/Actual | "A" = Actual "E" = Estimated |
| InAirSource | Airline/airport or FAA | "A" = Airline Data "F" = FAA data |
| LandedLocal | Time flight landed (local) | |
| LandedUtc | Time flight landed (utc) | |
| LandedAccuracy | Estimated/Actual | "A" = Actual "E" = Estimated |
| LandedSource | Airline/airport or FAA | "A" = Airline Data "F" = FAA data |
| InGateLocal | Time flight arrived at the gate (local) | |
| InGateUtc | Time flight arrived at the gate (utc) | |
| InGateAccuracy | Estimated/Actual | "A" = Actual "E" = Estimated |
| InGateSource | Airline/airport or FAA | "A" = Airline Data "F" = FAA data |
| SchedDepAptNS | Namespace code used to identify the Scheduled Departure Airport | |
| SchedArrAptNS | Namespace code used to identify the Scheduled Arrival Airport | "I" = IATA "C" = ICAO |
| AltDepAptNS | Namespace code used to identify the Alternate Departure Airport | "F" = FAA |
| AltArrAptNS | Namespace code used to identify the Alternate Arrival Airport | |
| RevSchedDepLocal | Schedule departure time (UTC) | |
| RevSchedDepUtc | Schedule arrival time (UTC) | |
| RevSchedArrLocal | Schedule departure time (local) | |
| RevSchedArrUtc | Schedule arrival time (local) | |
| Suffix | Extra character indicating a second flight with the same flight number and city pair on the same local | |

| | departure day | |
|-------------------|---|--|
| AircraftOwner | Airline code for aircraft owner | |
| IsGA | Is this a general aviation flight (privately owned/operated aircraft) | "Y" if private aviation flight; empty otherwise |
| DiversionType | Type of diversion (planned, unplanned, etc) | "N" = Unplanned "P" = Planned "T" = Tech Stop "A" = In Air Return "R" = Recovery "L" = No Longer Diverted |
| SimpleMaxAltitude | Maximum altitude (feet) of flight | |
| SimpleAvgAltitude | Average altitude (feet) | |
| SimpleMaxSpeed | Maximum speed (knots) of flight | |
| SimpleAvgSpeed | Average speed (knots) | |
| Distance | Great circle distance between SchedDepAirport and SchedArrAirport in nautical miles | Calculated |
| TimeAloft | Flight Time (minutes) from runway to runway | Calculated |
| Cancelled | Was this Flight Cancelled? | "1" = yes; "0" = no |
| ActTaxiTimeDep | Departing taxi time | calculated (InAir – OutGate) |
| ActTaxiTimeArr | Arriving taxi time | calculated (InGate - Landed) |
| MinLateDeparted | Minutes flight arrived past scheduled departure time (negative value for early flights) | calculated (OutGate - SchedDep) |
| MinLateArrived | Minutes flight arrived past scheduled arrival time (negative value for early flights) | calculated (InGate - SchedArr) |

NOTE: Not all data elements are available for every flight leg.