

FLIGHT BOOKING API DOCUMENTATION

Complete Technical Reference

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TABLE OF CONTENTS

- 1. Overview
- 2. Authentication
- 3. Core REST API
- 4. GraphQL API
- 5. Mobile SDKs
- 6. Payment Integration
- 7. Corporate APIs
- 8. Airline Integrations
- 9. Advanced Features
- 10. Webhooks
- 11. Error Handling
- 12. SDKs & Tools
- 13. Postman Collection
- 14. Support

1. OVERVIEW

Flight Booking API enables third-party developers to access airline inventory for search, price comparison, booking, and ticket management.

Supported Operations

Operation	Description
Flight Search	Real-time availability across 500+ airlines
Price Verification	Lock prices before booking
Booking Creation	Passenger details + payment
Ticket Management	Retrieve, modify, cancel
Ancillary Services	Seats, meals, baggage, insurance
Corporate Tools	Approval workflows, expense integration

Supported Regions

Region	Coverage
--------	----------

India	Full domestic + international
Southeast Asia	Singapore, Thailand, Malaysia, Indonesia
Middle East	UAE, Qatar, Saudi Arabia
Europe	UK, Germany, France, Netherlands
North America	USA, Canada (limited)

2. AUTHENTICATION

API Key

All requests require `Authorization` header.

```
text
```

```
Authorization: Bearer YOUR_API_KEY
```

Rate Limits

Plan	Requests/Minute	Requests/Day
Free	10	100
Starter	60	10,000
Business	300	100,000
Enterprise	Unlimited	Unlimited

Response on limit exceeded:

```
json
{
  "error": {
    "code": "RATE_LIMIT_EXCEEDED",
    "message": "Too many requests",
    "retry_after": 60
  }
}
```

3. CORE REST API

3.1 Search Flights

Endpoint: `POST /search`

Request:

```
json
{
  "origin": "DEL",
  "destination": "BOM",
  "departure_date": "2024-08-15",
  "return_date": "2024-08-20",
  "passengers": {
    "adults": 2,
    "children": 1,
    "infants": 0
  },
  "cabin_class": "economy",
  "currency": "INR",
  "preferred_airlines": ["6E", "AI"],
  "max_price": 15000,
  "max_duration": 180
}
```

Response:

```
json
{
  "search_id": "srch_abc123xyz",
  "results_count": 47,
  "filters": {
    "airlines": [...],
    "stops": [...],
    "price_range": {"min": 4500, "max": 12500}
  },
  "flights": [
    {
      "flight_id": "flt_6E1234_20240815",
      "airline": {
        "code": "6E",
        "name": "IndiGo",
        "logo_url": "https://cdn.example.com/airlines/6E.png"
      },
      "flight_number": "6E-1234",
      "origin": {
        "airport_code": "DEL",
        "airport_name": "Indira Gandhi International",
        "terminal": "3",
        "city": "New Delhi",
        "datetime": "2024-08-15T06:30:00+05:30"
      },
      "destination": {
```

```
    "airport_code": "BOM",
    "airport_name": "Chhatrapati Shivaji Maharaj International",
    "terminal": "2",
    "city": "Mumbai",
    "datetime": "2024-08-15T08:45:00+05:30"
  },
  "duration_minutes": 135,
  "stops": 0,
  "aircraft": "Airbus A320neo",
  "fare": {
    "base_fare": 4500,
    "taxes": 890,
    "fees": 610,
    "total": 6000,
    "currency": "INR"
  },
  "seats_available": 12,
  "baggage": {
    "cabin": "7kg",
    "checked": "15kg"
  },
  "refundable": false,
  "change_allowed": true,
  "change_fee": 1500,
  "amenities": ["wifi", "meal_purchase"]
}
]
```

3.2 Price Verification

Endpoint: POST /verify-price

Locks price for 10 minutes before booking.

```
json
{
  "flight_id": "flt_6E1234_20240815",
  "search_id": "srch_abc123xyz"
}
```

Response:

```
json
{
```

```
"price_valid": true,
"valid_until": "2024-08-14T18:30:00Z",
"fare": {
  "base_fare": 4500,
  "taxes": 890,
  "fees": 610,
  "total": 6000,
  "currency": "INR"
}
}
```

3.3 Create Booking

Endpoint: POST /bookings

```
json
{
  "flight_id": "flt_6E1234_20240815",
  "search_id": "srch_abc123xyz",
  "contact": {
    "email": "john.doe@example.com",
    "phone": "+91-9876543210",
    "country_code": "IN"
  },
  "passengers": [
    {
      "type": "adult",
      "title": "Mr",
      "first_name": "John",
      "last_name": "Doe",
      "date_of_birth": "1985-03-15",
      "nationality": "IN",
      "passport_number": "A1234567",
      "passport_expiry": "2027-05-20",
      "frequent_flyer": {
        "airline": "6E",
        "number": "6E1234567890"
      }
    }
  ],
  "addons": {
    "seats": [{"passenger": 0, "seat": "12A", "price": 300}],
    "meals": [{"passenger": 0, "code": "VEG_MAX", "price": 350}],
    "baggage": [{"passenger": 0, "prepaid": "10kg", "price": 2000}]
  },
  "payment": {
    "method": "card",

```

```
    "token": "tok_visa_4242424242424242"
  }
}
```

Response:

```
json
{
  "booking_id": "BKNG202408150001",
  "status": "confirmed",
  "pnr": "ABC123",
  "etickets": [
    {
      "ticket_number": "1234567890123",
      "passenger": "John Doe",
      "status": "confirmed"
    }
  ],
  "total_paid": {
    "amount": 8650,
    "currency": "INR"
  },
  "booking_datetime": "2024-08-14T14:30:00Z"
}
```

3.4 Cancel Booking

Endpoint: POST /bookings/{booking_id}/cancel

```
json
{
  "reason": "change_of_plans",
  "refund_method": "original_payment",
  "passengers_to_cancel": ["all"] // or ["PAX1"]
}
```

4. GRAPHQL API

Endpoint

```
POST https://api.flightbooking.example.com/graphql
```

Authentication

text

```
Authorization: Bearer YOUR_API_KEY
```

Schema

Queries:

- `searchFlights(input: FlightSearchInput!)`
- `flight(id: ID!)`
- `booking(id: ID!)`
- `myBookings(status: BookingStatus)`
- `flightStatus(flightNumber: String!, date: Date!)`

Mutations:

- `createBooking(input: CreateBookingInput!)`
- `cancelBooking(id: ID!, input: CancelBookingInput!)`
- `createPaymentIntent(input: PaymentIntentInput!)`

Subscriptions:

- `bookingUpdates(bookingId: ID!)`
- `flightStatusUpdates(flightId: ID!)`

Example Query

```
graphql
```

```
query SearchFlights($input: FlightSearchInput!) {  
  searchFlights(input: $input) {  
    searchId  
    totalResults  
    flights {  
      id  
      airline { code name logoUrl }  
      flightNumber
```

```

        origin { code name datetime }
        destination { code name datetime }
        duration
        fare { total currency }
        seatsAvailable
    }
}

```

Variables:

```

json
{
  "input": {
    "origin": "DEL",
    "destination": "BOM",
    "departureDate": "2024-08-15",
    "passengers": {"adults": 1},
    "cabinClass": "ECONOMY"
  }
}

```

5. MOBILE SDKs

5.1 Android SDK

Gradle:

```

gradle
implementation 'com.flightbooking:sdk-android:2.1.0'
implementation 'com.flightbooking:sdk-android-ui:2.1.0'

```

Initialize:

```

kotlin
FlightBookingSDK.initialize(
    context = this,
    apiKey = "YOUR_API_KEY",
    environment = Environment.PRODUCTION,
    config = SDKConfig(currency = "INR", language = "en")
)

```

Search:

```
kotlin
val request = FlightSearchRequest(
    origin = AirportCode("DEL"),
    destination = AirportCode("BOM"),
    departureDate = LocalDate.of(2024, 8, 15),
    passengers = Passengers(adults = 1),
    cabinClass = CabinClass.ECONOMY
)

FlightBookingSDK.search(request) { result ->
    when (result) {
        is Result.Success -> { /* handle flights */ }
        is Result.Error -> { /* handle error */ }
    }
}
```

5.2 iOS SDK (Swift)

Swift Package Manager:

```
swift
.package(url: "https://github.com/flightbooking/ios-sdk.git", from:
"2.1.0")
```

Initialize:

```
swift
FlightBookingSDK.initialize(
    apiKey: "YOUR_API_KEY",
    environment: .production,
    configuration: SDKConfiguration(currency: "INR", language: "en")
)
```

5.3 React Native

```
bash
npm install @flightbooking/react-native-sdk
```

```
javascript
import { FlightBookingProvider, FlightSearch } from
'@flightbooking/react-native-sdk';

<FlightBookingProvider apiKey="YOUR_API_KEY" environment="production">
  <FlightSearch onSearch={handleSearch} />
</FlightBookingProvider>
```

5.4 Flutter

```
yaml
dependencies:
  flightbooking_sdk: ^2.1.0

dart
FlightBookingSDK.initialize(
  apiKey: 'YOUR_API_KEY',
  environment: Environment.production,
);

final result = await FlightBookingSDK.instance.search(
  origin: AirportCode('DEL'),
  destination: AirportCode('BOM'),
  departureDate: DateTime(2024, 8, 15),
);
```

6. PAYMENT INTEGRATION

6.1 Supported Gateways

Gateway	Regions	Methods
---------	---------	---------

Stripe	Global	Card, UPI, Wallet
Razorpay	India, SE Asia	Card, UPI, Netbanking, Wallet
PayPal	Global	PayPal, Card
Adyen	Europe	Card, iDEAL, SOFORT

6.2 Payment Flow

text

1. Create Payment Intent → 2. Collect Customer Details →
3. Confirm Payment → 4. Webhook Confirmation → 5. Issue Ticket

6.3 Create Payment Intent

Endpoint: POST /payments/intent

json

```
{
  "booking_id": "BKNG202408150001",
  "gateway": "razorpay",
  "amount": {"value": 18000, "currency": "INR"},
  "customer": {
    "name": "John Doe",
    "email": "john@example.com",
    "phone": "+919876543210"
  }
}
```

Response:

```
json
{
  "intent_id": "pi_abc123xyz",
  "client_secret": "pi_abc123xyz_secret_xyz789",
  "gateway_order_id": "order_9A33WuAg5L2S8b",
  "amount": 18000,
  "currency": "INR",
  "expires_at": "2024-08-14T15:00:00Z"
}
```

6.4 Razorpay Frontend Integration

```
javascript
const options = {
  key: "rzp_test_YOUR_KEY",
  amount: 1800000, // in paise
  currency: "INR",
  name: "FlightBooking",
  order_id: "order_9A33WuAg5L2S8b",
  handler: function(response) {
    verifyPayment(response);
  },
  prefill: {
    name: "John Doe",
    email: "john@example.com",
    contact: "+919876543210"
  }
};

const rzp = new Razorpay(options);
rzp.open();
```

7. CORPORATE APIs

7.1 Authentication

```
text
Authorization: Bearer CORP_SA_abc123xyz
```

X-Corporate-Account-ID: CORP_ACME_001

7.2 Get Corporate Rates

Endpoint: POST /corporate/rates

```
json
{
  "origin": "DEL",
  "destination": "LHR",
  "departure_date": "2024-09-01",
  "employee_level": "manager"
}
```

Response:

```
json
{
  "corporate_fares": true,
  "negotiated_rates": [{
    "airline": "British Airways",
    "corporate_code": "BAACME2024",
    "discount_percentage": 12,
    "fare": {
      "base": 85000,
      "after_discount": 74800,
      "total": 93300,
      "currency": "INR"
    },
    "benefits": [
      "Free date change",
      "Extra baggage 10kg",
      "Priority check-in",
      "Lounge access"
    ]
  }],
  "policy_compliance": {
    "allowed": true,
    "advance_booking": "OK",
    "cabin_class": "APPROVED_FOR_LEVEL"
  }
}
```

7.3 Approval Workflow

```
json
{
  "flight_id": "flt_BA256_20240901",
  "requires_approval": true,
  "approver": {
    "email": "manager@acme.com",
    "employee_id": "EMP001"
  },
  "justification": "Client meeting in London"
}
```

8. AIRLINE INTEGRATIONS

8.1 IndiGo (6E)

Feature	Status
NDC API	21.3
6E Prime	
Fast Forward	
Seat Selection	

Meal Pre-booking



6E Prime Add-on:

```
json
{
  "6e_prime": {
    "code": "6EPRIME",
    "price": 899,
    "includes": [
      "Priority check-in",
      "Priority boarding",
      "Priority baggage",
      "Complimentary meal",
      "Standard seat free"
    ]
  }
}
```

8.2 Air India (AI)

Feature	Status
---------	--------

Maharaja Club

Auto-FF

Upgrade Bidding



Lounge Access



8.3 Singapore Airlines (SQ)

Feature

Status

KrisFlyer



Book the Cook



Suites/First Class



9. ADVANCED FEATURES

9.1 Multi-City Search

Endpoint: POST /search/multi-city

```
json
{
  "trips": [
    {"origin": "DEL", "destination": "BOM", "departure_date":
"2024-08-15"},
    {"origin": "BOM", "destination": "SIN", "departure_date":
"2024-08-18"},
```

```
{ "origin": "SIN", "destination": "DEL", "departure_date":  
"2024-08-25"}  
],  
"passengers": {"adults": 2},  
"cabin_class": "business"  
}
```

9.2 Fare Alerts

Subscribe: POST /alerts/subscribe

```
json  
{  
  "origin": "DEL",  
  "destination": "JFK",  
  "target_price": 45000,  
  "email": "john@example.com",  
  "frequency": "daily"  
}
```

9.3 Price Prediction

Endpoint: GET /predict/price

```
json  
{  
  "current_price": 5500,  
  "predicted_lowest": 4200,  
  "confidence": 0.78,  
  "recommended_book_time": "2024-11-15",  
  "price_trend": "decreasing"  
}
```

9.4 Group Booking (10+ passengers)

Endpoint: POST /groups/request

10. WEBHOOKS

Events

Event	Description
<code>booking.confirmed</code>	Booking successful
<code>booking.failed</code>	Payment/confirmation failed
<code>booking.cancelled</code>	Booking cancelled
<code>flight.delayed</code>	Flight delayed
<code>flight.cancelled</code>	Flight cancelled
<code>refund.processed</code>	Refund completed
<code>payment_intent.succeeded</code>	Payment successful

Payload Example

```
json
{
  "event": "booking.confirmed",
  "timestamp": "2024-08-14T14:30:05Z",
  "data": {
    "booking_id": "BKNG202408150001",
    "pnr": "ABC123",
    "status": "confirmed",
    "etickets": ["1234567890123"]
  }
}
```

11. ERROR HANDLING

Error Response Format

```
json
{
  "error": {
    "code": "INSUFFICIENT_SEATS",
    "message": "Requested seats not available",
    "details": {"requested": 3, "available": 2},
    "request_id": "req_abcl23xyz"
  }
}
```

Common Error Codes

Code	HTTP	Description
INVALID_ORIGIN	400	Origin airport invalid

PRICE_EXPIRED	410	Price no longer valid
INSUFFICIENT_SEATS	409	Not enough seats
PAYMENT_FAILED	402	Payment processing failed
RATE_LIMIT_EXCEEDED	429	Too many requests

12. SDKS & TOOLS

Language	Package	Install
Python	<code>flightbooking-sdk</code>	<code>pip install flightbooking-sdk</code>
Node.js	<code>@flightbooking/sdk</code>	<code>npm install @flightbooking/sdk</code>

PHP	flightbooking/php-sdk	composer require flightbooking/php-sdk
Java	com.flightbooking:sdk	Maven/Gradle
Go	github.com/flightbooking/sdk-g o	go get
Ruby	flightbooking_sdk	gem install flightbooking_sdk

13. POSTMAN COLLECTION

Collection URL

`https://api.flightbooking.example.com/postman/collection.json`

Environment Variables

Variable	Value
base_url	<code>https://api.flightbooking.example.com/v1</code>

api_key	YOUR_API_KEY
---------	--------------

booking_id	BKNG202408150001
------------	------------------

flight_id	flt_6E1234_20240815
-----------	---------------------

Newman CI/CD

```
bash
newman run FlightBookingAPI.postman_collection.json \
  -e Production.postman_environment.json \
  --reporters cli,htmlextra
```

14. SUPPORT

Channel	Link
---------	------

Documentation	https://docs.flightbooking.example.com
---------------	---

API Status	https://status.flightbooking.example.com
------------	---

Email api-support@flightbooking.example.com

Slack <https://flightbooking-dev.slack.com>