

# TRAVELPORT UNIVERSAL API WELCOME CALL

UAPI 技术介绍



# 会议议程

- [开发者资源/工具 - Developer Resources and Tools](#)
- [搜索到预定的工作流程表 – Shop to Book High-Level workflow](#)
- 常用Universal API事务
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- [最佳应用方法 - Best Practices](#)
- [开始上线使用 - Getting Started](#)

# 开发者资源

- Universal API 文档

<https://support.travelport.com/webhelp/uapi/uAPI.htm>

- Universal API 演示网站

<https://demo.travelportuniversalapi.com/>

- Universal API 测试工具

<https://developer.travelport.com/documents/51667814/59924970/TravelportAPITool.zip>

# UNIVERSAL API 参考文档

**TRAVELPORT**

Search All Files

Contents Glossary

- Introduction to Universal API
- Disclaimer
- What's New
- Improving Search Results
- Release Notes
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## TRAVELPORT UNIVERSAL API

### Schema Retirement

**Important!**

**Schema Retirement of Release 16.4 through 17.2**

Schema versions 39 (released with 16.4), 40 (released with 17.1) and 41 (released with 17.2) are set to retire as of 13 January 2022.

*After the retirement date, transactions that are sent using retired schema versions will fail and will no longer be supported.*

### What's New

New [samples](#) are available for the most common transactions.

See the [What's New](#) page for more information about new features in Universal API.

### Introduction

Travelport Universal API offers an array of travel content for air, hotel, car, and rail, including ancillaries (optional services). It also provides functionality to build complete traveler, agency, branch, and account profiles.

When you are ready to start building your application with Universal API, the following sections of the help will provide background information, let you download the latest version of the Universal API WSDLs, show you how to set up your first request, and determine the end point(s) you need to use in your transactions.

<a href="#">Releases and Release Notes</a>	Universal API has a new release approximately five times per year. At that time, updated WSDLs that contain new functionality and improvements to existing functionality are provided.
	Release Notes for each release provide a brief explanation of new functionality and, depending on the amount of detail, may contain a link to a specific topic or topics that provides further information.

# UNIVERSAL API 演示网站



版本 : uAPI version

Travelport Universal API

Demonstration Release 17.3 v42.0

100% powered by Travelport Universal API

SHOP

RETRIEVE UNIVERSAL RECORD

LOGS



CREDENTIALS

PRODUCTION

运行环境 : Environment

Show Developer Tool Tips Close Panel

From  To

Departure  Return

Adults  Child (2-12)  Infant (0-2)

Travelport System

Air and Rail

- Travelport System e-Pricing Meta
- Airline Content Hub (ACH)
- Rail Content Hub (RCH)
- Split-Ticketing Search
- Flex Shopping Options
- Advanced Options

Hotel

**SEARCH**

## Travelport API Demo

The Travelport Demo has been created to stimulate new ideas and help you develop new applications to stay ahead of the competition. Through this demo site, we are able to showcase new content and functionality with code that's ready to use.



### Travelport Universal API

Travelport Universal API offers a range of multi-source content via a single API: air, hotel, car rental, and rail, making it easy to develop an desktop, web or mobile end-to-end application, with an extensive array of features and functionality available. Ancillaries may also be offered, depending on the type of content that is requested.

Ready to begin your development? [Request test access to Travelport Universal API now!](#)

[Travelport Universal API overview](#)

[Return on Trip](#)

[Find out more in Developer site](#)

[Branded fares and rich content](#)

**Important!** When using the Demo Site on the Production environment, there is no option to create a booking.



# UNIVERSAL API 演示网站

Shop Results HKG to LHR 18/09/2020 - 30/09/2020

Air and Rail

Change the view:   / Show:

 Malaysia

<b>Economy Basic</b> 800 <sup>32</sup> <sub>GBP</sub> 1 stop From HKG at 18:35 (1 option)	<b>Economy Smart</b> 1,238 <sup>32</sup> <sub>GBP</sub> 1 stop From HKG at 18:35 (1 option)	<b>Economy Flex</b> 1,925 <sup>32</sup> <sub>GBP</sub> 1 stop From HKG at 18:35 (1 option)
---	---	--

 China Airlines

<b>Economy Basic</b> 896 <sup>84</sup> <sub>GBP</sub> 1 stop From HKG at 21:15 (1 option)	<b>Economy Standard</b> 1,334 <sup>84</sup> <sub>GBP</sub> 1 stop From HKG at 21:15 (1 option)
---	--

 Aeroflot

<b>Economy Saver</b> 1,043 <sup>72</sup> <sub>GBP</sub> 1 stop From HKG at 11:35 (1 option)	<b>Economy Classic</b> 1,166 <sup>72</sup> <sub>GBP</sub> 1 stop From HKG at 11:35 (1 option)
---	---

 Singapore Air

<b>Economy Lite</b> 1,070 <sup>12</sup> <sub>GBP</sub> 1 stop From HKG at 19:55 (1 option)	<b>Economy Standard</b> 1,210 <sup>12</sup> <sub>GBP</sub> 1 stop From HKG at 19:55 (1 option)	<b>Economy Flexi</b> 1,542 <sup>12</sup> <sub>GBP</sub> 1 stop From HKG at 12:25 (3 options)
--	--	--

 Turkish Airlines

1,089 <sup>84</sup> <sub>GBP</sub> 1 stop From HKG at 23:00 (2 options)
--

1 2 3 »

点击XML按钮以获取  
LowFareSearch请求与响  
应



# UNIVERSAL API 演示网站



Travelport Universal API  
Demonstration Release 17.3 v42.0  
100% powered by Travelport Universal API

SHOP RETRIEVE UNIVERSAL RECORD LOGS

0 CREDENTIALS: PRODUCTION

AIR.XSD > LOWFARESHOPPINGREQ > LOWFARESHOPPINGRSP

View Request XML

View Response XML

```
1 <LowFareSearchReq xmlns="http://www.travelport.com/schema/air_v42_0" TraceId="7c7a756f-210d-4a78-aa92-500fe4564a04" TargetBrand="KOR" />
2 <BillingPointOfSaleInfo xmlns="http://www.travelport.com/schema/common_v42_0" OriginApplication="uAPI" />
3 <SearchAirLeg>
4   <SearchOrigin>
5     <CityOrAirport xmlns="http://www.travelport.com/schema/common_v42_0" Code="HKG" PreferCity="true" />
6   </SearchOrigin>
7   <SearchDestination>
8     <CityOrAirport xmlns="http://www.travelport.com/schema/common_v42_0" Code="FUK" PreferCity="true" />
9   </SearchDestination>
10  <SearchDepTime PreferredTime="2021-06-30" />
11 </SearchAirLeg>
12 <AirSearchModifiers>
13   <PreferredProviders>
14     <Provider xmlns="http://www.travelport.com/schema/common_v42_0" Code="1G" />
15   </PreferredProviders>
16 </AirSearchModifiers>
17 <SearchPassenger xmlns="http://www.travelport.com/schema/common_v42_0" Code="ADT" />
18 <AirPricingModifiers>
19   <AccountCodes>
20     <AccountCode xmlns="http://www.travelport.com/schema/common_v42_0" Code=" " />
21   </AccountCodes>
22 </AirPricingModifiers>
23 </LowFareSearchReq>
```

Emirates

1,733<sup>30</sup> GBP 2 stops  
From HKG at 21:30 (2 options)



# UNIVERSAL API 测试工具



- 业务与开发部门可通过格式化的视图，轻松理解UAPI响应内容
- 支持以终端指令(Terminal Commands)与Host系统交互
- 支持Pre-Production与Production网页服务端点
- 以UAPI账户密码开始使用

e.g. LowFareSearch返回 – 按价格分组排列

UNIVERSAL API - USER UNIVERSAL API/UAPI6781769363-D609178D - WAB P3221296

Credentials	Terminal	Request	Response	Response - Table View	Response - Formatted View	Help
User name:	Universal API/uAPI6781769363-d609178d					
Password:	●●●●●●●●					
Target branch:	P3221296					
URL:	https://apac.universal-api.travelport.com/B2BGateway/connect/uAPI					
GDS code (for cryptic):	1G					

Travelport API Test Tool

File Edit API Tools Universal API Help

UNIVERSAL API - USER UNIVERSAL API/UAPI7843645375-AC0FFEB9 - WAB P2944662

Credentials Terminal Request Response Response - Table View Response - Formatted View Help

Default view  Special view

[Go to rail fares](#)

HKD4657 (base: HKD2000 - taxes: HKD2657)										
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source	Brand
Outbound	2020-02-09	PR313	07:50	10:05	HKG	MNL	O	Economy	1G - S	
	2020-02-09	PR720	12:55	19:25	MNL	LHR	O	Economy	1G - S	
Inbound	2020-03-21	PR721	21:50	19:25	LHR	MNL	O	Economy	1G - P	
	2020-03-22	PR312	21:15	23:35	MNL	HKG	O	Economy	1G - P	
Inbound	2020-03-21	PR721	21:50	19:25	LHR	MNL	O	Economy	1G - P	
	2020-03-23	PR306	15:15	17:40	MNL	HKG	O	Economy	1G - P	
Inbound	2020-03-21	PR721	21:50	19:25	LHR	MNL	O	Economy	1G - P	
	2020-03-23	PR310	19:00	21:35	MNL	HKG	O	Economy	1G - P	

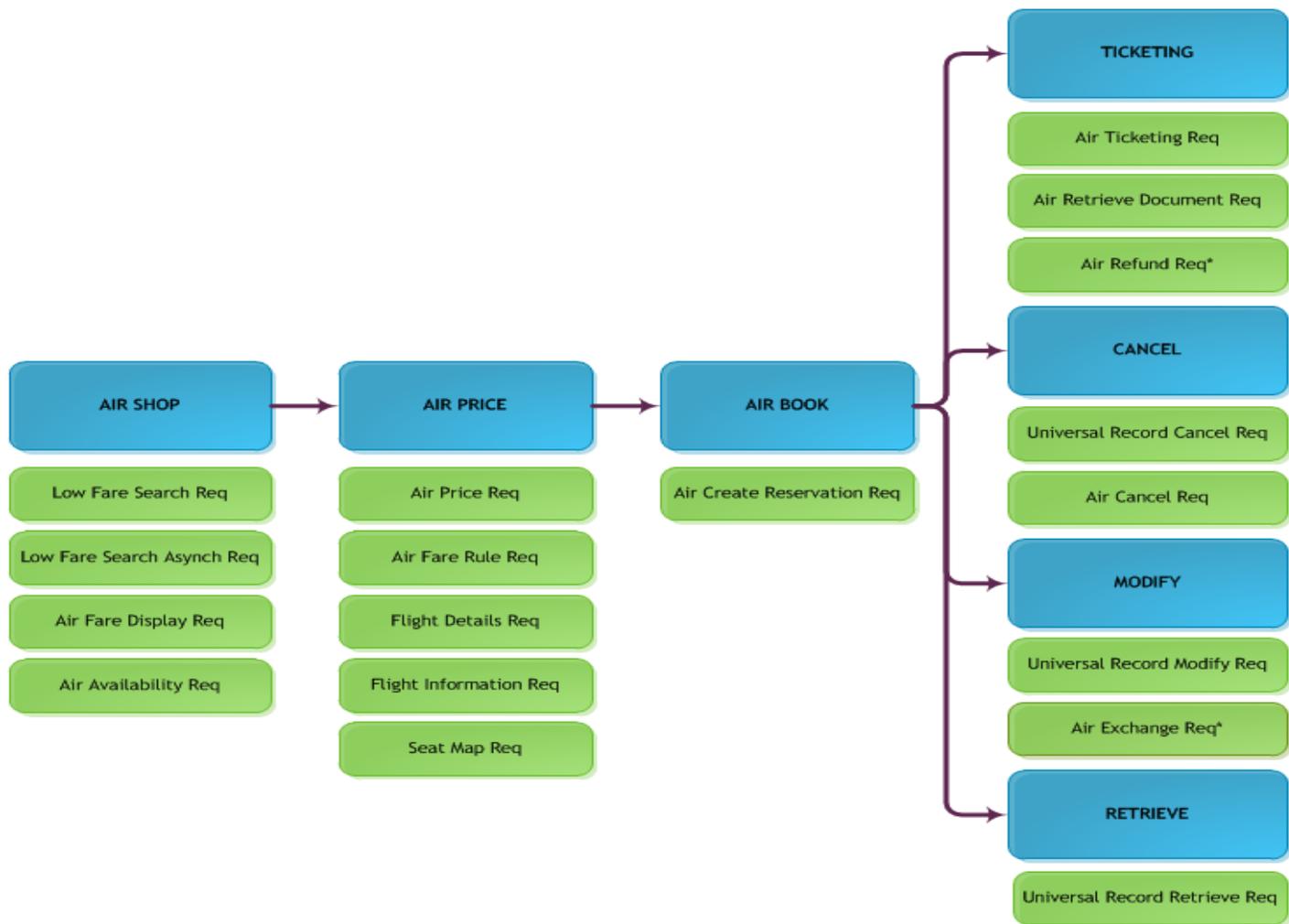
HKD4755 (base: HKD3230 - taxes: HKD1525)										
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source	Brand
Outbound	2020-02-09	VS207	23:55	04:50	HKG	LHR	T	Economy	1G - Q	
Inbound	2020-03-21	VS206	21:00	16:55	LHR	HKG	T	Economy	1G - Q	

HKD4955 (base: HKD3430 - taxes: HKD1525)										
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source	Brand
Outbound	2020-02-09	BA28	23:45	04:55	HKG	LHR	O	Economy	1G - P	
Outbound	2020-02-09	BA32	23:30	04:45	HKG	LHR	O	Economy	1G - P	
Inbound	2020-03-21	BA27	21:00	16:55	LHR	HKG	O	Economy	1G - P	

RESPONSE RECEIVED

TIME: 5,600 SIZE: 321,872

# UNIVERSAL API 工作流程



 TRAVELPORT

# LOWFARESEARCH

满足价格优先的旅客



# LOWFARESEARCH REQUEST

```
<air:LowFareSearchReq SolutionResult="false" TraceId="5386541420160923034855114280" TargetBranch="TargetBranch" AuthorizedBy="user"
xmlns:com="http://www.travelport.com/schema/common_v38_0" xmlns:air="http://www.travelport.com/schema/air_v38_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  - <air:SearchAirLeg>
    - <air:SearchOrigin>
      <com:Airport Code="HKG"/>
    </air:SearchOrigin>
    - <air:SearchDestination>
      <com:City Code="LON"/>
    </air:SearchDestination>
    <air:SearchDepTime PreferredTime="2017-05-17"/>
    <air:AirLegModifiers> </air:AirLegModifiers>
  </air:SearchAirLeg>
  - <air:SearchAirLeg>
    - <air:SearchOrigin>
      <com:City Code="LON"/>
    </air:SearchOrigin>
    - <air:SearchDestination>
      <com:Airport Code="HKG"/>
    </air:SearchDestination>
    <air:SearchDepTime PreferredTime="2017-05-26"/>
    <air:AirLegModifiers> </air:AirLegModifiers>
  </air:SearchAirLeg>
  - <air:AirSearchModifiers>
    - <air:PreferredProviders>
      <com:Provider Code="1G"/>
    </air:PreferredProviders>
    - <air:PermittedCarriers>
      <com:Carrier Code="EK"/>
      <com:Carrier Code="CX"/>
    </air:PermittedCarriers>
    <air:FlightType TripleInterlineCon="false" DoubleInterlineCon="false" SingleInterlineCon="false" TripleOnlineCon="false" DoubleOnlineCon="true"
      SingleOnlineCon="true" StopDirects="true" NonStopDirects="true"/>
  </air:AirSearchModifiers>
  <com:SearchPassenger Code="ADT"/>
  <com:SearchPassenger Code="ADT"/>
  <com:SearchPassenger Code="CNN" Age="8"/>
  + <air:AirPricingModifiers ETicketability="Required" FaresIndicator="AllFares" AccountCodeFaresOnly="false">
</air:LowFareSearchReq>
```

## <PermittedCarriers> vs <PreferredCarriers> vs <ProhibitedCarriers>

Permitted只返回特定航空公司的航班 (max 99)

Preferred不仅返回特定航空公司的航班, 也可能根据最佳价格返回其他航司的航班(max 99)

Prohibited排除特定航空公司的航班(max 99)

\*同一个请求中, 只能使用三个modifiers中的一个

## <FlightType> 控制返回的航班类型

SingleOnlineCon	允许相同航司一次转机
DoubleOnlineCon	允许相同航司二次转机
SingleInterlineCon	允许不同航司一次转机
DoubleInterlineCon	允许不同航司二次转机
NonStopDirects	允许不停站直飞
StopDirects	允许停站直飞



## <SearchPassenger> Passenger types Code

填写乘客类型(PTC)以确保准确的价格与机位, 提升 Bookability

\*小童(CNN)乘客必须填写岁数

Air Pricing change CNN to CHD



# LOWFARESEARCH REQUEST (续)

- Account Code设定
  - 最多同时使用6个Account Codes
    - 如想用超过6个, 可以考虑使用我们另一产品Agency Private Fares (APF)中的Master Account Code功能, 它最多支持合并10个account codes成一个master account code. 如有兴趣可向你客户经理查询
  - 如客人选择了Account Code Fare, 必须在之后AirPrice、AirCreateReservation APIs请求中的“AirPricingModifiers”, 加入对应的Account Code

```
<air:AirPricingModifiers ETicketability="Required" FaresIndicator="AllFares" AccountCodeFaresOnly="false">  
- <air:AccountCodes>  
    <com:AccountCode Code="ACCT1"/>  
    <com:AccountCode Code="ACCT2"/>  
</air:AccountCodes>  
</air:AirPricingModifiers>
```

# LOWFARESEARCH REQUEST (续)

## 使用机场代码或城市代码

\*取决于网站UI设计

## 上海(SHA)有虹桥(SHA)与浦东(PVG)两个机场

From: shanghai

To

Shanghai, China

Shanghai Hongqiao Intl(SHA), Shanghai, China

Shanghai Pudong International(PVG), Shanghai, China

SHA	SHANGHAI	CHINA
PVG	SHANGHAI	
SHA A	HONGQIAO	

## 同时搜索机场与城市代码

```
<air:SearchOrigin>  
  <com:CityOrAirport PreferCity="true" Code="SHA"/>  
</air:SearchOrigin>
```

## 返回由虹桥(SHA)或浦东机场(PVG)出发的航班

```
<com:City Code="SHA"/>
```

## 只返回由虹桥机场(SHA)出发的航班

```
<com:Airport Code="SHA"/>
```

# LOWFARESEARCH REQUEST (续)

- XML 请求结构:

```
<air:LowFareSearchReq TargetBranch="TarBranch" SolutionResult="false" TraceId="4643182520160108153923138520">
  <com:BillingPointOfSaleInfo OriginApplication="uAPI"/>
  - <air:SearchAirLeg>
```

- SolutionResult的值决定响应回传价格的格式

True (根据价格点与航段分组)

Total price: HKD2661									
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source
Outbound	2016-03-12	HX284	23:05	00:50	HKG	TPE	X	Economy	1G - E
Inbound	2016-03-14	HX285	08:00	09:55	TPE	HKG	X	Economy	1G - E

Total price: HKD2661									
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source
Outbound	2016-03-12	HX284	23:05	00:50	HKG	TPE	X	Economy	1G - E
Inbound	2016-03-14	HX253	11:45	13:45	TPE	HKG	X	Economy	1G - E

Total price: HKD3261									
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source
Outbound	2016-03-12	HX282	17:15	19:00	HKG	TPE	X	Economy	1G - E
Inbound	2016-03-14	HX285	08:00	09:55	TPE	HKG	X	Economy	1G - E

False (只根据价格点分组)

HKD2661 (base: HKD1950 - taxes: HKD711)									
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source
Outbound	2016-03-12	HX284	23:05	00:50	HKG	TPE	X	Economy	1G - E
Inbound	2016-03-14	HX285	08:00	09:55	TPE	HKG	X	Economy	1G - E
Inbound	2016-03-14	HX253	11:45	13:45	TPE	HKG	X	Economy	1G - E

HKD3261 (base: HKD2550 - taxes: HKD711)									
Direction	Date	Flight	Depart	Arrive	From	To	Class	Cabin	Source
Outbound	2016-03-12	HX282	17:15	19:00	HKG	TPE	X	Economy	1G - E
Outbound	2016-03-12	HX254	12:05	13:55	HKG	TPE	X	Economy	1G - E
Inbound	2016-03-14	HX285	08:00	09:55	TPE	HKG	X	Economy	1G - E
Inbound	2016-03-14	HX253	11:45	13:45	TPE	HKG	X	Economy	1G - E

# LOWFARESEARCH RESPONSE

- XML响应结构:

```
<air:LowFareSearchRsp TraceId="ABCTravel20180709000001" TransactionId="82C1877B0A0759C87624EDC1246E466E"  
  ResponseTime="3286" DistanceUnits="MI" CurrencyType="HKD">  
  +<air:FlightDetailsList>  
  +<air:AirSegmentList>  
  +<air:FareInfoList>  
  +<air:RouteList>  
  +<air:AirPricePointList>  
</air:LowFareSearchRsp>
```

**ResponseTime** = Travelport服务器处理的时间, 单位ms

- API客户端响应时间 (由OTA记录) = ResponseTime + 网络传输时间 (由OTA记录)

XML Element	Description
AirSegmentList	所有航段的信息
FlightDetailsList	所有航段的附加信息(e.g. 航站楼)
FareInfoList	FareBasis的相关信息
RouteList	搜索的路线信息(等于请求中SearchAirLeg的出发地与目的地)
AirPricePointList	价格点的详细信息 (e.g. FareInfoRef & SegmentRef)
BrandList	航空公司所提供的品牌信息 (e.g. 特选经济舱) (Rich Content & Branding)

# LOWFARESEARCH RESPONSE (续)

- **AirSegmentList** – 航段信息

- 航司, 航班号
- 出发地, 目的地与时间
- 停留次数 (NumberOfStops)
- 飞行时间 (FlightTime)
- 如航段中途有停留, 可能会有多过一个FlightDetailsRef
- Travelport舱位数据来源 (AvailabilitySource)

例子 : Code	Description
A	AVS
S	Seamless
X	Customer Reusing Availability Data from Customer Cache (Data Originally Obtained from Travelport)

```
<air:AirSegment Equipment="388" FlightTime="625" ArrivalTime="2018-11-27T17:30:00.000+08:00" DepartureTime="2018-11-27T03:05:00.000+04:00" Destination="HKG" Origin="DXB" Key="60tnRRBAAA/BaCH/8TAAAA==" Distance="3688"
AvailabilityDisplayType="Fare Shop/Optimal Shop" AvailabilitySource="S" OptionalServicesIndicator="false"
PolledAvailabilityOption="Polled avail used" LinkAvailability="true" ParticipantLevel="Secure Sell" ChangeOfPlane="false"
ETicketability="Yes" FlightNumber="384" Carrier="EK" Group="1" NumberOfStops="1">
  <air:AirAvailInfo ProviderCode="1G"/>
  <air:FlightDetailsRef Key="60tnRRBAAA/BcCH/8TAAAA==" />
  <air:FlightDetailsRef Key="60tnRRBAAA/BdCH/8TAAAA==" />
</air:AirSegment>
```

# LOWFARESEARCH RESPONSE (续)

- **FlightDetails** – 航段的附加信息
  - 出发地/到达地 航站楼
  - FlightTime = 航段飞行时间 [DXB-BKK (360) + GroundTime(100) + BKK-HKG(165) = 625 mins]
  - GroundTime = 地面停留时间(有停站的航段才会有)

```
<air:FlightDetails OriginTerminal="3" Equipment="388" TravelTime="1195" FlightTime="360" ArrivalTime="2018-11-27T12:05:00.000+07:00" DepartureTime="2018-11-27T03:05:00.000+04:00" Destination="BKK" Origin="DXB" Key="60tnRRBAAA/BcCH/8TAAAA==" OnTimePerformance="-1" Distance="3046" GroundTime="100"/>
```

```
<air:FlightDetails DestinationTerminal="1" Equipment="388" TravelTime="1195" FlightTime="165" ArrivalTime="2018-11-27T17:30:00.000+08:00" DepartureTime="2018-11-27T13:45:00.000+07:00" Destination="HKG" Origin="BKK" Key="60tnRRBAAA/BdCH/8TAAAA==" OnTimePerformance="-1" Distance="1048"/>
```

# LOWFARESEARCH RESPONSE (续)

- **FareInfoList** – 运价基础(FareBasis)相关信息
  - 运价基础代码 (FareBasis Code)
  - 运价乘客类型 (PassengerTypeCode)
  - 行李相关信息 (BaggageAllowance), 只会显示件数或者总重量
  - 运价规则令牌 (Fare Rule Token Key), 可通过 “AirFareRuleReq” 获取运价规则明细
  - Ticket Code (如有)

```
<air:FareInfoList>
- <air:FareInfo Destination="SYD" Origin="SIN" Key="OgWfHjlxnDKAJPQGpEAAAA==" PseudoCityCode="682J" PrivateFare="Airlin
TourCode="POO" NegotiatedFare="true" Amount="HKD23050" DepartureDate="2021-06-17" EffectiveDate="2021-04-16T17:41:0
PassengerTypeCode="ADT" FareBasis="Z11SGR">
  <air:TicketingCode Value="Z11SGRPO"/>
  - <air:BaggageAllowance>
    <air:MaxWeight Value="40" Unit="Kilograms"/>
  </air:BaggageAllowance>
  <air:FareRuleKey ProviderCode="1G" FareInfoRef="OgWfHjlxnDKAJPQGpEAAAA==" BrandFound="false"/>
  <air:Brand Key="OgWfHjlxnDKAePQGpEAAAA==" BrandFound="false"/>
</air:FareInfo>
<air:FareInfo Destination="LAX" Origin="HKG" Key="Q7N9IOsB0BKA0NXj2AAAAA==" NegotiatedFare="false"
Amount="HKD3500" DepartureDate="2018-11-08" EffectiveDate="2018-05-23T11:21:00.000+08:00" PassengerTypeCode="ADT"
FareBasis="ULOXSE">
  - <air:BaggageAllowance>
    <air:NumberOfPieces>2</air:NumberOfPieces>
    <air:MaxWeight/>
  </air:BaggageAllowance>
  <air:FareRuleKey ProviderCode="1G" FareInfoRef="Q7N9IOsB0BKA0NXj2AAAAA==">gws-
    eJxNjsEOwiAQRD+mmfsulFhvoEJN2qBJbdJe/P/P6ACadAPswNudxXtvRADxxvpTdPh2U0Re70CG4Z7Dhr53V4HytkNELNb5
</air:FareInfo>
```

**BaggageAllowance:** 系统只基于票价(Fare)提取行李信息, 但行李信息除票价外还会受航班和实际营运航司影响. 准确的行李信息只在选定航班时才能拿到. 所以应以AirPriceRsp(或订单建立后查看AirTicketingRsp及AirRetrieveDocumentRsp) 内的行李信息为准.

# LOWFARESEARCH RESPONSE (续)

- **RouteList** – 搜索的路线信息
  - 出发地/到达地

```
<air:RouteList>
|   <air:Route Key="h8+Q1o7znDKAiP3zEBAAAA==">
|   |   <air:Leg Key="h8+Q1o7znDKAJP3zEBAAAA==" Group="0" Origin="HKG" Destination="BJS"/>
|   </air:Route>
</air:RouteList>
```

# LOWFARESEARCH RESPONSE (续)

- **AirPricePointList** – 价格点列表
  - TotalPrice, ApproximateBasePrice, Taxes (使用PCC货币)
  - BasePrice (使用出发地货币)
  - 税项细节(TaxInfo), 票价计算公式(FareCalc)
  - FlightOptions – 在此价格点上可供选择的, 每一程的航段

```
<air:AirPricePoint Key="aGBhrR7Q2BKAKwzUDAAAAA==" CompleteItinerary="true" ApproximateTaxes="HKD2923"
Taxes="HKD2923" ApproximateBasePrice="HKD14050" ApproximateTotalPrice="HKD16973" BasePrice="HKD14050"
TotalPrice="HKD16973">
- <air:AirPricingInfo Key="aGBhrR7Q2BKALwzUDAAAAA==" ETicketability="Yes" ProviderCode="1G" Taxes="HKD1286"
ApproximateBasePrice="HKD5110" ApproximateTotalPrice="HKD6396" BasePrice="HKD5110" TotalPrice="HKD6396"
Cat35Indicator="false" PlatingCarrier="CX" Refundable="true" PricingMethod="GuaranteedUsingAirlinePrivateFare"
LatestTicketingTime="2018-07-12">
  <air:FareInfoRef Key="aGBhrR7Q2BKAhszUDAAAAA==" />
  <air:FareInfoRef Key="aGBhrR7Q2BKAQtzUDAAAAA==" />
  <air:TaxInfo Key="aGBhrR7Q2BKAMwzUDAAAAA" Amount="HKD160" Category="G3"/>
  <air:TaxInfo Key="aGBhrR7Q2BKANwzUDAAAAA" Amount="HKD120" Category="HK"/>
  <air:TaxInfo Key="aGBhrR7Q2BKA0wzUDAAAAA" Amount="HKD45" Category="I5"/>
  <air:TaxInfo Key="aGBhrR7Q2BKAPwzUDAAAAA" Amount="HKD815" Category="GB"/>
  <air:TaxInfo Key="aGBhrR7Q2BKAQwzUDAAAAA" Amount="HKD146" Category="UB"/>
  <air:FareCalc>HKG CX LON 324.94QLATRW7P CX HKG 324.94QLATRW7P NUC649.88END ROE7.849851</air:FareCalc>
  <air:PassengerType Code="ADT"/>
  <air:PassengerType Code="ADT"/>
  <air:ChangePenalty PenaltyApplies="Anytime">
    <air:Percentage>100.00</air:Percentage>
  </air:ChangePenalty>
  <air:CancelPenalty PenaltyApplies="Anytime">
    <air:Amount>HKD1800.0</air:Amount>
  </air:CancelPenalty>
- <air:FlightOptionsList>
  + <air:FlightOption Destination="LON" Origin="HKG" LegRef="aGBhrR7Q2BKAAyszUDAAAAA==">
  + <air:FlightOption Destination="HKG" Origin="LON" LegRef="aGBhrR7Q2BKA9szUDAAAAA==">
  </air:FlightOptionsList>
</air:AirPricingInfo>
```

Category Examples	Description
G3	机场建设费 (ACF)
HK	香港特别行政区 - 机场离境税
I5	机场旅客保安费
GB	英国 - 航空乘客税
UB	英国 - 乘客服务费
YR	燃油附加费

返回最严厉的退赔条例  
\*\*由航司录入, 仅供参考用途



# LOWFARESEARCH RESPONSE (续)

- **AirPricePointList** – 价格点列表
  - 指定航班选项(FlightOption)的行程总时间(TravelTime), 以文字格式显示
  - 转机航段信息: SegmentIndex
  - 舱位剩余数量: BookingCount

```
<air:FlightOptionsList>
+ <air:FlightOption Destination="LON" Origin="HKG" LegRef="aGBhrR7Q2BKAYSzUDAAAAA==">
- <air:FlightOption Destination="HKG" Origin="LON" LegRef="aGBhrR7Q2BKA9szUDAAAAA==">
  - <air:Option TravelTime="P1DT3H10M0S" Key="aGBhrR7Q2BKAguzUDAAAAA==">
    <air:BookingInfo FareInfoRef="aGBhrR7Q2BKAVuzUDAAAAA=="
      SegmentRef="aGBhrR7Q2BKARszUDAAAAA==" CabinClass="Economy" BookingCount="4"
      BookingCode="S"/>
    <air:BookingInfo FareInfoRef="aGBhrR7Q2BKAVuzUDAAAAA=="
      SegmentRef="aGBhrR7Q2BKATszUDAAAAA==" CabinClass="Economy" BookingCount="9"
      BookingCode="S"/>
    <air:Connection SegmentIndex="0"/>
  </air:Option>
+ <air:Option TravelTime="P1DT11H0M0S" Key="aGBhrR7Q2BKAjuzUDAAAAA==">
</air:FlightOption>
</air:FlightOptionsList>
```

要在第1个航段(0代表第一个航段)中加入Connection Indicator

e.g. P1DT11H0M0S=  
1天又11小时

# LOWFARESEARCH RESPONSE (续)

- **AirPricePointList** – 价格点列表
  - 指定航班选项(FlightOption)的行程总时间(TravelTime), 以文字格式显示
  - 转机航段信息: SegmentIndex
  - 舱位剩余数量: BookingCount

在往后的AirPrice和AirCreateReservation请求中, 要在转机航段内加入Connection Indicator

```
<air:AirSegment AvailabilityDisplayType="Fare Shop/Optimal Shop" AvailabilitySource="S" OptionalServicesIndicator="false"
PolledAvailabilityOption="Polled avail used" LinkAvailability="true" ParticipantLevel="Secure Sell" ChangeOfPlane="false"
Equipment="320" ETicketability="Yes" Distance="157" FlightTime="60" ArrivalTime="2018-11-26T20:55:00.000+00:00"
DepartureTime="2018-11-26T19:55:00.000+00:00" Destination="MAN" Origin="LHR" FlightNumber="1243" Carrier="CX"
Group="1" Key="aGBhrR7Q2BKARszUDAAAAA==" ProviderCode="1G">
  <air:Connection/>
</air:AirSegment>
```

如欲了解Travelport转机逻辑, 请参考

[https://support.travelport.com/webhelp/uapi/uAPI.htm#Air/Shared\\_Air\\_Topics/AirSegmentConnectionLogic.htm](https://support.travelport.com/webhelp/uapi/uAPI.htm#Air/Shared_Air_Topics/AirSegmentConnectionLogic.htm)

# LOWFARESEARCH RESPONSE (续)

- **BrandList** – 航空公司所提供的品牌信息
  - 提供向上销售/增销及品牌信息资讯

```
<air:BrandList>
  <air:Brand Key="BaNX1obynDKAdQP/QBAAAA==" BrandID="783746" Name="BUSINESS FLEXIBLE" BrandedDetailsAvailable="true"
Carrier="IB">
  <air:Title Type="External" LanguageCode="EN">Business Flexible</air:Title>
  <air:Title Type="Short" LanguageCode="EN">BUSFLEX</air:Title>
  <air:Text Type="Strapline" LanguageCode="EN">Business Flexible</air:Text>
  <air:ImageLocation Type="Agent" ImageWidth="150" ImageHeight="150">https://cdn.travelport.com/iberia/
IB_general_medium_71583.jpg</air:ImageLocation>
</air:Brand>
  <air:Brand Key="BaNX1obynDKAfQP/QBAAAA==" BrandID="708216" Name="ECON CLASSIC" BrandedDetailsAvailable="true" Carrier="QR">
  <air:Title Type="External" LanguageCode="EN">Economy Classic</air:Title>
  <air:Title Type="Short" LanguageCode="EN">EcoCL</air:Title>
  <air:Text Type="MarketingAgent" LanguageCode="EN">Economy Classic includes
- Checked baggage 25kg - carry on 7kg (1 piece)
- 50% Qmiles accumulation
- Refund to original form of payment (chargeable) - Refund to voucher
- Upgrade with Qmiles
  </air:Text>
  <air:Text Type="Strapline" LanguageCode="EN">The very best deals</air:Text>
  <air:ImageLocation Type="Agent" ImageWidth="150" ImageHeight="150">https://cdn.travelport.com/qatar/
QR_general_medium_193603.jpg</air:ImageLocation>
  <air:ImageLocation Type="Consumer" ImageWidth="150" ImageHeight="150">https://cdn.travelport.com/qatar/
QR_general_medium_193603.jpg</air:ImageLocation>
</air:Brand>
```

• Please note that if the flight is operated by another airline then the on-board product or service maybe different to that described above.</air:Text>

# LOWFARESEARCH – 总结与Q&A

- LowFareSearch以从价格优先的模式搜索行程组合，满足价格敏感的旅客
- LowFareSearch一系列的参数，可被用于调节航司，航班类型，旅客类型，私有运价等参数，以影响Response结果
- LowFareSearch Response包含行程的定价，航班，运价等详细细节。
- 定价详情可以以价格点(PricePoint)或定价方案(PricingSolution)返回
- Q&A

TRAVELPORT

# 建立搜索缓存 SHOPPING CACHE

改善代理查订比(Agency Look-to-Book)



# 搜索缓存(SHOPPING CACHE)

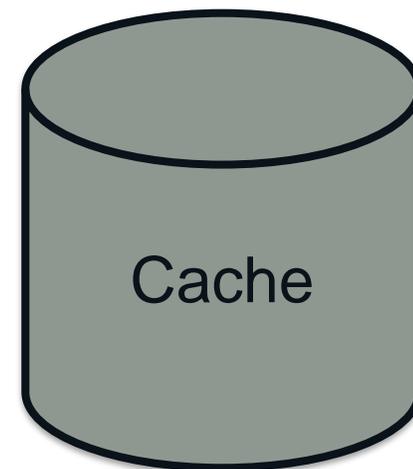
建立搜索缓存的目的,是为了减少查询量及查订比,以防止超过合约上签订的额度。

以下是搜索缓存最佳实践指引,请根据 贵公司的需要去适当地调节,不宜将短期内出发的航班(例如即日及明日)之舱位放进缓存系统,所有缓存数据需有过期失效功能,保存期限设为 X 分钟,建议根据出发日期来设定保存期限为X (出发日期越近, X 值越小)

举例:

- 出发日期至今90天以内, X为15分钟
- 出发日期至今90天~120天, X为25分钟
- 出发日期至今120天以上, X为120分钟
- 出行高峰日期, X可设定为更小值舱位

缓存数据只应该来自同一个**POS**的PCC存取

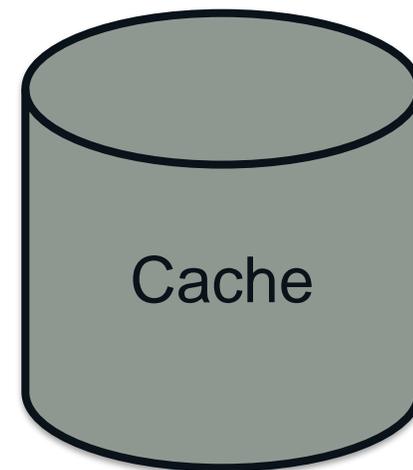


今日日期	出发日期	缓存
1Jan21	1Jan21	N
	2Jan21	N
3-90天	3Jan-1Apr21	Y – 15mins
91-120天	2Apr-1May21	Y – 25mins
120天以上	2May21-Open	Y – 120mins

# 搜索缓存(SHOPPING CACHE)

以下是搜索缓存最佳实践指引，请根据 贵司需要适当调节：

- 不应该把中转或往返航班的舱位数据分割储存
- 不应该把来自其他GDS的缓存数据应用到1G
- 不建议把Flex Shopping 舱位数据放入缓存
- 当遇到预定失败或者价格变化时，应立即清空相关缓存数据
- 当成功预定一个行程后，也应立即清空相关缓存数据
- 如使用缓存，在AirPrice请求中，务必将Availability Source改为（建议设定为 X）以资识别



\*如欲了解更多Travelport Availability Source，请参考

[https://support.travelport.com/webhelp/uapi/Content/Air/Shared\\_Air\\_Topics/Air\\_Availability\\_Source.htm](https://support.travelport.com/webhelp/uapi/Content/Air/Shared_Air_Topics/Air_Availability_Source.htm)

Code	Description
A	AVS
X	Customer Reusing Availability Data from Customer Cache (Data Originally Obtained from Travelport)

 TRAVELPORT

# AIRPRICE

查询最实时的票价与舱位



# AIRPRICE REQUEST

```
<air:AirPriceReq CheckFlightDetails="true" FareRuleType="short" TraceId="ABCTravel20180709000001" TargetBranch="P7025810"
AuthorizedBy="user" xmlns:com="http://www.travelport.com/schema/common_v45_0"
xmlns:air="http://www.travelport.com/schema/air_v45_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  - <air:AirItinerary>
    <air:AirSegment AvailabilityDisplayType="Fare Shop/Optimal Shop" AvailabilitySource="S" OptionalServicesIndicator="false"
      PolledAvailabilityOption="Polled avail used" LinkAvailability="true" ParticipantLevel="Secure Sell" ChangeOfPlane="false"
      Equipment="77W" ETicketability="Yes" Distance="5965" FlightTime="790" ArrivalTime="2018-11-17T20:15:00.000+00:00"
      DepartureTime="2018-11-17T15:05:00.000+08:00" Destination="LHR" Origin="HKG" FlightNumber="253" Carrier="CX"
      Group="0" Key="aGBhrR7Q2BKA7rzUDAAAAA==" ProviderCode="1G"/>
    - <air:AirSegment AvailabilityDisplayType="Fare Shop/Optimal Shop" AvailabilitySource="S" OptionalServicesIndicator="false"
      PolledAvailabilityOption="Polled avail used" LinkAvailability="true" ParticipantLevel="Secure Sell" ChangeOfPlane="false"
      Equipment="320" ETicketability="Yes" Distance="157" FlightTime="60" ArrivalTime="2018-11-26T19:55:00.000+00:00"
      DepartureTime="2018-11-26T19:55:00.000+00:00" Destination="MAN" Origin="LHR" FlightNumber="216" Carrier="CX"
      Group="1" Key="aGBhrR7Q2BKARszUDAAAAA==" ProviderCode="1G"/>
    <air:Connection/>
  </air:AirItinerary>
  - <air:AirPricingModifiers FaresIndicator="AllFares" InventoryRequestType="DirectAccess">
    + <air:AccountCodes>
    </air:AirPricingModifiers>
    <com:SearchPassenger Code="ADT" BookingTravelerRef="ADT1"/>
    <com:SearchPassenger Code="ADT" BookingTravelerRef="ADT2"/>
    <com:SearchPassenger Code="CNN" BookingTravelerRef="CNN1" Age="8"/>
  - <air:AirPricingCommand>
    <air:AirPricingModifiers ETicketability="Required"/>
    + <air:AirSegmentPricingModifiers AirSegmentRef="aGBhrR7Q2BKA7rzUDAAAAA==">
    + <air:AirSegmentPricingModifiers AirSegmentRef="aGBhrR7Q2BKARszUDAAAAA==">
    + <air:AirSegmentPricingModifiers AirSegmentRef="aGBhrR7Q2BKATszUDAAAAA==">
  </air:AirPricingCommand>
</air:AirPriceReq>
```

根据LFS Response加入Connection indicator

设InventoryRequestType="DirectAccess"以查询航司可能提供最准确级别的舱位数量

务必准确填写PTC (Passenger Type Code), 以获取正确的票价与舱位 (Availability)



# AIRPRICE REQUEST

```
<air:AirPriceReq CheckFlightDetails="true" FareRuleType="short" TraceId="A1
AuthorizedBy="user" xmlns:com="http://www.travelport.com/schema/c
xmlns:air="http://www.travelport.com/schema/air_v45_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  + <air:AirItinerary>
    <air:AirPricingModifiers FaresIndicator="AllFares" InventoryRequestType="
      - <air:AccountCodes>
        <com:AccountCode Code="ACCT1"/>
      </air:AccountCodes>
    </air:AirPricingModifiers>
    <com:SearchPassenger Code="ADT" BookingTravelerRef="ADT1"/>
    <com:SearchPassenger Code="ADT" BookingTravelerRef="ADT2"/>
    <com:SearchPassenger Code="CNN" BookingTravelerRef="CNN1" Age="8"/>
  - <air:AirPricingCommand>
    <air:AirPricingModifiers ETicketability="Required"/>
    - <air:AirSegmentPricingModifiers AirSegmentRef="aGBhrR7Q2BKA7rzUDAAAAA==">
      - <air:PermittedBookingCodes>
        <air:BookingCode Code="S"/>
      </air:PermittedBookingCodes>
    </air:AirSegmentPricingModifiers>
    + <air:AirSegmentPricingModifiers AirSegmentRef="aGBhrR7Q2BKARszUDAAAAA==">
    + <air:AirSegmentPricingModifiers AirSegmentRef="aGBhrR7Q2BKATs7UDAAAAA==">
  </air:AirPricingCommand>
</air:AirPriceReq>
```

FaresIndicator可控制查询的运价类型:

- AllFares: 所有运价
- PublicFaresOnly: 只有公布运价
- PrivateFaresOnly: 只有私有运价
- AgencyPrivateFaresOnly: 只有经APF工具录入的私有运价
- AirlinePrivateFaresOnly: 只有航司提供的私有运价
- NetFaresOnly: 只有Net Fares运价
- PublicAndPrivateFares: 只有公布和私有运价

在此输入Account Code, AirPrice只会查询第一个Account Code

## <PermittedBookingCodes>

- BookingCode会应用于所有航段
- 如不指定, AirPrice会返回最便宜的票价, Booking Code可能会变化

# AIRPRICE REQUEST

```
<air:AirPriceReq CheckFlightDetails="true" TraceId="ABCTravel20180709000001"
```

如设**CheckFlightDetails=true**，机内服务(如餐点、多媒体娱乐)细节会出现在AirPrice Response中

```
- <air:FlightDetails Equipment="77W" TravelTime="790" FlightTime="790" ArrivalTime="2018-11-17T20:15:00.000+00:00" DepartureTime="2018-11-17T15:05:00.000+08:00" Destination="LHR" Origin="HKG" Key="75ClrR3R2BKACokVDAAAAA==" AutomatedCheckin="false" DestinationTerminal="3" OriginTerminal="1">
```

```
<air:Meals>Dinner</air:Meals>  
<air:Meals>Lunch</air:Meals>  
<air:InFlightServices>Movie</air:InFlightServices>  
<air:InFlightServices>Telephone</air:InFlightServices>  
<air:InFlightServices>Audio Programming</air:InFlightServices>  
<air:InFlightServices>Duty Free Sales</air:InFlightServices>  
<air:InFlightServices>Non-smoking</air:InFlightServices>  
<air:InFlightServices>Short Feature Video</air:InFlightServices>  
<air:InFlightServices>In-Seat Power Source</air:InFlightServices>  
<air:InFlightServices>In-seat Video Player/Library</air:InFlightServices>
```

```
</air:FlightDetails>
```

# AIRPRICE REQUEST

```
<air:AirPriceReq AuthorizedBy="user" TargetBranch="P2944662" TraceId="ABCTravel20180709000001"
xmlns:com="http://www.travelport.com/schema/common_v50_0" xmlns:air="http://www.travelport.com/schema/air_v50_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  + <air:AirItinerary>
    <air:AirPricingModifiers ReturnFailedSegments="true" FaresIndicator="PublicAndPrivateFares" InventoryRequestType="DirectAccess"/>
    <com:SearchPassenger Key="AQZo18kJOBKAJR/WXAAAAA==" Code="ADT"/>
```

设定ReturnFailedSegments="true" 可以在有验仓 (InventoryRequestType 为 DirectAccess/Seamless时), 如果验仓失败, 它会返回哪个航段没有位置.

```
<SOAP:Fault xmlns:SOAP="http://schemas.xmlsoap.org/soap/envelope/">
  <faultcode>Server.Business</faultcode>
  <faultstring>BOOKING CLASS/PREFERENCE NOT AVAIL CHECK AVAILABILITY</faultstring>
  - <detail>
    - <air:AvailabilityErrorInfo xmlns:common_v50_0="http://www.travelport.com/schema/common_v50_0"
      xmlns:air="http://www.travelport.com/schema/air_v50_0">
      <common_v50_0:Code>3000</common_v50_0:Code>
      <common_v50_0:Service>AIRSVC</common_v50_0:Service>
      <common_v50_0:Type>Business</common_v50_0:Type>
      <common_v50_0:Description>BOOKING CLASS/PREFERENCE NOT AVAIL CHECK AVAILABILITY</common_v50_0:Description>
      <common_v50_0:TransactionId>2A9A81F70A0E7C790F07A9F62FE0029E</common_v50_0:TransactionId>
      <common_v50_0:TraceId>ABCTravel20180709000001</common_v50_0:TraceId>
      <air:AirSegmentError>
        <air:AirSegment OptionalServicesIndicator="false" ChangeOfPlane="false" ClassOfService="Y" DepartureTime="2021-11-
          20T08:30:00.000+08:00" Destination="BKK" Origin="HKG" FlightNumber="0705" Carrier="CX" Group="0"
          Key="AQZo18kJOBKAJR/WXAAAAA==" />
        <air:ErrorMessage>BOOKING CLASS/PREFERENCE NOT AVAIL CHECK AVAILABILITY</air:ErrorMessage>
      </air:AirSegmentError>
    </air:AvailabilityErrorInfo>
  </detail>
</SOAP:Fault>
```

# AIRPRICE REQUEST

## Fare Basis Code

```
<air:AirPriceReq xmlns:com="http://www.travelport.com/schema/common_v52_0" xmlns:air="http://www.travelport.com/schema/air_v52_0">
  MostRestrictivePenalties="true" TraceId="trace" TargetBranch="P2944662" AuthorizedBy="system">
    <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
    + <air:AirItinerary>
      <air:AirPricingModifiers PlatingCarrier="MU" InventoryRequestType="Basic"/>
      <com:SearchPassenger BookingTravelerRef="ADT1" Code="ADT"/>
    - <air:AirPricingCommand>
      <air:AirPricingModifiers ETicketability="Required"/>
      - <air:AirSegmentPricingModifiers FareBasisCode="VLE4WCSS" AirSegmentRef=
        - <air:PermittedBookingCodes>
          <air:BookingCode Code="V"/>
        </air:PermittedBookingCodes>
      </air:AirSegmentPricingModifiers>
      - <air:AirSegmentPricingModifiers FareBasisCode="VLE4WCSS" AirSegmentRef=
        - <air:PermittedBookingCodes>
          <air:BookingCode Code="V"/>
        </air:PermittedBookingCodes>
      </air:AirSegmentPricingModifiers>
    </air:AirPricingCommand>
  </air:AirPriceReq>
```

AirPrice默认返回最平宜并有效的票价, 如果你想指定Fare Basis, 也可以在FareBasisCode \*在中设定了Fare Basis编码

\* 如果有多个相同Fare使用相同Fare Basis编码, 系统默认会使用最平宜那个

```
- <air:FareInfo Destination="KMG" Origin="SIN" Key=
  DepartureDate="2022-07-02" EffectiveDate="2022-
    <common_v52_0:Endorsement Value="Q/NON-E
    <common_v52_0:Endorsement Value="STANDAF
    <air:FareRuleKey ProviderCode="1G"
      FareInfoRef="uVeH6Db0nDKA2k1OBWBAA
    - <air:FareRuleFailureInfo>
      <air:Reason>RoutingFailure</air:Reason>
    </air:FareRuleFailureInfo>
```

在这个例子中, 有2个fare (第2和第5行 fare)都使用fare basis 编码“VLE4WCSS”, 系统默认只会用第2行那个, 但如果只有第5行贵的那个才适用, AirPriceRsp会在FareInfo返回 FareRuleFailureInfo, 解决方法请参考下一页

```
>
FARES LAST UPDATED 06JUN 5:10 A
MU SIN-KMG DEPART 07JUL
MPM 1975 EH
**ADDITIONAL TAXES/FEES MAY APPLY**
PUBLIC FARES
CX FARE FARE C AP MIN/ SEASONS..... MR GI DT
SGD BASIS MAX
SINKMG
1 MU 232.00 VLE5WBLS V 14 08JUN2-08JUL2 R EH
2 MU 252.00 VLE4WCSS V 7 08JUN2-08JUL2 R EH
3 MU 272.00 VKE5WBLS V 14 25JUN2-16AUG2 R EH
4 MU 272.00 VLE0WCFS V 08JUN2-08JUL2 R EH
5 MU 280.00 VLE4WCSS V 7 08JUN2-08JUL2 R EH
6 MU 292.00 VKE4WCSS V 7 25JUN2-16AUG2 R EH
```



# AIRPRICE REQUEST

## Fare Basis Code (续)

```
<air:AirPriceReq xmlns:com="http://www.travelport.com/schema/common_v52_0" xmlns:air="http://www.travelport.com/schema/air_v52_0"
  FareRuleValidation="true" MostRestrictivePenalties="true" TraceId="trace" TargetBranch="P2944662" AuthorizedBy="system">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  + <air:AirItinerary>
    <air:AirPricingModifiers PlattingCarrier="MU" InventoryRequestType="Basic"/>
    <com:SearchPassenger BookingTravelerRef="ADT1" Code="ADT"/>
  - <air:AirPricingCommand>
    <air:AirPricingModifiers ETicketability="Required"/>
    - <air:AirSegmentPricingModifiers FareBasisCode="VLE4WCSS" AirSegmentRef="HmMf/yPxnDKAU0QBAAAAAA==">
      - <air:PermittedBookingCodes>
        <air:BookingCode Code="V"/>
      </air:PermittedBookingCodes>
    </air:AirSegmentPricingModifiers>
    - <air:AirSegmentPricingModifiers FareBasisCode="VLE4WCSS" AirSegmentRef="HmMf/yPxnDKAW0QBAAAAAA==">
      - <air:PermittedBookingCodes>
        <air:BookingCode Code="V"/>
      </air:PermittedBookingCodes>
    </air:AirSegmentPricingModifiers>
  </air:AirPricingCommand>
</air:AirPriceReq>
```

在uapi的schema v52 (或之后) 加了一个新参数**FareRuleValidation**, 当设成true会强制要求只返回有效的Fare, 强烈建议如果你有在AirPriceReq中设定FareBasisCode的话, 要加上FareRuleValidation="true"

p.s. 它的功能和HOST >FQ参数 /VR一样: >FQ@VLE4WCSS/VR

# AIRPRICE REQUEST

```
<air:AirPricingModifiers ReturnServices="false" FaresIndicator="AllFares" InventoryRequestType="DirectAccess">  
- <air:BrandModifiers>  
  <air:BasicDetailsOnly ReturnBasicDetails="true"/>  
  </air:BrandModifiers>  
</air:AirPricingModifiers>
```

在请中可以加入以下以设定以控制升舱及附加服务的返回:

- ReturnServices="false": 不返回附加服务, 默认为false
- ReturnBasicDetails="true": 只返回基本票价描述(Branding)资料(并最多返回一个升舱内容)

# AIRPRICE RESPONSE

```
<air:AirPriceRsp xmlns:common_v45_0="http://www.travelport.com/schema/common_v45_0"
xmlns:air="http://www.travelport.com/schema/air_v45_0" ResponseTime="24071"
TransactionId="7E0767C30A0764778137E33C5973B87E" TraceId="ABCTravel20180709000001">
  <common_v45_0:ResponseMessage ProviderCode="1G" Type="Warning" Code="710401">Taxes returned at the FareInfo level are for
  informational purposes only, and may differ from those returned at the Itinerary/Passenger Type
  levels.</common_v45_0:ResponseMessage>
  <common_v45_0:ResponseMessage Type="Warning" Code="4400">No Merchandising optional services returned for Flight(s) [CX][253]
  </common_v45_0:ResponseMessage>
  <common_v45_0:ResponseMessage Type="Warning" Code="4400">No Merchandising optional services returned for Flight(s) [CX]
  [1243]</common_v45_0:ResponseMessage>
  <common_v45_0:ResponseMessage Type="Warning" Code="4400">No Merchandising optional services returned for Flight(s) [CX][216]
  </common_v45_0:ResponseMessage>
  + <air:AirItinerary>
  - <air:AirPriceResult>
    + <air:AirPricingSolution Key="75ClrR3R2BKAHokVDAAAAA==" QuoteDate="2018-07-09" ApproximateTaxes="HKD3412" Fees="HKD0"
    Taxes="HKD3412" ApproximateBasePrice="HKD18230" ApproximateTotalPrice="HKD21642" BasePrice="HKD18230"
    TotalPrice="HKD21642">
    </air:AirPriceResult>
</air:AirPriceRsp>
```

- Airltinerary: 行程细节 (可复制到AirCreateReservation请求中)
- AirPriceResult: 可用的价格
  - AirPricingSolution: 包含所有信息, 如价格, 税项, 行李, 运价规则等重要信息。
  - AirPricingInfo: 价格根据PTC (旅客类型)细分, 每个AirPricingInfo反映了所有同PTC乘客的价格
  - 1st Pricing Solution: 根据AirPrice Request中请求的内容定价
  - 2nd Pricing Solution: 增销(Upsell)的选项

# AIRPRICE RESPONSE

```
- <air:BaggageAllowances>
  - <air:BaggageAllowanceInfo Destination="LAX" Origin="HKG" Carrier="HX" TravelerType="ADT">
    - <air:URLInfo>
      <air:URL>MYTRIPANDMORE.COM/BAG
    </air:URLInfo>
    - <air:TextInfo>
      <air:Text>2P</air:Text>
      <air:Text>BAGGAGE DISCOUNTS MAY APPLY BASED ON FREQUENT FLYER STATUS/ ONLINE CHECKIN/FORM OF PAYMENT/MILITARY/ETC.</air:Text>
    </air:TextInfo>
    - <air:BagDetails ApproximateBasePrice="HKD0" ApproximateTotalPrice="HKD0" BasePrice="HKD0" TotalPrice="HKD0" ApplicableBags="1stChecked">
      - <air:BaggageRestriction>
        - <air:TextInfo>
          <air:Text>UPTO50LB/23KG AND UPTO62LI/158LCM</air:Text>
        </air:TextInfo>
      </air:BaggageRestriction>
    </air:BagDetails>
    - <air:BagDetails ApproximateBasePrice="HKD0" ApproximateTotalPrice="HKD0" BasePrice="HKD0" TotalPrice="HKD0" ApplicableBags="1stChecked">
      - <air:BaggageRestriction>
        - <air:TextInfo>
          <air:Text>UPTO50LB/23KG AND UPTO62LI/158LCM</air:Text>
        </air:TextInfo>
      </air:BaggageRestriction>
    </air:BagDetails>
  </air:BaggageAllowanceInfo>
  - <air:CarryOnAllowanceInfo Destination="LAX" Origin="HKG" Carrier="HX">
    - <air:TextInfo>
      <air:Text>1P</air:Text>
    </air:TextInfo>
    - <air:CarryOnDetails ApproximateBasePrice="HKD0" ApproximateTotalPrice="HKD0" BasePrice="HKD0" TotalPrice="HKD0" ApplicableCarryOnBags="1">
      - <air:BaggageRestriction>
        - <air:TextInfo>
          <air:Text>UPTO15LB/7KG AND UPTO45LI/115LCM</air:Text>
        </air:TextInfo>
      </air:BaggageRestriction>
    </air:CarryOnDetails>
  </air:CarryOnAllowanceInfo>
</air:BaggageAllowances>
```

行李主单位: 可以是重量 或 件数

行李信息可在<AirPricingInfo> / <BaggageAllowances>找到。  
\*数据由航司提供, 格式根据航司的不同会变化

行李明细备注: 由航司输入, 如行李主单位为件数, 多数会放重量相关信息在此



# AIRPRICE RESPONSE – 错误

- 常见错误:

- 如果设InventoryRequestType="DirectAccess"但航司没有剩余仓位，AirPrice响应会报错并给出理由。

```
<SOAP:Fault xmlns:SOAP="http://schemas.xmlsoap.org/soap/envelope/">
  <faultcode>Server.System</faultcode>
  <faultstring>000276 BOOKING CLASS/PREFERENCE NOT AVAIL CHECK AVAILABILITY </faultstring>
  - <detail>
    - <common_v34_0:ErrorInfo xmlns:common_v34_0="http://www.travelport.com/schema/common_v34_0">
      <common_v34_0:Code>3319</common_v34_0:Code>
      <common_v34_0:Service>WEBSVC</common_v34_0:Service>
      <common_v34_0:Type>System</common_v34_0:Type>
      <common_v34_0:Description>Booking Class/Preference not avail, check
        availability.</common_v34_0:Description>
      <common_v34_0:TransactionId>311491AF0A0759BFFA823F8F44E96C37</common_v34_0:TransactionId>
      <common_v34_0:TraceId>uAPI5898906289-500e9dd6</common_v34_0:TraceId>
    </common_v34_0:ErrorInfo>
  </detail>
</SOAP:Fault>
```

# AIRPRICE RESPONSE - 错误

- 常见错误:

- 请求的条件没有有效的票价
- 也可以因为运价类型FaresIndicator设私有运价, 但运价基础代码FareBasisCode又引用公布运价

```
</air:Airtinerary>
<air:AirPricingModifiers InventoryRequestType="DirectAccess" FaresIndicator="PrivateFaresOnly"
PlatingCarrier="MS" />
<com:SearchPassenger Code="ADT" BookingTravelerRef="ADT1" />
<air:AirPricingCommand>
  <air:AirPricingModifiers ETicketability="Required" />
  <air:AirSegmentPricingModifiers AirSegmentRef="Seq1" FareBasisCode="LKRTUS" - Private Fare
    <air:PermittedBookingCodes>
      <air:BookingCode Code="L" />
    </air:PermittedBookingCodes>
  </air:AirSegmentPricingModifiers>
  <air:AirSegmentPricingModifiers AirSegmentRef="Seq2" FareBasisCode="LNIEG" - Publish Fare
    <air:PermittedBookingCodes>
      <air:BookingCode Code="L" />
    </air:PermittedBookingCodes>
  </air:AirSegmentPricingModifiers>
```

```
<SOAP:Fault xmlns:SOAP="http://schemas.xmlsoap.org/soap/envelope/">
  <faultcode>Server.System</faultcode>
  <faultstring>NO VALID FARE FOR INPUT CRITERIA</faultstring>
  <detail>
    - <common_v40_0:ErrorInfo xmlns:common_v40_0="http://www.travelport.com/schema/common_v40_0">
      <common_v40_0:Code>-1</common_v40_0:Code>
      <common_v40_0:Service>AirPriceService</common_v40_0:Service>
      <common_v40_0:Type>System</common_v40_0:Type>
      <common_v40_0:Description>NO VALID FARE FOR INPUT CRITERIA</common_v40_0:Description>
      <common_v40_0:TransactionId>275E75610A0759C78FBA79C38022D2DC</common_v40_0:TransactionId>
      <common_v40_0:TraceId>4743818520160216135742868345</common_v40_0:TraceId>
    </common_v40_0:ErrorInfo>
  </detail>
</SOAP:Fault>
```

# AIRPRICE – 总结与Q&A

- AirPrice可以根据Request内要求的条件，提供可用的、最便宜的价钱
- AirPrice可以查询公布运价与私有运价
- AirPrice可以与航司查询仓位 (Availability)
- AirPricingSolutions根据PTC类型(成人，小孩)细分
- 增销(UpSell)选项亦会被返回



# AVAILABILITY SEARCH

获取OD或指定航班各仓位的数量



# AVAILABILITYSEARCH REQUEST (根据 OD)

## ■ 根据出发地和目的地搜索

```
<air:AvailabilitySearchReq TargetBranch="P2944662" xmlns:air="http://www.travelport.com/schema/air_v49_0"
xmlns:com="http://www.travelport.com/schema/common_v49_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <com:PointOfCommencement Time="2021-01-10" CityOrAirportCode="HKG"/>
  - <air:SearchAirLeg>
    - <air:SearchOrigin>
      <com:City Code="HKG"/>
    </air:SearchOrigin>
    - <air:SearchDestination>
      <com:City Code="BKK"/>
    </air:SearchDestination>
    <air:SearchDepTime PreferredTime="2021-01-10"/>
    - <air:AirLegModifiers AllowDirectAccess="false">
      - <air:PermittedCarriers>
        <com:Carrier Code="CX"/>
      </air:PermittedCarriers>
    </air:AirLegModifiers>
  </air:SearchAirLeg>
  - <air:AirSearchModifiers ExcludeGroundTransportation="true" PreferNonStop="true">
    - <air:PreferredProviders>
      <com:Provider Code="1G"/>
    </air:PreferredProviders>
    <air:FlightType TripleInterlineCon="false" DoubleInterlineCon="true" SingleInterlineCon="true" TripleOnlineCon="false" DoubleOnlineCon="true"
    SingleOnlineCon="true" StopDirects="true" NonStopDirects="true"/>
  </air:AirSearchModifiers>
</air:AvailabilitySearchReq>
```

如果想直接从航司得到仓位数据，可以设置 AllowDirectAccess为true(默认为false)。但必须指定一个航司为PermittedCarriers

由于AvailabilitySearch会返回大量结果，建议设定 PermittedCarriers来减少返回的航段数目

# AVAILABILITYSEARCH RESPONSE (根据 OD)

## ■ 根据出发地和目的地搜索

```
<air:AvailabilitySearchRsp xmlns:common_v36_0="http://www.travelport.com/schema/common_v36_0"
xmlns:air="http://www.travelport.com/schema/air_v36_0" DistanceUnits="MI" ResponseTime="439"
TransactionId="6CCBEEE80A0759BE43B0443CA2E4C9AF">
  <common_v36_0:NextResultReference>H4sIAAAAAAAAAAJ1UTUwTQRR+bSl/ogQwxGAEjUa4uNtSpFTwoICItkBs46G
+ <air:FlightDetailsList>
- <air:AirSegmentList>
  - <air:AirSegment Equipment="320" TravelTime="100" FlightTime="100" ArrivalTime="2017-03-
10T09:45:00.000+08:00" DepartureTime="2017-03-10T08:05:00.000+08:00" Destination="TPE" Origin="HKG"
Key="rtDQqhBAAA/BvoA4FFAAAA==" AvailabilityDisplayType="General" AvailabilitySource="S"
OptionalServicesIndicator="false" PolledAvailabilityOption="Polled avail used" LinkAvailability="true"
ParticipantLevel="Secure Sell" ChangeOfPlane="false" ETicketability="Yes" FlightNumber="5486" Carrier="CX"
Group="0">
  <air:CodeshareInfo OperatingFlightNumber="486" OperatingCarrier="KA">HONG KONG DRAGON
  AIRLINE</air:CodeshareInfo>
  - <air:AirAvailInfo ProviderCode="1G">
    <air:BookingCodeInfo BookingCounts="Y9|B9|H9|K9|M9|L9|V9|S9|NL|OL" CabinClass="Economy"/>
  </air:AirAvailInfo>
  <air:FlightDetailsRef Key="rtDQqhBAAA/BvoA4FFAAAA==" />
</air:AirSegment>
```

如需下一页的搜索结果，可在下一个请求内加上  
NextResultReference令牌

```
<air:AvailabilitySearchReq TargetBranch="P2690600" xmlns:air="http://www.travelport.com/schema/air_v36_0"
xmlns:com="http://www.travelport.com/schema/common_v36_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <com:NextResultReference
    ProviderCode="1G">H4sIAAAAAAAAAAJ1UTUwTQRR+bSl/ogQwxGAEjUa4uNtSpFTwoICItkBs46GEw7A7XQa3
  . . . . .
```

# AVAILABILITYSEARCH RESPONSE (根据 OD) – NEUTRAL DISPLAY

- 如何判断AvailabilitySearch结果为最后一页 (Neutral Display: 当AllowDirectAccess=**false**)

```
<air:AvailabilitySearchRsp xmlns:common_v49_0="http://www.travelport.com/schema/common_v49_0"
xmlns:air="http://www.travelport.com/schema/air_v49_0" DistanceUnits="MI" ResponseTime="709"
TransactionId="B9C5B81F0A0759D8003033927357AD3C">
  <common_v49_0:ResponseMessage Type="Warning" Code="3051">No more later flights.</common_v49_0:ResponseMessage>
```

在响应中如果出现“No more later flights”警告，那么这就是AvailabilitySearch结果的最后一页

# AVAILABILITYSEARCH RESPONSE (根据 OD) – DIRECT ACCESS

- 如何判断AvailabilitySearch结果为最后一页 (Direct Access:当AllowDirectAccess=**true**)
- 每个航司会通过不同的方式, 告知已返回所有分页仓位数据。在上线前需要对航司进行逐一测试, 以下是一些常见的例子。

```
<air:AvailabilitySearchRsp xmlns:common_v49_0="http://www.travelport.com/schema/common_v49_0"
xmlns:air="http://www.travelport.com/schema/air_v49_0" DistanceUnits="MI" ResponseTime="709"
TransactionId="B9C5B81F0A0759D8003033927357AD3C">
  <common_v49_0:ResponseMessage Type="Warning" Code="3051">No more later flights.</common_v49_0:ResponseMessage>
```

例子: XML中通过'Nor More later flights'的fault或Warning响应讯息告知已显示所有结果

```
<SOAP:Fault xmlns:SOAP="http://schemas.xmlsoap.org/soap/envelope/">
  <faultcode>Server.System</faultcode>
  <faultstring>No more later flights. Carriers: CX </faultstring>
  + <detail>
</SOAP:Fault>
```

# AVAILABILITYSEARCH RESPONSE (根据 OD) – DIRECT ACCESS

- 如何判断AvailabilitySearch结果为最后一页 (Direct Access:当AllowDirectAccess=**true**)
- 例子2: 航司开始返回其他日期的仓位数据

部分航司会开始返回与请求日期不同的其他日期的仓位数据, 这也代表请求日期的仓位数据已经结束。

请求日期: 2021-01-10

返回日期: 2020-06-14

```
<air:SearchAirLeg>
- <air:SearchOrigin>
  <com:City Code="HKG"/>
</air:SearchOrigin>
- <air:SearchDestination>
  <com:City Code="BKK"/>
</air:SearchDestination>
<air:SearchDepTime PreferredTime="2021-01-10"/>
```

```
<common_v49_0:NextResultReference>H4sIAAAAAAAAAAJ1UzU/UQBR/u8sKKEoAJQajaDSiB9pll68VL/IhIuUjLvGwhMOwn!
+ <air:FlightDetailsList>
- <air:AirSegmentList>
- <air:AirSegment Equipment="319" TravelTime="55" FlightTime="55" ArrivalTime="2020-06-14T08:45:00.000+07:00"
  DepartureTime="2020-06-14T07:50:00.000+07:00" Destination="REP" Origin="PNH"
  Key="XWMTvGBAAA/Bh0VZIBAAAA==" AvailabilityDisplayType="Carrier Specific/Direct Access" AvailabilitySource="D"
  OptionalServicesIndicator="false" PolledAvailabilityOption="Polled avail used" LinkAvailability="true"
  ParticipantLevel="Secure Sell" ChangeOfPlane="false" ETicketability="Yes" FlightNumber="801" Carrier="KR" Group="0">
- <air:AirAvailInfo HostTokenRef="XWMTvGBAAA/Bh0VZIBAAAA==" ProviderCode="1G">
  <air:BookingCodeInfo BookingCounts="Y9|B9|M9|U9|HR|WR|QR|VR|LR|TR|KR|IR|RR|GR|XR"
```

# AVAILABILITYSEARCH RESPONSE (根据航段)

- 根据指定航段搜索

```
<air:AvailabilitySearchReq xmlns:air="http://www.travelport.com/schema/air_v38_0" TargetBranch="TargetBranch"
AuthorizedBy="user" TraceId="20160317143834"
xmlns:com="http://www.travelport.com/schema/common_v38_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <air:SearchSpecificAirSegment Destination="NRT" Origin="JFK" FlightNumber="8402" Carrier="AA"
    DepartureTime="2017-01-12"/>
  <air:SearchSpecificAirSegment Destination="HKG" Origin="NRT" FlightNumber="8417" Carrier="AA"
    DepartureTime="2017-01-13" SegmentIndex="0"/>
</air:AvailabilitySearchReq>
```

**Segment Index="0"**指的是第一个航段是这一航段的接驳航段  
第一个航段: JFK -> NRT, 2017-01-12  
第二个航段: NRT -> HKG, 2017-01-13, SegmentIndex="0"

# AVAILABILITYSEARCH RESPONSE (根据航段)

## ■ 根据指定航段搜索

```
<air:AvailabilitySearchRsp xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
xmlns:air="http://www.travelport.com/schema/air_v38_0" DistanceUnits="MI" ResponseTime="373"
TransactionId="F2DC9FFB0A07425E5833449358932826" TraceId="20160317143834">
  <common_v38_0:ResponseMessage ProviderCode="ACH" Type="Error" Code="2011"> [ACH] Provider error:
    SearchSpecificAirSegment is not supported for ACH.</common_v38_0:ResponseMessage>
  + <air:FlightDetailsList>
  + <air:AirSegmentList>
  + <air:AirItinerarySolution Key="zqyzFjBAAA/BJ7uSUHAAAA==">
</air:AvailabilitySearchRsp>
```

## ■ AirSegmentList

```
<air:AirSegmentList>
- <air:AirSegment Equipment="773" TravelTime="1275" FlightTime="860" ArrivalTime="2017-01-
13T16:35:00.000+09:00" DepartureTime="2017-01-12T12:15:00.000-05:00" Destination="NRT" Origin="JFK"
Key="zqyzFjBAAA/BG7uSUHAAAA==" AvailabilityDisplayType="Flight Specific" AvailabilitySource="S"
OptionalServicesIndicator="false" PolledAvailabilityOption="Polled avail used" LinkAvailability="true"
ParticipantLevel="Secure Sell" ChangeOfPlane="false" ETicketability="Yes" FlightNumber="8402" Carrier="AA"
Group="0">
  <air:CodeshareInfo OperatingFlightNumber="5" OperatingCarrier="JL"/>
  - <air:AirAvailInfo ProviderCode="1G">
    <air:BookingCodeInfo BookingCounts="F7|A7" CabinClass="First"/>
    <air:BookingCodeInfo BookingCounts="J7|R7|D7|I7" CabinClass="Business"/>
    <air:BookingCodeInfo BookingCounts="Y7|H7|K7|M7|L7|G7|V7|S7|N7|Q7|O7" CabinClass="Economy"/>
    <air:BookingCodeInfo BookingCounts="W7" CabinClass="PremiumEconomy"/>
  </air:AirAvailInfo>
  <air:FlightDetailsRef Key="zqyzFjBAAA/BF7uSUHAAAA==" />
</air:AirSegment>
```

各个舱等剩余的座位数量  
e.g. Y仓有7个位置

# AVAILABILITYSEARCH RESPONSE (根据航段)

- 务必要加上<PointOfCommencement>元素
- UAPI会把POC信息，发给使用POC收益管理策略来管理仓位的航司

```
<air:AvailabilitySearchReq xmlns:air="http://www.travelport.com/schema/air_v48_0" TargetBranch="P2944662" AuthorizedBy="user"
xmlns:com="http://www.travelport.com/schema/common_v48_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <com:PointOfCommencement Time="2019-12-24" CityOrAirportCode="HKG"/>
  <air:SearchSpecificAirSegment Destination="NRT" Origin="HKG" FlightNumber="526" Carrier="CX" DepartureTime="2019-12-24"/>
</air:AvailabilitySearchReq>
```

只需填写行程的出发地与日期

# AVAILABILITYSEARCH – 总结与Q&A

- AvailabilitySearch可以根据OD查询航班的舱位数量
- AvailabilitySearch可以通过Direct Access直接向航司系统查询舱位数量
- AvailabilitySearch可以查询指定航段的舱位数量
- AvailabilitySearch可以查询AirPrice的增销(UpSell)选项的舱位数量



 TRAVELPORT

# AIRCREATE RESERVATION

建立PNR并储存价格



# AIRCREATERESERVATION REQUEST – 建立PNR

## ■ XML 请求结构

- 乘客信息(Booking Traveler)
- 旅行社联络信息(AgencyContactInfo)
- 航段信息(AirPricingSolution/AirSegment)
- 票价资料(AirPricingInfo) (选填)
- 出票日期(ActionStatus)

```
<univ:AirCreateReservationReq xmlns:univ="http://www.travelport.com/schema/universal_v45_0"
xmlns:com="http://www.travelport.com/schema/common_v45_0" xmlns:air="http://www.travelport.com/schema/air_v45_0"
AuthorizedBy="user" RetainReservation="Both" TargetBranch="P7025810" TraceId="ABCTravel20180709000001">
  <com:BillingPointOfSaleInfo xmlns:com="http://www.travelport.com/schema/common_v45_0" OriginApplication="UAPI"/>
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="M" Key="ADT1"
  TravelerType="ADT" Age="40">
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="F" Key="ADT2"
  TravelerType="ADT" Age="38">
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="F" Key="CNN1"
  TravelerType="CNN" Age="4" DOB="2014-08-09">
  <com:ContinuityCheckOverride>yes</com:ContinuityCheckOverride>
  + <com:AgencyContactInfo>
  + <com:FormOfPayment xmlns:com="http://www.travelport.com/sch
  + <air:AirPricingSolution Key="75ClrR3R2BKAHokVDAAAAA"
  Taxes="HKD3412" ApproximateBasePrice="HKD19250" ApproximateT
  TotalPrice="HKD21642">
  <com:ActionStatus xmlns:com="http://www.travelport.com/schema/common_v45_0" Type="ACTIVE" ProviderCode="1G"
  TicketDate="T*" />
</univ:AirCreateReservationReq>
```

T\* = 尽快出票, 相当于Galileo指令

T.T\*

es="HKD0"

# AIRCREATERESERVATION REQUEST – 建立PNR

```
<univ:AirCreateReservationReq xmlns:univ="http://www.travelport.com/schema/universal_v45_0"
xmlns:com="http://www.travelport.com/schema/common_v45_0" xmlns:air="http://www.travelport.com/schema/air_v45_0"
AuthorizedBy="user" RetainReservation="Both" TargetBranch="P7025810" TraceId="ABCTravel20180709000001">
  <com:BillingPointOfSaleInfo xmlns:com="http://www.travelport.com/schema/common_v45_0" OriginApplication="UAPI"/>
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="M" Key="ADT1"
  TravelerType="ADT" Age="40">
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="F" Key="ADT2"
  TravelerType="ADT" Age="38">
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="F" Key="CNN1"
  TravelerType="CNN" Age="4" DOB="2014-08-09">
  <com:ContinuityCheckOverride>yes</com:ContinuityCheckOverride>
  + <com:AgencyContactInfo>
  + <com:FormOfPayment xmlns:com="http://www.travelport.com/schema/common_v45_0"
  - <air:AirPricingSolution Key="75ClrR3R2BKAHokVDAAAAA==" QuoteDate="2018-07-09" ApproximateTaxes="HKD3412" Fees="HKD0"
  Taxes="HKD3412" ApproximateBasePrice="HKD18230" ApproximateTotalPrice="HKD21642" BasePrice="HKD18230"
  TotalPrice="HKD21642">
  + <air:AirSegment Key="75ClrR3R2BKABokVDAAAAA==" AvailabilityDisplayType="Fare Specific Fare Quote Unbooked"
  LinkAvailability="true" ParticipantLevel="Secure Sell" OptionalServicesIndicator="false" ChangeOfPlane="false" Equipment="77W"
  ClassOfService="S" Distance="5965" TravelTime="790" FlightTime="790" ArrivalTime="2018-11-17T20:15:00.000+00:00"
  DepartureTime="2018-11-17T15:05:00.000+08:00" Destination="LHR" Origin="HKG" ProviderCode="1G" FlightNumber="253"
  Carrier="CX" Group="0" AvailabilitySource="S">
  - <air:AirSegment Key="75ClrR3R2BKADokVDAAAAA==" AvailabilityDisplayType="Fare Specific Fare Quote Unbooked"
  LinkAvailability="true" ParticipantLevel="Secure Sell" OptionalServicesIndicator="false" ChangeOfPlane="false" Equipment="77W"
  ClassOfService="S" Distance="157" TravelTime="60" FlightTime="60" ArrivalTime="2018-11-26T20:55:00.000+00:00"
  DepartureTime="2018-11-26T19:55:00.000+00:00" Destination="MAN" Origin="LHR" ProviderCode="1G" FlightNumber="253"
  Carrier="CX" Group="1" AvailabilitySource="S">
  <air:CodeshareInfo OperatingCarrier="BA">BRITISH AIRWAYS</air:CodeshareInfo>
  <air:FlightDetails Key="75ClrR3R2BKAEokVDAAAAA==" Equipment="320" TravelTime="60" FlightTime="60" ArrivalTime="2018-11-26T20:55:00.000+00:00"
  DepartureTime="2018-11-26T19:55:00.000+00:00" Destination="MAN" Origin="LHR" AutomatedCheckin="false" DestinationTerminal="3" OriginTerminal="5"/>
  <air:Connection/>
</air:AirSegment>
```

填写从AirPrice响应返回的AvailabilitySource以确保可预定性报告的正确性(Bookability Report)。

AirPrice响应中的AirPricingSolution, 在把AirSegmentRef替换为AirPrice响应中的Airtinerary的AirSegment后, 可以直接在此使用。务必要在要在转机航段内加入Connection Indicator。



# AIRCREATERESERVATION REQUEST – 建立PNR

- XML请求结构

- Group – 分组参数会在AirPrice, AvailabilitySearch, LowFareSearch响应中返回, 用以判断不同航段 (AirSegment)是否属同一航程(AirLeg)。

```
<air:AirSegment Key="97+jfj3R2BKAHEeIAAAAAA==" AvailabilitySource="P" Group="0" Carrier="CX" FlightNumber="251"
  ArrivalTime="2017-05-18T05:40:00.000+01:00" FlightTime="765" TravelTime="765" Distance="5965" ClassOfService=
  LinkAvailability="true" AvailabilityDisplayType="Fare Specific Fare Quote Unbooked"> </air:AirSegment>
<air:AirSegment Key="97+jfj3R2BKAJEeIAAAAAA==" AvailabilitySource="P" Group="1" Carrier="CX" FlightNumber="7143"
  ArrivalTime="2017-05-26T21:20:00.000+02:00" FlightTime="80" TravelTime="80" Distance="
  LinkAvailability="true" AvailabilityDisplayType="Fare Specific Fare Quote Unbooked">
  <air:Connection/>
</air:AirSegment>
<air:AirSegment Key="97+jfj3R2BKALEeIAAAAAA==" AvailabilitySource="P" Group="1" Carrier="CX" FlightNumber="376"
  ArrivalTime="2017-05-28T06:35:00.000+08:00" FlightTime="670" TravelTime="670" Distance="5721" ClassOfService=
  LinkAvailability="true" AvailabilityDisplayType="Fare Specific Fare Quote Unbooked"> </air:AirSegment>
```

去程(Outbound)

回程(Inbound)

# AIRCREATERESERVATION REQUEST – 建立PNR

```
<univ:AirCreateReservationReq xmlns:univ="http://www.travelport.com/schema/universal_v45_0"
xmlns:com="http://www.travelport.com/schema/common_v45_0" xmlns:air="http://www.travelport.com/schema/air_v45_0"
AuthorizedBy="user" RetainReservation="Both" TargetBranch="P7025810" TraceId="ABCTravel20180709000001">
  <com:BillingPointOfSaleInfo xmlns:com="http://www.travelport.com/schema/common_v45_0" OriginApplication="UAPI"/>
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="M" Key="ADT1"
  TravelerType="ADT" Age="40">
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="F" Key="ADT2"
  TravelerType="ADT" Age="38">
  + <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="F" Key="CNN1"
  TravelerType="CNN" Age="4" DOB="2014-08-09">
  <com:ContinuityCheckOverride>yes</com:ContinuityCheckOverride>
  + <com:AgencyContactInfo>
  + <com:FormOfPayment xmlns:com="http://www.travelport.com/schema/common_v45_0" Type="MiscFormOfPayment">
  + <air:AirPricingSolution Key="75ClrR3R2BKAHokVDAAAAA==" QuoteDate="2018-07-09" ApproximateTaxes="HKD3412" Fees="HKD0"
  Taxes="HKD3412" ApproximateBasePrice="HKD18230" ApproximateTotalPrice="HKD21642" BasePrice="HKD18230"
  TotalPrice="HKD21642">
  <com:ActionStatus xmlns:com="http://www.travelport.com/schema/common_v45_0" Type="ACTIVE" ProviderCode="1G"
  TicketDate="T*"/>
</univ:AirCreateReservationReq>
```

务必添加<ContinuityCheckOverride> 元素, UAPI会在有缺口航程时自动在PNR中添加ARNK(Arrival Unknown)。

# AIRCREATERESERVATION REQUEST – 建立PNR

## AirPricingInfoGroup

- 在AirPrice响应中, 每一种乘客类型(PTC)都会有对应的定价信息(AirPricingInfo)
- 如要在生单时保存价钱, 务必在AirCreateReservation请求中加入所有PTC类型的AirPricingInfo。
- 可用AirPricingInfoGroup数值来控制那些PTC (AirPricingInfo)须存布相同filed fare里

```
+ <air:AirPricingInfo Key="97+jfj3R2BKASEeIAAAAAA==" TotalPrice="HKD8136" BasePrice="HKD6640"
  ApproximateTotalPrice="HKD8136" ApproximateBasePrice="HKD6640" Taxes="HKD1496"
  ApproximateTaxes="HKD1496" ProviderCode="1G" AirPricingInfoGroup="1" LatestTicketingTime="2017-05-
  17T23:59:00.000+08:00" PricingMethod="GuaranteedUsingAirlinePrivateFare" Refundable="true"
  IncludesVAT="false" ETicketability="Yes" PlatingCarrier="CX" TotalNetPrice="HKD8136">
+ <air:AirPricingInfo Key="97+jfj3R2BKAIeIAAAAAA==" TotalPrice="HKD5616" BasePrice="HKD4990"
  ApproximateTotalPrice="HKD5616" ApproximateBasePrice="HKD4990" Taxes="HKD626"
  ApproximateTaxes="HKD626" ProviderCode="1G" AirPricingInfoGroup="2" LatestTicketingTime="2017-05-
  17T23:59:00.000+08:00" PricingMethod="GuaranteedUsingAirlinePrivateFare" Refundable="true"
  IncludesVAT="false" ETicketability="Yes" PlatingCarrier="CX" TotalNetPrice="HKD8136">
```

不同的AirPricingInfoGroup值会令其AirPricingInfo存在不同的filed fare中

# AIRCREATERESERVATION REQUEST – 建立PNR

## AirPricingInfoGroup (续)

- 不设定AirPricingInfoGroup (或设定为相同值)

```
1.1QIN/MAURICE 2.1CHAN/PETER*P-C08
1. KA 486 Y 20MAR HKTPE HS2 0800 0945 O E FR
** FILED FARE DATA EXISTS ** >*FF
FQ1 - S1 AP G 21NOV19 /
P1 QIN/MAURICE ADT G 21NOV19 * HKD 4016
P2 CHAN/PETER C08 G 21NOV19 * HKD 2986
```

ADT和CNN乘客类型的票价被一起保存

- 设定AirPricingInfoGroup为不同值

```
1.1QIN/MAURICE 2.1CHAN/PETER*P-C08
1. KA 486 Y 20MAR HKTPE HS2 0800 0945 O E FR
** FILED FARE DATA EXISTS ** >*FF
FQ1 - S1 AP G 21NOV19 /
P1 QIN/MAURICE ADT G 21NOV19 * HKD 4016
FQ2 - S1 AP G 21NOV19 /
P2 CHAN/PETER C08 G 21NOV19 * HKD 2986
```

ADT和CNN乘客类型的票价被分开保存

# AIRCREATERESERVATION REQUEST – CREATE PNR

## AirPricingInfoGroup (续)

- 1G 以前要求Cat35 fare (Negotiate Fare)必须按PTC来保存filed fare, 但我们在2022年7月1日上线了新功能允许不同PTC的Cat35 fare可以保存在相同的filed fare中
- 但以下例外情况(未必可以完全在HOST/uapi判断), 你仍然需要按PTC来保存filed fare(不同AirPricingInfoGroup设定不同AirPricingInfoGroup值):
  - Tour Code
  - Carrier Agreement Reference (CAR) Code
  - Value Code
  - Plating Carrier
  - Fare Box Text ('IT' and 'BT')

\* 你依然可以按PTC来保存Cat35票价, 这改动不是必需要把不同PTC's Cat35票价保存在单一filed fare中

# AIRCREATERESERVATION REQUEST – CREATE PNR

## AirPricingInfoGroup (续)

- 必需要把不同PTC's Cat35票价保存在单一filed fare中, 为防止上页的例外情况, 你可以加入以下检查:
  - 所有AirPringInfo.PlatingCarrier是相同
  - 所有AirPricingInfo中的FareInfo.FareBasis按次序是一样
  - 所有AirPricingInfo中的FareInfo.PrivateFare (如返回)按次序是一样

```
-<air:AirPricingInfo Key="Rj7FnGTqWDKA1kczHAAAAA==" TotalPrice="HKD3518" BasePrice="HKD2750" ApproximateTotalPrice="HKD3518"
  ApproximateBasePrice="HKD2750" ApproximateTaxes="HKD768" Taxes="HKD768" LatestTicketingTime="2022-11-10T23:59:00.000+08:00"
  PricingMethod="GuaranteedUsingAirlinePrivateFare" Refundable="true" IncludesVAT="false" ETicketability="Yes" PlatingCarrier="MH"
  ProviderCode="1G">
+<air:FareInfo Key="Rj7FnGTqWDKA9kczHAAAAA==" FareBasis="QLG1YHK" PassengerTypeCode="ADT" Origin="HKC" Destination="SIN"
  EffectiveDate="2022-07-07T18:56:00.000+08:00" DepartureDate="2022-11-10" Amount="HKD1380" PrivateFare="AirlinePrivateFare"
  NegotiatedFare="false" NotValidBefore="2022-11-10" NotValidAfter="2022-11-10" PseudoCityCode="682J" TaxAmount="HKD367.00">
+<air:FareInfo Key="Rj7FnGTqWDKAYIczHAAAAA==" FareBasis="QLG1YHK" PassengerTypeCode="ADT" Origin="SIN" Destination="HKC"
  EffectiveDate="2022-07-07T18:56:00.000+08:00" DepartureDate="2022-11-20" Amount="HKD1370" PrivateFare="AirlinePrivateFare"
  NegotiatedFare="false" NotValidBefore="2022-11-20" NotValidAfter="2022-11-20" PseudoCityCode="682J" TaxAmount="HKD401.00">
```

\* 如AirPringInfo中有多个FareInfo, 请确保放同一filed fare中的所有AirPricingInfo中的FareInfo都有用以上方法按次序检查.

# AIRCREATERESERVATION REQUEST – 建立PNR

```
- <air:AirPricingInfo Key="ktLnF6Kc1BKAhYFLpCBAAA==" ProviderCode="1G" ApproximateTaxes="HK
ApproximateTotalPrice="HKD4134" BasePrice="HKD1190" TotalPrice="HKD4134" PlatingCarrier="RJ"
LatestTicketingTime="2019-12-09T23:59:00.000-05:00" AirPricingInfoGroup="1">
  + <air:FareInfo Key="ktLnF6Kc1BKArYFLpCBAAA==" Destination="LHR" Origin="HKG" TaxAmount="HKD600"
  DepartureDate="2020-02-09" EffectiveDate="2019-12-06T14:37:00.000+08:00"
  + <air:FareInfo Key="ktLnF6Kc1BKAsYFLpCBAAA==" Destination="HKG" Origin="LHR" TaxAmount="HKD590"
  DepartureDate="2020-03-21" EffectiveDate="2019-12-06T14:37:00.000+08:00"
  <air:BookingInfo FareInfoRef="ktLnF6Kc1BKArYFLpCBAAA==" HostTokenRef="ktLnF6Kc1BKAd
  CabinClass="Economy" BookingCode="R"/>
  <air:BookingInfo FareInfoRef="ktLnF6Kc1BKArYFLpCBAAA==" HostTokenRef="ktLnF6Kc1BKAd
  CabinClass="Economy" BookingCode="R"/>
  <air:BookingInfo FareInfoRef="ktLnF6Kc1BKAsYFLpCBAAA==" HostTokenRef="ktLnF6Kc1BKAe
  CabinClass="Economy" BookingCode="R"/>
  <air:BookingInfo FareInfoRef="ktLnF6Kc1BKAsYFLpCBAAA==" HostTokenRef="ktLnF6Kc1BKAe
  CabinClass="Economy" BookingCode="R"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAiYFLpCBAAA==" Amount="HKD160" Category="G3"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAjYFLpCBAAA==" Amount="HKD120" Category="HK"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAkYFLpCBAAA==" Amount="HKD50" Category="I5"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAlYFLpCBAAA==" Amount="HKD18" Category="E7"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAmYFLpCBAAA==" Amount="HKD116" Category="KJ"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAnYFLpCBAAA==" Amount="HKD798" Category="GB"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAoYFLpCBAAA==" Amount="HKD418" Category="UB"/>
  <air:TaxInfo Key="ktLnF6Kc1BKApYFLpCBAAA==" Amount="HKD66" Category="YQ"/>
  <air:TaxInfo Key="ktLnF6Kc1BKAqYFLpCBAAA==" Amount="HKD1198" Category="YR"/>
  <air:FareCalc>HKG RJ X/AMM RJ LON 75.96RRJSPL RJ X/AMM RJ HKG 75.96RRJSPL NUC15
  <air:PassengerType Age="25" BookingTravelerRef="ADT1" Code="ADT"/>
  + <air:ChangePenalty PenaltyApplies="Anytime">
  + <air:CancelPenalty PenaltyApplies="Anytime">
  + <air:BaggageAllowances>
</air:AirPricingInfo>
```

在相应的AirPricingInfo中加入  
BookingTravelerRef和PTC Code信息。

# AIRCREATERESERVATION REQUEST – 建立PNR

- RetainReservation
  - 决定了在价钱或航班时间有变动时，是否建立PNR。

```
<univ:AirCreateReservationReq ProviderCode="1G" TargetBranch="TarBranch"
RetainReservation="Both" AuthorizedBy="Travelport">
  <com:BillingPointOfSaleInfo OriginApplication="uAPI"/>
```

RetainReservation equals	Changed Value	UR/PNR Created?	AirSolutionChangedInfo returns...
None	Schedule	No	New time.
	Price	No	New price.
	Both	No	New time and price.
Price	Schedule	No	New time.
	Price	Yes	Original price.
	Both	No	New time and price.
Schedule	Schedule	Yes	Original time.
	Price	No	New price.
	Both	No	New time and price.
Both	Schedule	Yes	Original time.
	Price	Yes	Original price.
	Both	Yes	Original time and price.

ACR响应中会包含变更的内容

```
<air:AirSolutionChangedInfo ReasonCode="Price">
  - <air:AirPricingSolution Key="a6PzBLdLSImKpm+fVf/x2A==">
```

# AIRCREATERESERVATION REQUEST – 建立PNR

- 如果BookingTraveler是儿童(CNN), 务必添加年龄的RemarkData以保证Host系统可以正确为儿童定价。

```
<com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v45_0" Gender="F"  
Key="CNN1" TravelerType="CNN" Age="4" DOB="2014-08-09">  
  <com:BookingTravelerName First="JESSICA" Last="CHAN" Prefix="MISS"/>  
  <com:SSR Type="FOID" FreeText="PPK01234569"/>  
  <com:SSR Type="DOCS" FreeText="P/HK/K01234569/HK/09OCT14/F/15JUL20/CHAN/JESSICA"/>  
  - <com:NameRemark Key="CNN3remark">  
    <com:RemarkData>P-C04</com:RemarkData>  
  </com:NameRemark>  
</com:BookingTraveler>
```

e.g. 如果儿童年龄为4岁, 请在<RemarkData>中填写“P-C04”

# AIRCREATERESERVATION REQUEST – 建立PNR

## ▪ 儿童乘客

- 由2022年6月8日起, 儿童备注(NameRemark)可按PCC来设定是否必需包含出生日期信息
- P-C08 指8岁儿童(按出发日), 而DOB09FEB14 指儿童出生日期为14年2月9日
- 系统会自动生成有DOB的CHLD SSR
- 如PCC已设定为必须包含儿童出生日期信息, 儿童乘客在备注中不包含出生DOB资料, 系统会返回错误信息: Name application failed: NEED CHILD BIRTHDATE IN NAME FIELD - ENTER AS DOBDDMMYY

```
- <com:BookingTraveler xmlns:com="http://www.travelport.com/schema/common_v51_0" Gender="F" Key="CNN1" TravelerType="CNN" Age="4" DOB="2014-02-09">  
  <com:BookingTravelerName First="JESSICA" Last="CHAN" Prefix="MISS"/>  
  <com:SSR Type="FOID" FreeText="PPK01234569"/>  
  <com:SSR Type="DOCS" FreeText="P/HK/K01234569/HK/09FEB14/F/15JUL20/CHAN/JESSICA"/>  
- <com:NameRemark Key="CNN3remark">  
  <com:RemarkData>P-C08 DOB09FEB14</com:RemarkData>  
</com:NameRemark>  
</com:BookingTraveler>
```

请求中在年龄备注后加入出生日期DOB

```
<common_v51_0:SSR Type="CHLD" Status="HK" ElStat="C" Key="zmZ1Y++pWDKAq15LBAAAAA=="  
  ProviderReservationInfoRef="zmZ1Y++pWDKAV/5LBAAAAA==" Carrier="SQ" FreeText="/09FEB14-1CHAN/JESSICAMISS"/>
```

返回中可看到自动生成的CHLD SSR包含DOB

# AIRCREATERESERVATION REQUEST – 建立PNR

- 自2019年六月起，IATA强制要求在BookingTraveler中加入CTCE或CTCM信息
- CTCE和CTCM被用作紧急联络方式。取决于OTA处理紧急情况流程，旅行者或者代理的联络方式均可使用。
- CTCE和CTCM都是通过SSR加入在BookingTraveler之中

```
- <com:BookingTraveler TravelerType="ADT" Gender="M" DOB="1980-01-10" Key="ADT1">  
  <com:BookingTravelerName Prefix="Ms" Last="Chan" First="Johnny"/>  
  <com:SSR FreeText="85269887263" Type="CTCM"/>  
  <com:SSR FreeText="JOHNNY.CHAN//GMAIL.COM" Type="CTCE"/>  
</com:BookingTraveler>
```

# AIRCREATERESERVATION RESPONSE

- XML响应结构:

```
<universal:AirCreateReservationRsp xmlns:air="http://www.travelport.com/schema/air_v38_0"
xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
xmlns:universal="http://www.travelport.com/schema/universal_v38_0" ResponseTime="16
TransactionId="E32D9BB20A07643C4B3A923FBD424FF2" TraceId="515160006796948">
```

Universal Record 预订代码

```
- <universal:UniversalRecord Status="Active" Version="0" LocatorCode="P65HBQ">
+ <common_v38_0:BookingTraveler ElStat="A" Gender="M" Age="40" TravelerType="ADT"
Key="dMcmfj8Q2BKA7HDJAAAAA==">
+ <common_v38_0:BookingTraveler ElStat="A" Gender="F" Age="38" TravelerType="ADT"
Key="dMcmfj8Q2BKACIDJAAAAA==">
+ <common_v38_0:BookingTraveler ElStat="A" Gender="F" Age="2" TravelerType="CO2"
Key="dMcmfj8Q2BKA3HDJAAAAA==" DOB="2014-10-09">
```

Host 预订代码 (e.g. 1G PNR)

Air 预定代码  
(出票时使用, 只在uapi中使用)

```
nStatus ElStat="A" Key="dMcmfj8Q2BKAQIDJAAAAA=="
ProviderReservationInfoRef="dMcmfj8Q2BKAQMDJAAAAA=="
<universal:ProviderReservationInfo LocatorCode="557ZXA"
Key="dMcmfj8Q2BKAQMDJAAAAA==" ProviderCode="1G" Ow
HostCreateDate="2016-12-09" ModifiedDate="2016-12-09T10:4
CreateDate="2016-12-09T10:43:02.764+00:00"/>
```

航司预订代码

\*如有此代码并且航段状态为'HK'或'KK', 说明位置被航司确认

\*每个航司会分别返回航司代码

\*航司可能延迟返回代码, 需在之后用 UniversalRecordRetrieve 查询

```
- <air:AirReservation LocatorCode="3Z0JYG" ModifiedDate="2019-11-12T08:0
12T08:05:45.844+00:00">
```

```
<common_v48_0:SupplierLocator ProviderReservationInfoRef="t9Gvc5BA
12T08:05:00.000+00:00" SupplierLocatorCode="OA32CO" SupplierCode="BA"/>
```

# AIRCREATERESERVATION RESPONSE

- 常见错误:
  - 所有航段均无法预订, PNR不会被生成

```
<SOAP:Fault xmlns:SOAP="http://schemas.xmlsoap.org/soap/envelope/">
  <faultcode>Server.Business</faultcode>
  <faultstring>General air service Error.</faultstring>
  - <detail>
    - <air:AvailabilityErrorInfo xmlns:air="http://www.travelport.com/schema/air_v40_0" xmlns:common_v40_0="http://www.travelport.com/schema/common_v40_0">
      <common_v40_0:Code>3000</common_v40_0:Code>
      <common_v40_0:Service>AIRSVC</common_v40_0:Service>
      <common_v40_0:Type>Business</common_v40_0:Type>
      <common_v40_0:Description>General air service Error.</common_v40_0:Description>
      <common_v40_0:TransactionId>A5E0F8AE0A0759BFB4E4EB4442A7291F</common_v40_0:TransactionId>
      <common_v40_0:TraceId>535160035749948</common_v40_0:TraceId>
    - <air:AirSegmentError>
      <air:AirSegment Key="lrUjNuBAAA/BtzRx5GAAAA==" Group="0" Carrier="CI" FlightNumber="186" Origin="TPE"
        29T19:10:00.000+09:00" ClassOfService="T" ChangeOfPlane="false" OptionalServicesIndicator="false"/>
      <air:ErrorMessage>*0 AVAIL/WL OPEN*</air:ErrorMessage>
    </air:AirSegmentError>
    - <air:AirSegmentError>
      <air:AirSegment Key="lrUjNuBAAA/BvzRx5GAAAA==" Group="1" Carrier="CI" FlightNumber="187" Origin="PUS"
        01T21:45:00.000+08:00" ClassOfService="T" ChangeOfPlane="false" OptionalServicesIndicator="false"/>
      <air:ErrorMessage>*0 AVAIL/WL OPEN*</air:ErrorMessage>
    </air:AirSegmentError>
  </air:AvailabilityErrorInfo>
</detail>
</SOAP:Fault>
```

# AIRCREATERESERVATION RESPONSE

- 常见错误:
  - 部分航段无法预订, PNR成功被生成
  - Universal Record需要通过UniversalRecordCancel取消, 以释放预订了的座位
  - 检查航段状态为'HK'或者'KK'以确保机位被航司确认

```
<universal:AirCreateReservationRsp xmlns:air="http://www.travelport.com/schema/air_v45_0" xmlns:common_v45_0="http://www.t
xmlns:universal="http://www.travelport.com/schema/universal_v45_0" ResponseTime="14280" TransactionId="A36869F40A07643E
  <common_v45_0:ResponseMessage ProviderCode="1G" Type="Warning" Code="0">NO FARES</common_v45_0:ResponseMessage>
  <common_v45_0:ResponseMessage ProviderCode="1G" Type="Warning" Code="0">Some of the requested AirPricingInfos could not
  <common_v45_0:ResponseMessage ProviderCode="1G" Type="Warning" Code="3029">Some of the prices could not be stored beca
    verify connections, then price and store again.</common_v45_0:ResponseMessage>
+ <universal:UniversalRecord Status="Active" Version="0" LocatorCode="034233">
- <air:AirSegmentSellFailureInfo>
  - <air:AirSegmentError>
    <air:AirSegment Key="75ClrR3R2BKAFv0ANAAAAA==" Carrier="CX" OptionalServicesIndicator="false" ChangeOfPlane="false"
      26T20:35:00.000+00:00" Destination="MAN" Origin="LHR" FlightNumber="1243" Group="1"/>
    <air:ErrorMessage>*0 AVAIL/WL CLOSED*</air:ErrorMessage>
  </air:AirSegmentError>
</air:AirSegmentSellFailureInfo>
</universal:AirCreateReservationRsp>
```

# AIRCREATERESERVATION – Q&A



 TRAVELPORT

# WORKING WITH UNIVERSAL RECORD

管理 Universal Record



# UNIVERSALRECORDRETRIEVE REQUEST

- **UniversalRecordRetrieve**可以被用来读取最新的PNR信息
- 检查PNR中是否有**航司预订代码(Supplier Locator Code)**以及获取最新的航段状态
- 通过**Universal Record预订代码**获取Universal Record

```
<univ:UniversalRecordRetrieveReq xmlns:com="http://www.travelport.com/schema/common_v38_0"
xmlns:univ="http://www.travelport.com/schema/universal_v38_0" TargetBranch="TARBRANCH">
  <com:BillingPointOfSaleInfo OriginApplication="uAPI"/>
  <univ:UniversalRecordLocatorCode>ABC123</univ:UniversalRecordLocatorCode>
</univ:UniversalRecordRetrieveReq>
```

```
<univ:UniversalRecordRetrieveReq xmlns:com="http://www.travelport.com/schema/common_v38_0"
xmlns:univ="http://www.travelport.com/schema/universal_v38_0" TargetBranch="TARBRANCH">
  <com:BillingPointOfSaleInfo OriginApplication="uAPI"/>
  <univ:ProviderReservationInfo ProviderLocatorCode="2G3H8I" ProviderCode="1G"/>
</univ:UniversalRecordRetrieveReq>
```

# UNIVERSALRECORDRETRIEVE RESPONSE

- 取决于航司, Supplier Locator Code航司预定代码可能会延迟出现在Universal Record中

```
<universal:UniversalRecordRetrieveRsp xmlns:air="http://www.travelport.com/schema/air_v43_0"
xmlns:common_v43_0="http://www.travelport.com/schema/common_v43_0"
xmlns:universal="http://www.travelport.com/schema/universal_v43_0" ResponseTime="1634"
TransactionId="ED531EE60A076478BDA5FF4AD55352D7" TraceId="trace1">
```

Universal Record 预订  
代码

```
- <universal:UniversalRecord Status="Active" Version="8" LocatorCode="RRQWE2">
+ <common_v43_0:BookingTraveler Key="xfUMn/4R2BKA59jnAAAAAA==">
+ <common_v43_0:BookingTraveler Key="xfUMn/4R2BKA69jnAAAAAA==">
<common_v43_0:ActionStatus Key="xfUMn/4R2BKA19jnAAAAAA==" ProviderCode="1G"
ProviderReservationInfoRef="xfUMn/4R2BKA09jnAAAAAA==" Type="ACTIVE"/>
<universal:ProviderReservationInfo LocatorCode="M7NZT8" Key="xfUMn/4R2BKA09jnAAAAAA"
OwningPCC="3C8" HostCreateDate="2017-11-24" ModifiedDate="2017-11-24T09:19:31.1"
CreateDate="2017-11-24T08:17:52.903+00:00"/>
- <air:AirReservation LocatorCode="HQY145" ModifiedDate="2017-11-24T09:14:22.567+00:00" CreateDate="2017-11-
24T08:17:52.023+00:00">
```

Host预订代码 (e.g.  
1G PNR)

```
<common_v43_0:SupplierLocator ProviderReservationInfoRef="xfUMn/4R2BKA09jnAAAAAA=="
CreateDateTime="2017-11-24T08:17:00.000+00:00" SupplierLocatorCode="WBAXF3" SupplierCode="CI"/>
<common_v43_0:SupplierLocator ProviderReservationInfoRef="xfUMn/4R2BKA09jnAAAAAA=="
CreateDate="2017-11-24T08:17:00.000+00:00" SupplierLocatorCode="WBAXF3" SupplierCode="KE"/>
<common_v43_0:SupplierLocator ProviderReservationInfoRef="xfUMn/4R2BKA09jnAAAAAA=="
```

## 航司预订代码

\*如有此代码并且航段状态为'HK'或  
'KK', 说明位置被航司确认

# UNIVERSALRECORD CANCEL AND MODIFY

- UniversalRecordCancel

```
<univ:UniversalRecordCancelReq TargetBranch="TARBRANCH" Version="0" UniversalRecordLocatorCode="ABC123">  
  <com:BillingPointOfSaleInfo OriginApplication="uAPI"/>  
</univ:UniversalRecordCancelReq>
```

- UniversalRecordModify

- 添加支付方式(FOP)
- 添加佣金数据
- 添加SSR
- 添加Remarks

```
<univ:UniversalRecordModifyReq TargetBranch="TargetBranch" AuthorizedBy="User"  
xmlns:com="http://www.travelport.com/schema/common_v36_0"  
xmlns:univ="http://www.travelport.com/schema/universal_v36_0"  
xmlns:air="http://www.travelport.com/schema/air_v36_0" ReturnRecord="true"  
Version="9">  
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>  
  <univ:RecordIdentifier ProviderCode="1G" UniversalLocatorCode="URLOCKX"  
    ProviderLocatorCode="PNRXXX"/>  
  - <univ:UniversalModifyCmd Key="1">  
    - <univ:AirAdd ReservationLocatorCode="AIRLOC">  
      - <air:AirPricingTicketingModifiers>  
        <air:AirPricingInfoRef Key="G5YJ4Ws9RhGTEQ2y1HVz9g==" />  
        - <air:TicketingModifiers>  
          <com:Commission Type="PercentBase" Level="Fare" Percentage="0.00" />  
        </air:TicketingModifiers>  
      </air:AirPricingTicketingModifiers>  
    </univ:AirAdd>  
  </univ:UniversalModifyCmd>  
  - <univ:UniversalModifyCmd Key="2">  
    - <univ:AirAdd ReservationLocatorCode="AIRLOC">  
      - <air:AirPricingTicketingModifiers>  
        <air:AirPricingInfoRef Key="uplF8rXxT9OmClc3ribtZQ==" />  
        - <air:TicketingModifiers>  
          <com:Commission Type="PercentBase" Level="Fare" Percentage="5.00" />  
        </air:TicketingModifiers>  
      </air:AirPricingTicketingModifiers>  
    </univ:AirAdd>  
  </univ:UniversalModifyCmd>  
  + <univ:UniversalModifyCmd Key="3">  
</univ:UniversalRecordModifyReq>
```

Universal Record  
预订代码

# WORKING WITH UNIVERSAL RECORDS - Q&A



# WORKING WITH QUEUE

管理PNR队列 (GDS Queue)



# WORKING WITH QUEUE

- GdsQueuePlace
- E.g. 将PNR从PCC A移动到PCC B出票

```
<gds:GdsQueuePlaceReq TraceId="trace" TargetBranch="TarBranch" PseudoCityCode="79E4"  
ProviderLocatorCode="TXLZXE" ProviderCode="1G" AuthorizedBy="user">  
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>  
  <com:QueueSelector Queue="20"/>  
</gds:GdsQueuePlaceReq>
```

Host预订代码

Target/Ticketing PCC  
如果是移动到相同PCC的Queue,  
不许填写PCC

```
<gdsQueue:GdsQueuePlaceRsp xmlns:common_v36_0="http://www.travelport.com/schema/common_v36_0"  
xmlns:gdsQueue="http://www.travelport.com/schema/gdsQueue_v36_0" ResponseTime="663"  
TransactionId="A2EF475B0A0759C1A889C230F2DA9DFE" TraceId="trace">  
  <common_v36_0:ResponseMessage Type="Info" Code="7020">Booking successfully placed on Queue 20 for  
    Pseudo City 79E4</common_v36_0:ResponseMessage>  
  + <universal:UniversalRecord xmlns:air="http://www.travelport.com/schema/air_v36_0"  
    xmlns:universal="http://www.travelport.com/schema/universal_v36_0" Status="Active" Version="0"  
    LocatorCode="1RDVJ3">  
</gdsQueue:GdsQueuePlaceRsp>
```

# WORKING WITH QUEUE

- **GdsQueueList**可读取指定队列里的PNR列表

- E.g. Queue 60内所有的PNR

```
<gds:GdsQueueListReq xmlns:com="http://www.travelport.com/schema/common_v38_0"
xmlns:gds="http://www.travelport.com/schema/gdsQueue_v38_0" TraceId="trace" AuthorizedBy="user"
TargetBranch="TargetBranch" ProviderCode="1G">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <gds:GdsQueueSelector Queue="60"/>
</gds:GdsQueueListReq>
```

- 响应返回所有PNR以及相应的乘客信息

```
<gdsQueue:GdsQueueListRsp xmlns:gdsQueue="http://www.travelport.com/schema/gdsQueue_v38_0"
ResponseTime="246" TransactionId="F7805EA00A076477F18E6EB80561868F" TraceId="trace">
  <gdsQueue:QueueElement CreatedByAgentCode="UAPI4683321331-32F14BC2" UniversalRecordLocatorCode="P5NJJN"
Name="1WONG/JOHNMR" QueueTime="17:22:00" QueueDate="13DEC" DepartureDate="20170517"
ProviderLocatorCode="2BQVX4" ProviderCode="1G"/>
  <gdsQueue:QueueElement Name="1WONG/MARYMS" QueueTime="17:22:00" QueueDate="13DEC"
DepartureDate="20170517" ProviderLocatorCode="2BQVX4" ProviderCode="1G"/>
  <gdsQueue:QueueElement Name="1WONG/JESSICAMISS" QueueTime="17:22:00" QueueDate="13DEC"
DepartureDate="20170517" ProviderLocatorCode="2BQVX4" ProviderCode="1G"/>
  <gdsQueue:QueueElement CreatedByAgentCode="UAPI4683321331-32F14BC2" UniversalRecordLocatorCode="Z1TLY0"
Name="1CHAN/JOHNMR" QueueTime="17:24:00" QueueDate="13DEC" DepartureDate="20170517"
ProviderLocatorCode="2K4C4C" ProviderCode="1G"/>
  <gdsQueue:QueueElement Name="1CHAN/MARYMS" QueueTime="17:24:00" QueueDate="13DEC"
DepartureDate="20170517" ProviderLocatorCode="2K4C4C" ProviderCode="1G"/>
  <gdsQueue:QueueElement Name="1CHAN/JESSICAMISS" QueueTime="17:24:00" QueueDate="13DEC"
DepartureDate="20170517" ProviderLocatorCode="2K4C4C" ProviderCode="1G"/>
</gdsQueue:GdsQueueListRsp>
```

# WORKING WITH QUEUE

- **GdsEnterQueue**可读取队列中的PNR
- 可指定Queue中的PNR来读取
  - 如不指定PNR代码, 队列中的第一个PNR会被返回

```
<gds:GdsEnterQueueReq xmlns:gds="http://www.travelport.com/schema/gdsQueue_v48_0"
xmlns:com="http://www.travelport.com/schema/common_v48_0" TraceId="TRAVELPORT654984351S36DF987GSA"
TargetBranch="P7025810" PseudoCityCode="682J" ProviderLocatorCode="2MQFMC" ProviderCode="1G" AuthorizedBy="user">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <com:QueueSelector Queue="22"/>
</gds:GdsEnterQueueReq>
```

指定某一PNR

```
<gdsQueue:GdsEnterQueueRsp xmlns:gdsQueue="http://www.travelport.com/schema/gdsQueue_v38_0"
QueueSessionToken="F790CB0F0A07643B64802B0AF81A95EF" Title="QUEUE 60" ResponseTime="2430"
TransactionId="F790C1140A07643B64802B0A62E2C3DC" TraceId="trace">
  <common_v38_0:ResponseMessage xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
  Type="Info" Code="6211">PNR in Queue Mode: 1G-2BQVX4</common_v38_0:ResponseMessage>
  <common_v38_0:ResponseMessage xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
  Type="Warning" Code="0">OFF QUEUE</common_v38_0:ResponseMessage>
  + <universal:UniversalRecord xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
  xmlns:air="http://www.travelport.com/schema/air_v38_0"
  xmlns:universal="http://www.travelport.com/schema/universal_v38_0" Status="Active" Version="1"
  LocatorCode="P5NJJN">
</gdsQueue:GdsEnterQueueRsp>
```

# WORKING WITH QUEUE

- **GdsNextOnQueue**

```
<gds:GdsNextOnQueueReq ProviderCode="1G" TargetBranch="TargetBranch" RemoveCurrent="true"
QueueSessionToken="F790CB0F0A07643B64802B0AF81A95EF" AuthorizedBy="user"
xmlns:gds="http://www.travelport.com/schema/gdsQueue_v38_0"
xmlns:com="http://www.travelport.com/schema/common_v38_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
</gds:GdsNextOnQueueReq>
```

设定True以将当前读取的  
PNR移出队列

GdsEnterQueue或GdsNextOnQueue响应中的  
QueueSessionToken

- 响应中返回PNR

```
<gdsQueue:GdsNextOnQueueRsp xmlns:gdsQueue="http://www.travelport.com/schema/gdsQueue_v38_0"
QueueSessionToken="F792A5F90A07647856399320C8A65630" ResponseTime="2544"
TransactionId="F7929BFC0A07647856399320BBA37871">
  <common_v38_0:ResponseMessage xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
  Type="Info" Code="0">Universal Record P5NJNI successfully removed from queue
  60</common_v38_0:ResponseMessage>
  <common_v38_0:ResponseMessage xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
  Type="Info" Code="6211">PNR in Queue Mode: 1G-2K4C4C</common_v38_0:ResponseMessage>
  + <universal:UniversalRecord xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
  xmlns:air="http://www.travelport.com/schema/air_v38_0"
  xmlns:universal="http://www.travelport.com/schema/universal_v38_0" Status="Active" Version="1"
  LocatorCode="Z1TLY0">
</gdsQueue:GdsNextOnQueueRsp>
```

# WORKING WITH QUEUE

- **GdsExitQueue**

```
<gds:GdsExitQueueReq ProviderCode="1G" TargetBranch="TargetBranch" RemoveCurrent="true"
QueueSessionToken="F792A5F90A07647856399320C8A65630" AuthorizedBy="user"
xmlns:gds="http://www.travelport.com/schema/gdsQueue_v38_0"
xmlns:com="http://www.travelport.com/schema/common_v38_0">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
</gds:GdsExitQueueReq>
```

Token from  
GdsEnterQueue/GdsNext  
OnQueue Response

- 在请求中放入从GdsEnterQueue或GdsNextOnQueue响应中的**QueueSessionToken**以将PNR移出队列

```
<gdsQueue:GdsExitQueueRsp xmlns:gdsQueue="http://www.travelport.com/schema/gdsQueue_v38_0"
ResponseTime="140" TransactionId="F79394110A076478563993204A9CECB8">
  <common_v38_0:ResponseMessage xmlns:common_v38_0="http://www.travelport.com/schema/common_v38_0"
Type="Info" Code="0">Universal Record Z1TLY0 successfully removed from queue
60</common_v38_0:ResponseMessage>
</gdsQueue:GdsExitQueueRsp>
```

# WORKING WITH QUEUE

- **GdsQueueRemoveReq** 现在已可支持直接把PNR由Queue中移除(由2020年5月起)
- It's easier to remove a PNR from Q compare with using GdsEnterQueue + GdsExitQueue

```
<gds:GdsQueueRemoveReq xmlns:gds="http://www.travelport.com/schema/gdsQueue_v43_0"
xmlns:com="http://www.travelport.com/schema/common_v43_0" TraceId="trace1" TargetBranch="TargetBranch"
PseudoCityCode="682J" ProviderLocatorCode="6L5VZU" ProviderCode="1G" AuthorizedBy="user">
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <com:QueueSelector Queue="85"/>
</gds:GdsQueueRemoveReq>
```

- 返回提示已由Queue中移走PNR

```
<gdsQueue:GdsQueueRemoveRsp xmlns:gdsQueue="http://www.travelport.com/schema/gdsQueue_v43_0"
ResponseTime="478" TransactionId="5F83F0850A07643CC6EEF7BECF227FCC" TraceId="trace1">
  <common_v43_0:ResponseMessage xmlns:common_v43_0="http://www.travelport.com/schema/common_v43_0"
Type="Warning" Code="0">OFF QUEUE</common_v43_0:ResponseMessage>
</gdsQueue:GdsQueueRemoveRsp>
```

# WORKING WITH QUEUE - Q&A



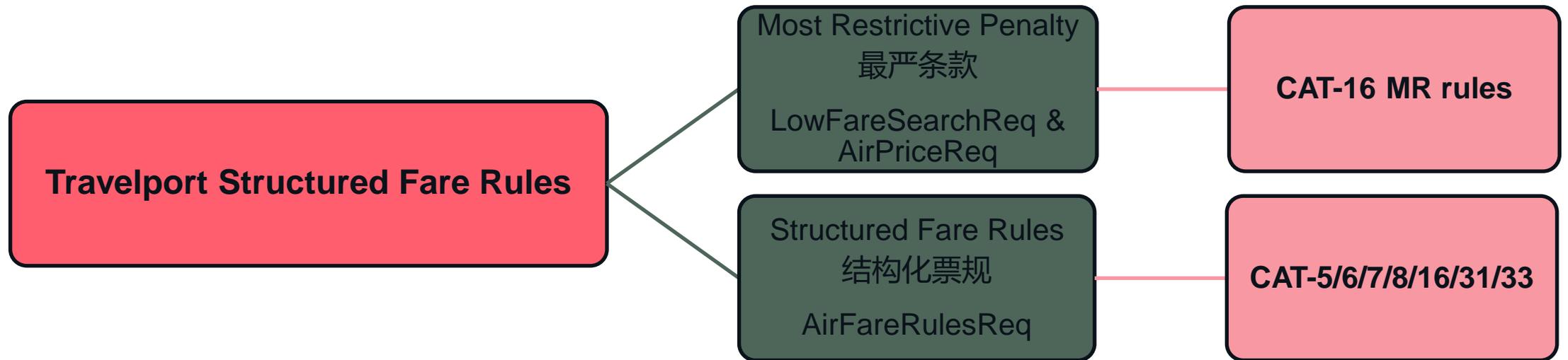
# STRUCTURE FARE RULE & MOST RESTRICTIVE CAT16 PENALTY

结构化票规及最严格Cat16罚款



# STRUCTURE FARE RULE & MOST RESTRICTIVE CAT16 PENALTY

- Travelport uAPI 有两种结构化票规返回功能:



# STRUCTURE FARE RULE & MOST RESTRICTIVE CAT16 PENALTY

Most Restrictive Cat 16 (最严格Cat16 条款)	Structure Fare Rule (结构化票规)
Cat 16	Cat 5, 6, 7, 8, 16, 31, 33
LowFareSearch AirPrice	AirFareRule
<pre data-bbox="78 676 1123 962">&lt;air:MostRestrictivePenalties&gt; - &lt;air:RestrictionType Value="Anytime And Before Departure"   Name="Changes"&gt;   &lt;air:Amount&gt;TWD2640.00&lt;/air:Amount&gt; &lt;/air:RestrictionType&gt; &lt;air:RestrictionType Value="AnyTime And Before Departure"   Name="Non-Refundable"/&gt; &lt;/air:MostRestrictivePenalties&gt;</pre>	<pre data-bbox="1258 676 2466 1119">&lt;air:VariableCategoryDetails Value="CHG"&gt;   &lt;air:CategoryDetails Value="USD" Name="Currency1"/&gt;   &lt;air:CategoryDetails Value="000000" Name="Amt2"/&gt;   &lt;air:CategoryDetails Value="0015000" Name="Amt1"/&gt;   &lt;air:CategoryDetails Value="X" Name="CancellationsRefunds"/&gt;   &lt;air:CategoryDetails Value="X" Name="Cancellation"/&gt;   &lt;air:CategoryDetails Value="000000" Name="Percent"/&gt;   &lt;air:CategoryDetails Value="1" Name="PenaltyCharges"/&gt;   &lt;air:CategoryDetails Value="07071932" Name="TextTableNumber996"/&gt;   &lt;air:CategoryDetails Value="0" Name="Decimal2"/&gt;   &lt;air:CategoryDetails Value="2" Name="Decimal1"/&gt;   &lt;air:CategoryDetails Value="4999300" Name="Sequence"/&gt; &lt;/air:VariableCategoryDetails&gt;</pre>

# STRUCTURE FARE RULE

## Fare Rule Category

- 如要返回结构化票规, 需要在 AirFareRuleReq中加入 FareRulesFilterCategory, 并放入类号代码
- 支持类别Cat 5, 6, 7, 8, 16, 31, 33

Category No. 类别号	Category Code 类别代码
5	ADV
6	MIN
7	MAX
8	STP
16	CHG
31	VOL
33	VOR

```
<air:AirFareRulesReq xmlns:com="http://www.travelport.com/schema/common_v50_0" xmlns:air="http://www.travelport.com/schema/air_v50_0"
AuthorizedBy="uAPI" TraceId="TX" PreferCompleteItinerary="true" TargetBranch="P2944662"
  <com:BillingPointOfSaleInfo OriginApplication="UAPI"/>
  <air:FareRuleKey ProviderCode="1G"
    FareInfoRef="wvRjCXcynDKAJ+UcLAAAAA==">6UUVoSldxwjWKn5JgwvxTcbKj3F8
  - <air:FareRulesFilterCategory>
    <air:CategoryCode>ADV</air:CategoryCode>
    <air:CategoryCode>MIN</air:CategoryCode>
    <air:CategoryCode>MAX</air:CategoryCode>
    <air:CategoryCode>STP</air:CategoryCode>
    <air:CategoryCode>CHG</air:CategoryCode>
    <air:CategoryCode>VOL</air:CategoryCode>
    <air:CategoryCode>VOR</air:CategoryCode>
  </air:FareRulesFilterCategory>
</air:AirFareRulesReq>
```

# STRUCTURE FARE RULE

## Fields Definition

- 在结构化票规(SFR)的返回的xml的资料定义可以在我们的uapi网上说明中找到:  
[https://support.travelport.com/webhelp/uapi/uAPI.htm#Air/Fare\\_Rules/Structured\\_Fare\\_Rules\\_Definitions.htm?TocPath=Air%257CAir%2520Shopping%2520and%2520Booking%257CFare%2520Rules%257C\\_\\_\\_\\_\\_2](https://support.travelport.com/webhelp/uapi/uAPI.htm#Air/Fare_Rules/Structured_Fare_Rules_Definitions.htm?TocPath=Air%257CAir%2520Shopping%2520and%2520Booking%257CFare%2520Rules%257C_____2)
- 建议可以下载其中的Excel档来查看返回资料的定义

## Download .CSV and .XLS of Category Rule Values

Click to [download a .zip archive](#) of spreadsheets for the category type, name, description, and values:

- Excel (.XLS) - All categories in different tabs.
- Comma Separated Value (.CSV) - All values for all categories in single spreadsheet.

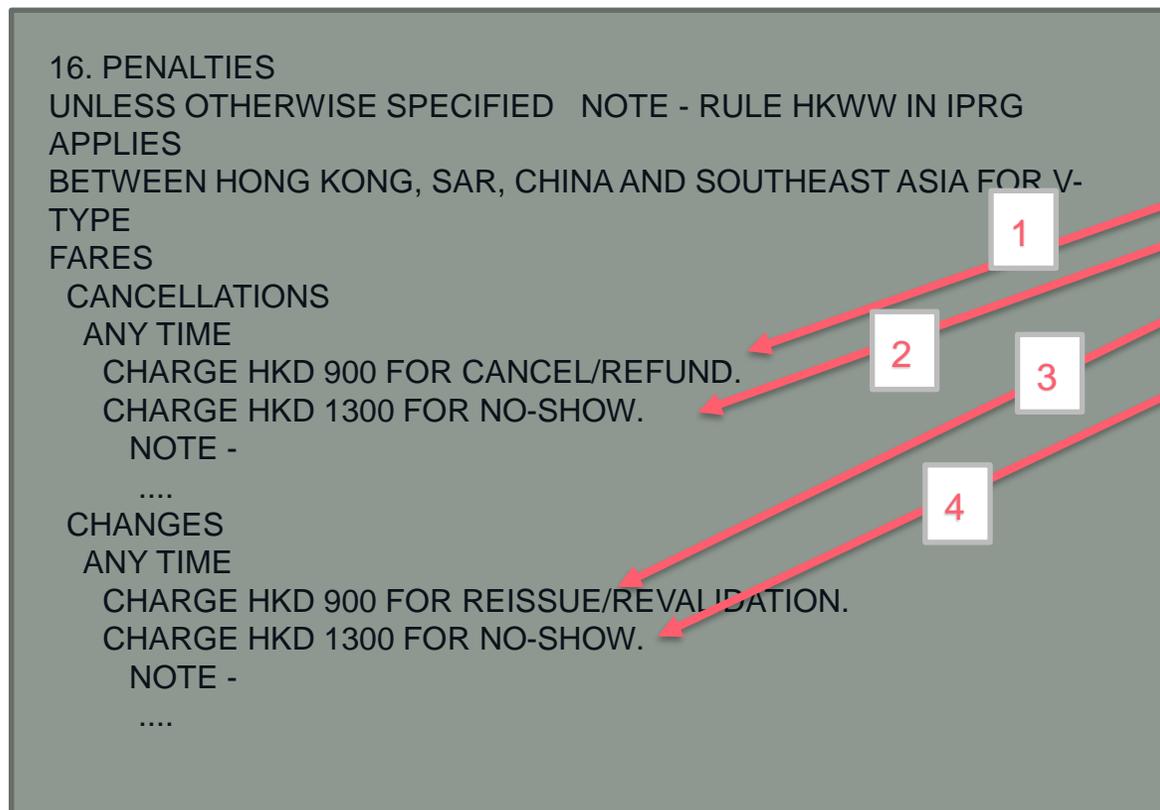
A	B	C	D
		CHG	Change Penalty Information
CategoryDetails			
	Name	Value	Description
	Voluntary	X = applies Blank = no application	Indicates if penalty is to be applied if change in itinerary occurs and requested by passenger.
	Involuntary	X = applies Blank = no application	Indicates if penalty is to be applied if change in itinerary occurs and not requested by passenger.
	CancellationsRefunds	X = applies Blank = no application X = non-refundable	Indicates if penalty is to be refunded/charged in case if cancellation in itinerary occurred.

# STRUCTURE FARE RULE

## 返回结构

- 每类(Category)的票规中都会包含多块资料
- 下图Category 16例子就包含4块资料

16. PENALTIES  
UNLESS OTHERWISE SPECIFIED NOTE - RULE HKWW IN IPRG APPLIES  
BETWEEN HONG KONG, SAR, CHINA AND SOUTHEAST ASIA FOR V-TYPE  
FARES  
CANCELLATIONS  
ANY TIME  
CHARGE HKD 900 FOR CANCEL/REFUND.  
CHARGE HKD 1300 FOR NO-SHOW.  
NOTE -  
....  
CHANGES  
ANY TIME  
CHARGE HKD 900 FOR REISSUE/REVALIDATION.  
CHARGE HKD 1300 FOR NO-SHOW.  
NOTE -  
....



```
+<air:VariableCategoryDetails Value="CHG">  
+<air:VariableCategoryDetails Value="CHG">  
+<air:VariableCategoryDetails Value="CHG">  
-<air:VariableCategoryDetails Value="CHG">  
<air:CategoryDetails Name="Currency1" Value="HKD" />  
<air:CategoryDetails Name="NoShowPenalty" Value="X" />  
<air:CategoryDetails Name="Amt2" Value="0000000" />  
<air:CategoryDetails Name="Amt1" Value="0001300" />  
<air:CategoryDetails Name="Voluntary" Value="X" />  
<air:CategoryDetails Name="Percent" Value="0000000" />  
<air:CategoryDetails Name="PenaltyCharges" Value="1" />  
<air:CategoryDetails Name="TextTableNumber996" Value="07115188" />  
<air:CategoryDetails Name="Decimal2" Value="0" />  
<air:CategoryDetails Name="Decimal1" Value="0" />  
<air:CategoryDetails Name="Sequence" Value="5003750" />  
</air:VariableCategoryDetails>
```

# STRUCTURE FARE RULE

## 重要事项

- 如你的票价包含多过一个fare basis, 请使用在每个场景(比如出发前更改)中最严谨的条件
  - E.g. 票价中的Fare Basis A 罚金为500, 而Fare Basis B罚金为800
    - 多数情况下, 你会使用最严谨条件, 其罚金为800
    - 但有机会它有可能用总和 $500 + 800 = 1300$
    - 在Cat 16 & 33中不会有显示它是最严谨还是用总和
    - 但Cat 31中, 你可以参考 FeeApplication
- 部份SFR 会显示百份比而不是金额, 你可以用FareInfo.Amount乘以百份比来计算罚金.
- 并非所有航司都会使用正确结构化数据来输入票价条款, 可能会出现
  - 部份重要资讯只在任意文本中出现
  - 最差情况可以是整个Category类别比如Cat16都是用任意文本输入
- 如果无法返回SFR, 可以先假设它是不可退改
- 如果你使用LowFareSearch中返回的FareRuleKey来查看SFR, 不要先默认查找全部, 应只查客人选中的航班组合的SFR. 或者只在验价阶段查看SFR.
- 如果Agency private fare(代理私有运价)的fare basis有对应的票规类别, 也是可返回其SFR的

# STRUCTURE FARE RULE (CAT 16)

## 返回的重要节点 (第16类票规CHG)

- Voluntary="X": 代表这块资料是针对改期
- Cancellations="X":代表这块资料是针对退款
  - CancellationsRefunds="X": 代表可退款
- TktNonRef: 是否是可退可改
  - X = 不可退
  - N = 不可改
  - B = 不可退也不不可改
- NoShowPenalty="X": 代表这块资料是针对No Show场景
- PenaltyCharges: 罚款对应的出发场景及儿童罚款优惠(child discount)
  - 1 = Penalty anytime 任何时间 (包括空值, 没返回)
  - 2 = Penalty before departure 出发前罚款
  - 3 = Penalty after departure 出发后罚款
  - 4 = Penalty anytime. Child's charge can be discounted 任何时间并有儿童罚款优惠
  - 5 = Penalty before departure. Child's charge can be discounted 出发前罚款并有儿童罚款优惠
  - 6 = Penalty after departure. Child's charge can be discounted 出发后罚款并有儿童罚款优惠

# STRUCTURE FARE RULE (CAT 16)

## 返回的重要节点 (第16类票规CHG)

- PortionOfTktPenalty, 代表行程中罚金组合方式  
重要但不常被航司使用
  - Blank/missing = 没注明/不可使用
  - 1 = One-way = 金额 X 单程数量
  - 2 = Round-trip = 金额 X 来回程数量
  - 3 = Per Ticket = 金额
  - 4 = Coupon = 金额 X 航段数量
  - 5 = Per Direction ≈ 大约为金额 X Fare Basis数量 (因为比较难计算Direction数量)
- 我们可能会增加新的“Name”和“Value”, 请查看最新的网上指引:  
[https://support.travelport.com/webhelp/uapi/uAPI.htm#Air/Air\\_Pricing/Air\\_Pricing\\_with\\_Most\\_Restrictive\\_Penalties.htm?ToCPath=Air%257CAir%2520Shopping%2520and%2520Booking%257CFare%2520Rules%257C\\_\\_\\_\\_\\_4](https://support.travelport.com/webhelp/uapi/uAPI.htm#Air/Air_Pricing/Air_Pricing_with_Most_Restrictive_Penalties.htm?ToCPath=Air%257CAir%2520Shopping%2520and%2520Booking%257CFare%2520Rules%257C_____4)

# STRUCTURE FARE RULE (CAT 16)

## Cat16 SFR例子

```
PENALTIES
UNLESS OTHERWISE SPECIFIED NOTE - RULE HK00 IN
IPRG
APPLIES
FOR M- TYPE FARES
CANCELLATIONS
ANY TIME
CHARGE USD 150.00 FOR CANCEL.
NOTE -
-----
FOR ALL JOURNEYS TO/FROM SOUTHEAST ASIA /
NORTH ASIA / SOUTH ASIA / DUBAI INCLUDING
JOURNEYS BETWEEN RUSSIA AND SWEDEN
OR BETWEEN AUSTRALIA AND NEW ZEALAND
BEFORE/AFTER FIRST FLIGHT DEPARTURE -
USD150
....
```

货币为USD, 有2个小数位,  
所以总罚金为 USD150.00

CancellationsRefunds=X, 代表  
取消可退款

Cancellation=X, 代表  
这块资料是针对取消

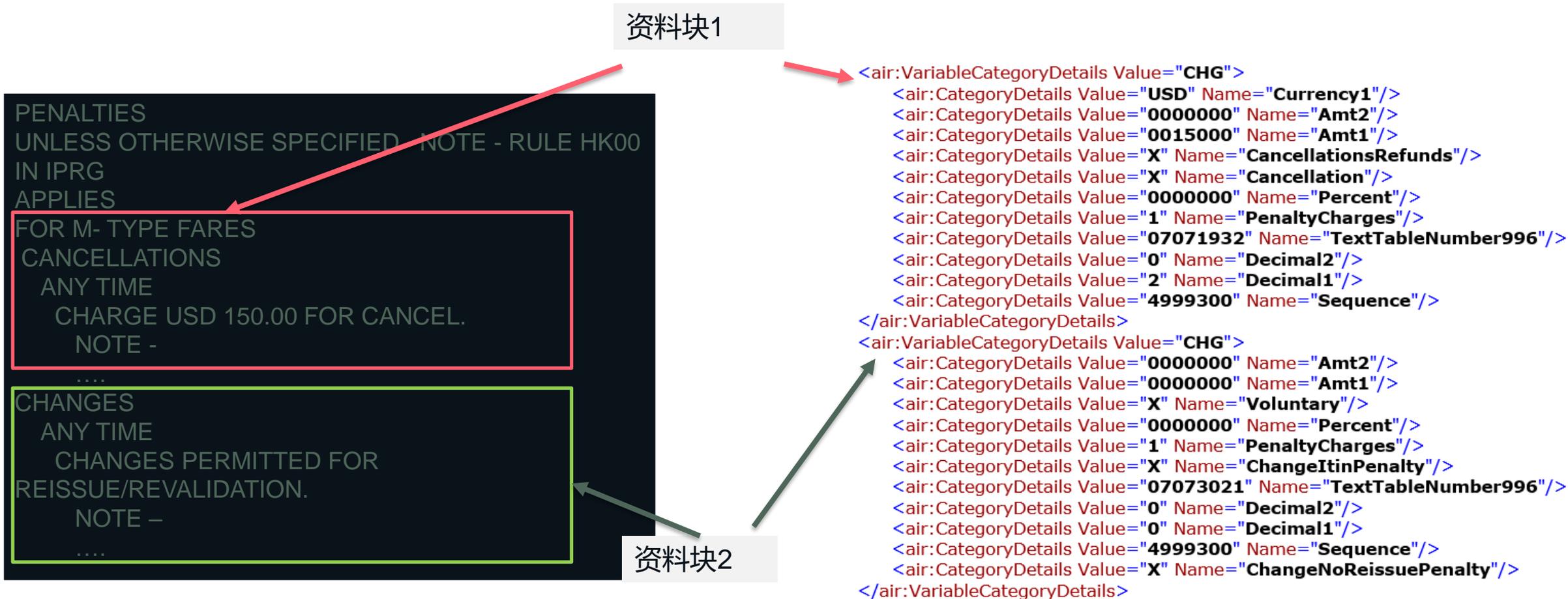
```
<air:VariableCategoryDetails Value="CHG">
  <air:CategoryDetails Value="USD" Name="Currency:"/>
  <air:CategoryDetails Value="0000000" Name="Amt2"/>
  <air:CategoryDetails Value="0015000" Name="Amt"/>
  <air:CategoryDetails Value="X" Name="CancellationsRefunds"/>
  <air:CategoryDetails Value="X" Name="Cancellation"/>
  <air:CategoryDetails Value="0000000" Name="Percent"/>
  <air:CategoryDetails Value="1" Name="PenaltyCharges"/>
  <air:CategoryDetails Value="07071932" Name="TextTableNumber996"/>
  <air:CategoryDetails Value="0" Name="Decimal2"/>
  <air:CategoryDetails Value="2" Name="Decimal1"/>
  <air:CategoryDetails Value="4999300" Name="Sequence"/>
</air:VariableCategoryDetails>
```

PenaltyCharges=1,  
指所有时间

TextTableNumber996  
如有值代表这块资料包含文  
字备注(NOTE)

# STRUCTURE FARE RULE (CAT 16)

Cat16 SFR例子



# STRUCTURE FARE RULE (CAT 16)

## SFR cat 16 (CHG) 对应场景例子 (未包括所有场景)

场景	CategoryDetails内的Name值				
	"Voluntary"	"CancellationsRefunds"	"TktNonRef"	"NoShowPenalty"	"PenaltyCharges"
Non-Refundable – Anytime and Before Departure 不可退 - 出发前			X/B	空值/没返回	1, 2, 4, 5 或 空值/没返回
Non-Refundable – After Departure 不可退 - 出发后			X/B	空值/没返回	3 或 6
Non-Changeable – Anytime and Before Departure 不可改 - 出发前			N	空值/没返回	1, 2, 4, 5 或 空值/没返回
Non-Changeable – After Departure 不可改 - 出发后			N	空值/没返回	1, 2, 4, 5 或 空值/没返回
Cancellations – Anytime and Before Departure 取消(可退) - 出发前		X	空值/没返回	空值/没返回	1, 2, 4, 5 或 空值/没返回
Cancellations – After Departure 取消(可退) - 出发后		X	空值/没返回	空值/没返回	3 或 6
Changes – Anytime and Before Departure 改 - 出发前	X		空值/没返回	空值/没返回	1, 2, 4, 5 或 空值/没返回
Changes – After Departure 改 - 出发后	X		空值/没返回	空值/没返回	3 或 6
Non-Refundable if a No Show – Anytime and Before Departure 不可退如没出现 - 出发前			X/B	X	1, 2, 4, 5 或 空值/没返回
Non-Refundable if a No Show – After Departure 不可退如没出现 - 出发后			X/B	X	3 或 6
No Show – Anytime and Before Departure 没出现 - 出发前			空值/没返回	X	1, 2, 4, 5 或 空值/没返回
No Show – After Departure 没出现 - 出发后			空值/没返回	X	3 或 6
Non-Changeable if a No Show – Anytime and Before Departure 不可改如没出现 - 出发前			N	空值/没返回	1, 2, 4, 5 或 空值/没返回
Non-Changeable if a No Show – After Departure 不可改如没出现 - 出发后			N	空值/没返回	3 或 6

### \*Important

不同航空公司对“出发前”有不同定义, 详情请参考票规 (多数在备注中)

比如有些航司出发前24小时才算“出发前”

# STRUCTURE FARE RULE (CAT 31 & 33)

## Important attributes

- Cat31 (VOL) 是自愿更改
- Cat33 (VOR) 是自愿退款
- 这两类票规主要是给系统使用做自动退改使用. 这里列出一些重要参数, 也可用来提取退改罚金
- 如Cat31 (VOL) & Cat33 (VOR) 没有数据, 请参考回Cat16 (CHG), 不要假设没有罚金
  
- 在Cat31 和 Cat33中, 可以用以下参数查看是针对出发前或后情况
  - Cat31 (VOL): Name="Journey"  
e.g. <air:CategoryDetails Name="Journey" Value="B" />
  - Cat33 (VOR): Name="DepartureOfJourney"  
e.g. <air:CategoryDetails Name="DepartureOfJourney" Value="B" />
  - B = 出发前  
A = 出发后  
空值 = 任何时间

# STRUCTURE FARE RULE (CAT 31 & 33)

## Important attributes

- 在Cat31 和 Cat33中, 可以用以下参数查看是针对出发前或后情况(续)
  - Cat33 (VOR): Name="OriginallyScheduledFlight" (如DepartureOfJourney没有返回)  
e.g. <air:CategoryDetails Name="OriginallyScheduledFlight" Value="B" />
    - B = 原出发时间前Before the originally scheduled flight
    - D = 原出发时间一天前One day before the originally scheduled flight
    - X = 原出发时间或之前On/Before the day of departure of the originally scheduled flight
    - Blank = 或是任何时间May be made before or after the originally scheduled flight
    - A = 原出发时间后Anytime after originally scheduled flight
    - O = 原出发时间一天或之后Day of originally scheduled flight and later
    - L = 原出发时间一天后Day after originally scheduled flight and later

# STRUCTURE FARE RULE (CAT 31 & 33)

## Important attributes

- In Cat31 and Cat33
  - Amount1, Amount2:  
罚款金额, 小数位位置参考Decimal值,
  - Decimal1, Decimal2:  
罚款金额的小数位位置
  - Currency1, Currency2:  
罚款金额的货币
  - 上方3个参数通常只有尾数为1 (Amount1, Decimal1 & Currency1) 会返回值, 如1和2都返回, 请使用值高者
  - PTC: 乘客类别, 空值/没返回指所有乘客类别
- 很多其他参数是针对换票计价, 并需要知道更改航班详细资料才能计算. 它们搜索shopping和验价pricing显示退改条件和金额时并不会用上.
  - 比如“Jpufc”指重新出票费用是按行程还计价单位来算
- 相同场景应用最严厉条件或最大罚金来计价
  - 比如UI只显是一个改的罚金, 那就在VOL中找最严厉条件显示就可

# STRUCTURE FARE RULE (CAT 31)

## Important attributes

- In Cat31 (VOL)
  - TypTikt, 说明罚款条件是针对reissue改票还是revalidate机票连接
    - A = Reissue
    - B = Revalidation
    - 空值 = 两者都可 `<air:CategoryDetails Name="TypTikt" Value=" " />`
  - 有些航司可能会收额外服务费Booking Service Charge (BSC), 但这服务费未必在我们SFR返回中包含, 建议和你们机票组确定是否针对某些航司要额外加罚金

```
/// BSC - BOOKING SERVICE CHARGE ///
```

```
FOR BR/B7 TICKETS ISSUE/CHANGE ON/AFTER 01JUL2020
```

```
AND HR TICKETS ISSUE/CHANGE ON/AFTER 29JUL2020
```

```
BOOKING SERVICE CHARGE /BSC/ USD 5.00 PER BR/B7
```

```
FLIGHT SECTOR WILL BE COLLECTED UNDER IATA TAX
```

```
CODE //YR//.
```
  - 另外也和机票组/出票方确定是否会提供reissue和revalidate服务, 有没额外行政费.

# STRUCTURE FARE RULE (CAT 31)

## Important attributes

- In Cat31 (VOL)
  - ChgInd, 是否可以reissued改票或可以改票的次数
    - J = 行程不可改  
如返回“J”代表这票不可改
    - N = Fare Component不可改  
P = Pricing Unit 不可改  
“N”及“P”值要主要看要改航班内容才知道是否可以改,但在搜索shopping和验价pricing时因为不知更改内容,可考虑显示
      - 改动罚金由航空公司最终决定
      - 或当作不可改
    - 空值: 请参考其他栏位  
e.g. `<air:CategoryDetails Name="ChgInd" Value=" " />`

# STRUCTURE FARE RULE (CAT 31)

## Important attributes

- In Cat31 (VOL)
  - Jpufc, 重新出票费用的计算是按行程, Pricing Unit还是Fare Component
    - J = Journey行程
    - P = Pricing Unit
    - Blank = Fare Component
  - FeeApplication,重新出票费用的计算方法, 会和Jpufc 一起考虑
    - 1并且(Jpufc 为空值或“J”) = 所有被更的fare components中, 收取最贵的更改费用
    - 2并且(Jpufc为空值或“J”) =所有fare components中(包括更改或没更改的), 收取最贵的更改费用
    - 3并且Jpufc为空值 = 所有Fare Components更改费用加总
    - (4并且Jpufc为空值) or (2并且Jpufc为“P”) = 所有有更改Pricing Unite的Fare components中, 收取最贵的更改费用
    - 5并且Jpufc为空值 =所有有更改或新加Pricing Unite的Fare components中, 收取最贵的更改费用
  - \*只有返回3并且Jpufc为空值 only 3 means penalty is sum up of all fare basis

# STRUCTURE FARE RULE (CAT 33)

## Important attributes

- In Cat33 (VOR)
  - CancellationIndicator: 是否可退
    - X = 不可退 `<air:CategoryDetails Name="CancellationIndicator" Value="X" />`
    - Blank = 可退
  - Percentage: 罚金占Base Fare基础票价百份比
    - E.g. \$1000 base fare, Percentage="60", 罚金则为 \$600
    - 如返Percentage返回值, Amount应为返回零值"0000000".
  - TaxNonRefundable: 税是否可退(按Fare的可退类别来分)
    - 返回“X”
      - 如是不可退的票Non-Refundable fares (CancellationIndicator="X"), 税也不可退
      - 如是可退的票Refundable fares (CancellationIndicator=" "), 税也可退
    - 返回空值“”, 票规没说明, 可以最严厉处理当成不可退税

# MOST RESTRICTIVE CAT16 PENALTY

- 只在LowFareSearch and AirPrice返回
- 必需在请求中加入MostRestrictivePenalties="true"才会返回
- 需要xml schema 版本为 v49 或以上
- 按Cat16 (CHG)内容计算
- 如Cat16中的文字备注内容或非保存在Record 3的资料不会被读取
- 返回节点在AirPricingInfo之中, 会返回AirPricingInfo 中所有票价基础Fare Basis的最严谨条件及罚金
  - 注: 如果AirPricingInfo有多个票价基础Fare Basis, 其中一个只有备注文字内容, 故无法读取其内容, 系统只会分析其余的Fare Basis
- 如果整个AirPricingInfo中的票价基础Fare Basis都无法读取, 系统不会返回MostRestrictivePenalties节点

```
<air:MostRestrictivePenalties>
- <air:RestrictionType Value="Anytime And Before Departure" Name="Cancellation">
  <air:Amount>HKD2200.00</air:Amount>
</air:RestrictionType>
- <air:RestrictionType Value="After Departure" Name="Cancellation">
  <air:Amount>SGD200.00</air:Amount>
</air:RestrictionType>
- <air:RestrictionType Value="Anytime And Before Departure" Name="Changes">
  <air:Amount>HKD2200.00</air:Amount>
</air:RestrictionType>
- <air:RestrictionType Value="Anytime And Before Departure" Name="No Show">
  <air:Amount>HKD2200.00</air:Amount>
</air:RestrictionType>
</air:MostRestrictivePenalties>
```

# MOST RESTRICTIVE CAT16 PENALTY

## Attributes

- 返回的“Name”及“Value”以代表场景及条件
- 返回的“Amount”及“Percentage”代表其中的退改罚金按金额还是比例计算
- “Name” (场景)的格式按航司输入来返回, 比如” Non-Refundable”和” Cancellation - Non-Refundable”是一样的
- 右边的内容不会都返回, 比如“No Show”, “Changes – After Departure”可以不返回

Name (代表场景)	Value (代表条件)
Non-Refundable	Anytime and Before Departure
Non-Changeable	After Departure
Cancellation	
Changes	
No Show	
Non-Refundable marked with No Show	
Non-Changeable marked with No Show	
Cancellation - Non-Refundable	
Cancellation - Non-Changeable	
Changes - Non-Refundable	
Changes - Non-Changeable	

# STRUCTURE FARE RULE & MOST RESTRICTIVE CAT16 PENALTY- Q&A



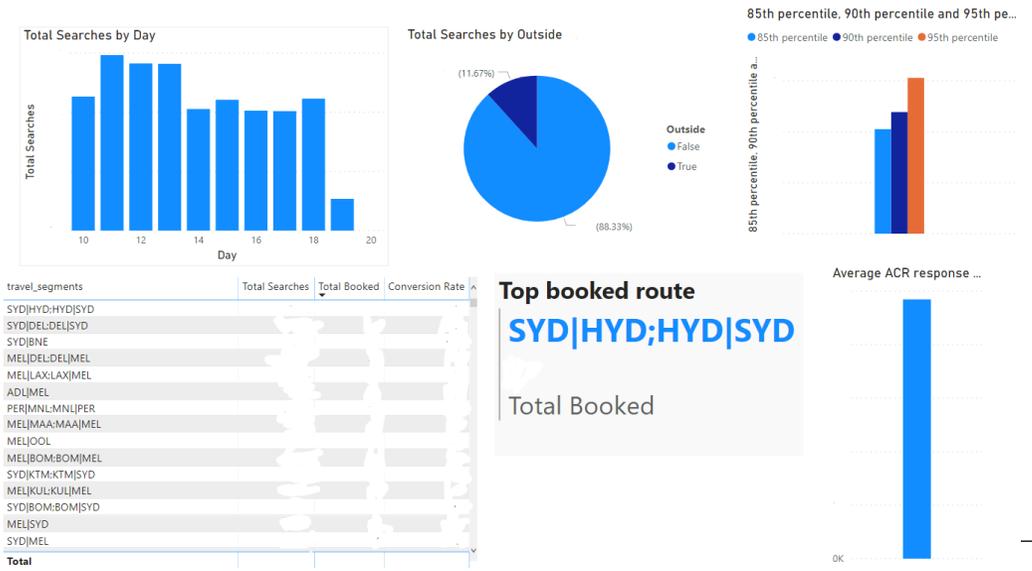
# UNIVERSAL API 最佳应用方法



# 转化分析 & TRACEID

- 同一个购物会话中，在LowFareSearch, AirPrice and AirCreateReservation请求中使用相同的TraceID
- e.g. 小明搜索(LFS)了PVG-TYO来回票，选择了一个行程(AP)并建立了一个预定(ACR)
- TraceID把三个独立的请求联系在一起，我们能知道哪些搜索得到转化，或是会话在哪个阶段流失
- 在此基础上我们可以从API日志生成转化报告，帮助你发现最佳/最少转化的路径

```
<air:LowFareSearchReq TraceId="5503841420161106092649626720">  
<air:AirPriceReq TraceId="5503841420161106092649626720">  
<univ:AirCreateReservationReq TraceId="5503841420161106092649626720">
```



# 保持PNR变更历史

```
<univ:AirCreateReservationReq AuthorizedBy="UAPI_applicationA"
```

- 在建立, 更新或删除PNR时, 设置AuthorizedBy参数
- e.g. AirCreateReservation, UniversalRecordModify, UniversalRecordCancel requests
- 相当于Smartpoint R. (Received By) 指令
- R. 指的是谁对这个PNR进行了操作
- 在线下流程, R. 后通常写的是客服人员的名字
- 建议设AuthorizedBy参数为应用名称, 并以UAPI作为前缀, 尤其是当有多个应用同时对PNR进行操作的情况
- PNR历史中会保有所有应用或人员进行的更改记录
- 如果不设置AuthorizedBy参数, 第一个乘客的姓名会被使用, 容易造成误解



 TRAVELPORT

**GETTING  
STARTED**

开始上线使用



# XML SCHEMA & RETIREMENT POLICY

## 下载UAPI Schema

- [https://support.travelport.com/webhelp/uapi/uAPI.htm#Getting\\_Started/Universal\\_API\\_Schemas\\_and\\_WSDLs.htm%3FTocPath%3D](https://support.travelport.com/webhelp/uapi/uAPI.htm#Getting_Started/Universal_API_Schemas_and_WSDLs.htm%3FTocPath%3D) 16

Schema Download	Release Date	Schema Release Differences	Differences Zip File
Current <a href="#">20.2</a>	18-May-20 03-Jun-20 (Bug Fix)	Version 20.2 Release-V19.2.0.12-Release-20.2.1.573	<a href="#">19.2.0.12 to 20.2.1.573.zip</a>
<a href="#">19.2</a>	16-Nov-19	Version 19.2 Release-V19.1.0.53-Release-19.2.0.12	<a href="#">19.1.0.53 to 19.2.0.12.zip</a>

## 查看各版本支持期限

- <https://support.travelport.com/webhelp/uapi/uAPI.htm#SchemaRetirement.htm>

Release Number	Schema Version	Release Date	Proposed Retirement Date (subject to change)
16.3	air_v38 common_v38	10-Aug-16	02-Sep-21

## 在版本到期前请更新至Schema至最新版本

- E.g. UAPI v16.3 (schema v38) 2016年8月推出, 在2021年9月到期



# GZIP COMPRESSION

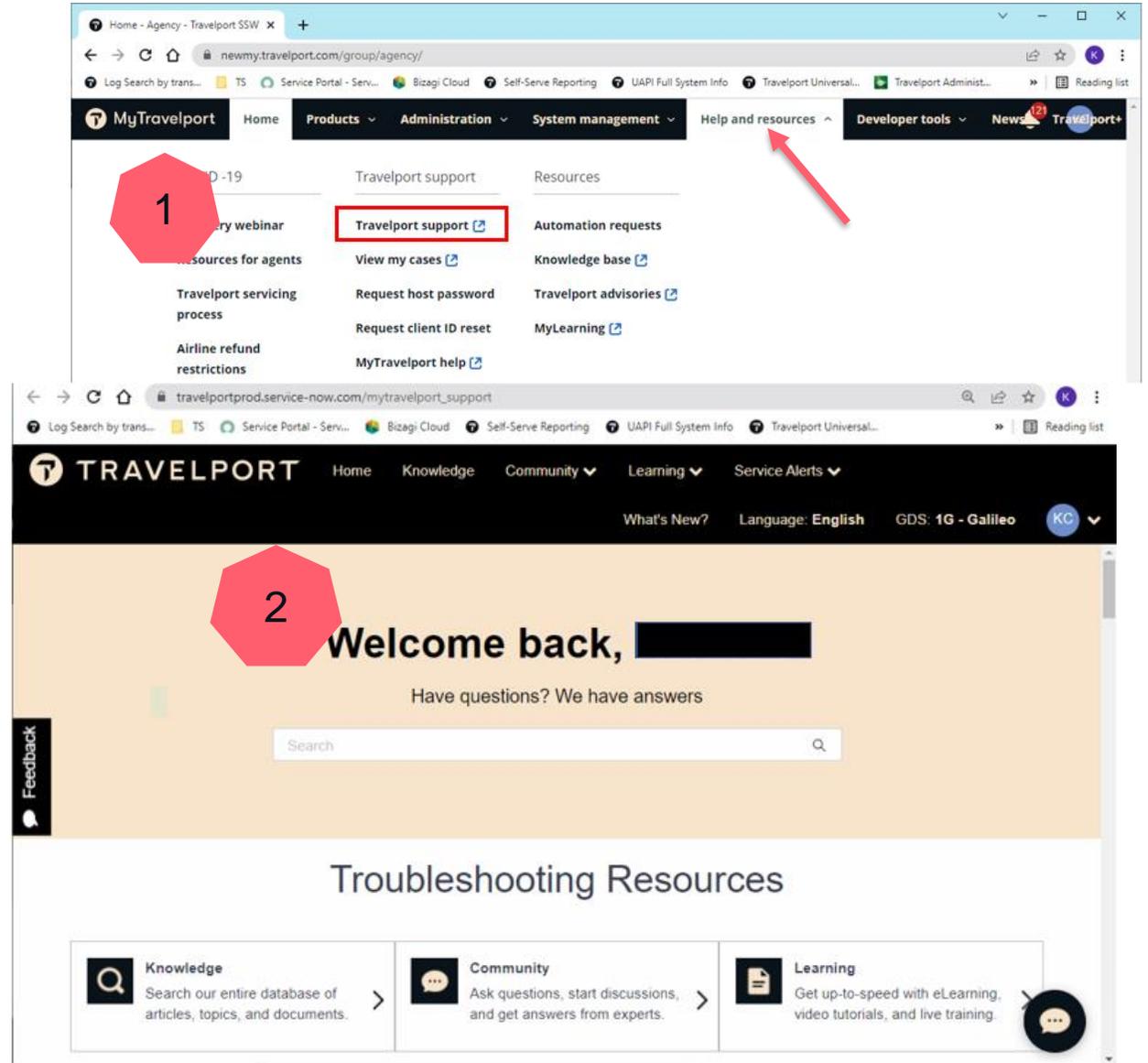
- UAPI支持GZIP压缩, 可以大幅度缩小HTTP有效载荷并缩短客户端与Travelport服务器之间的网络传输时间
- 请在Header中设置 **'Accept-Encoding: gzip, deflate'** 以使用GZIP压缩



# API SUPPORT

## How to Raise Incident

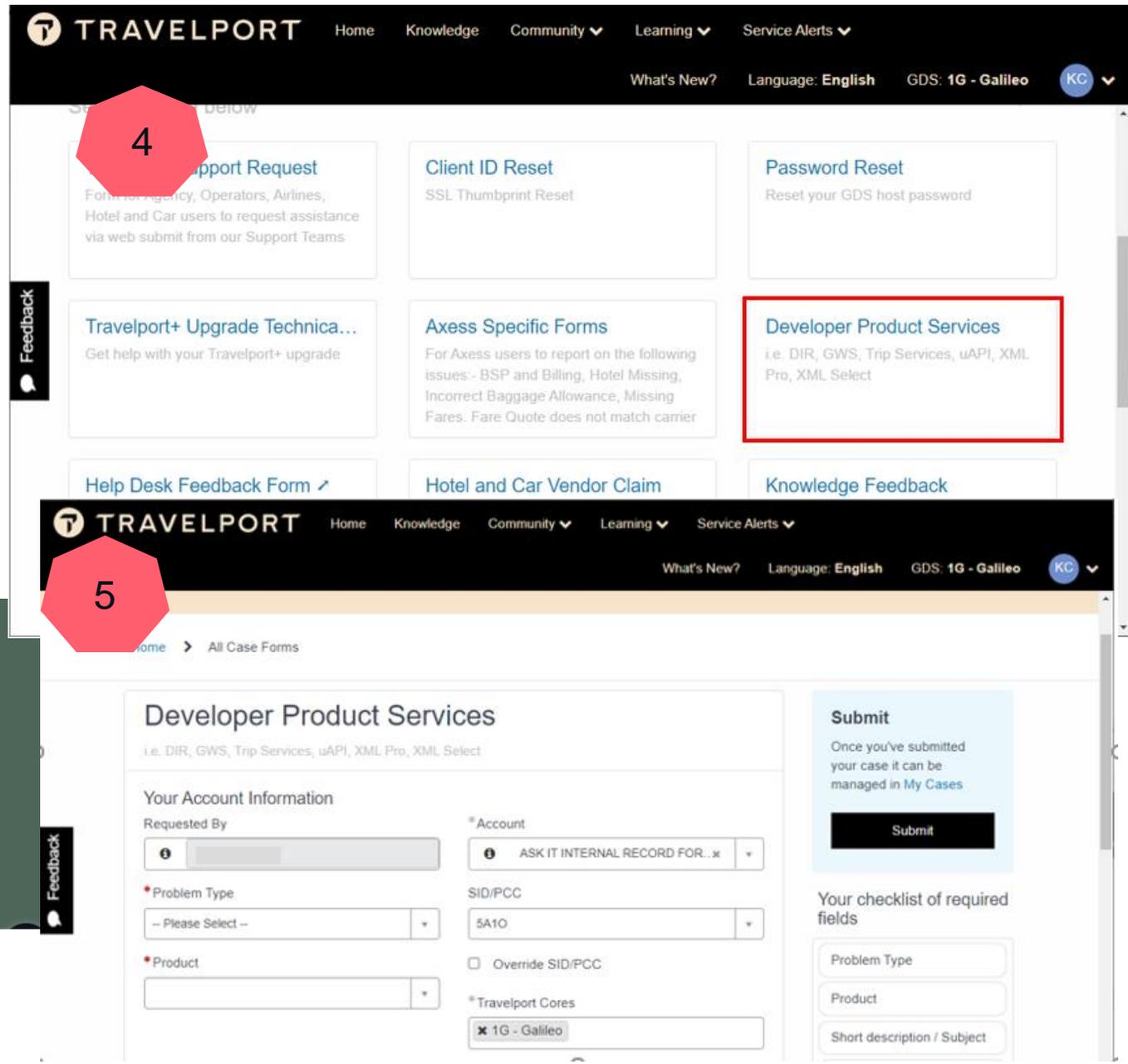
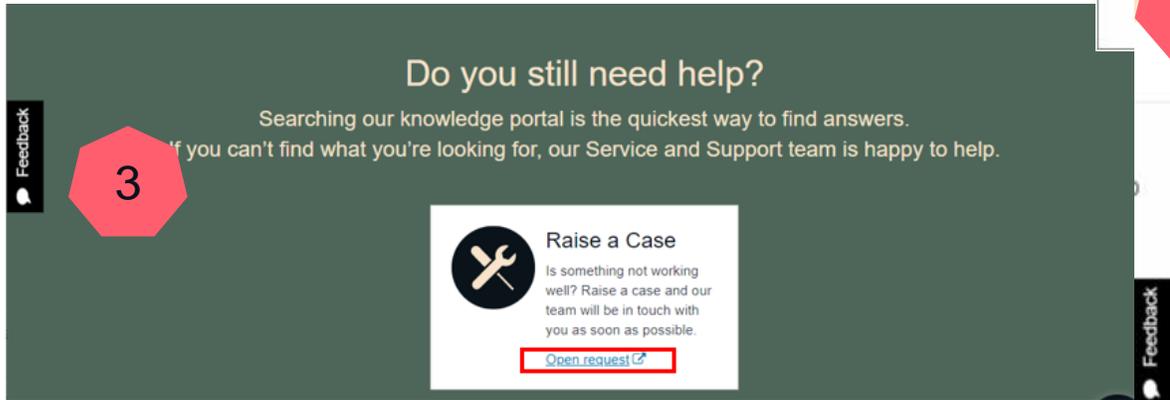
- My Travelport
  - <https://my.travelport.com/>
  - Travelport API支援同事会帮你们开一个MyTravelport 管理员帐号
  - MyTravelport 管理员帐号可以帮助同事建立账户
  - 你也可以访问MyTravelport中的海量Travelport专有知识库
  - 提交Travelport API认证以获得生产环境账号
- 如何提交工单
  1. 登入MyTravelport后, 在菜单”Help and resources “中点选”Travelport Support”
  2. 进入support支援页面



# API SUPPORT

## How to Raise Incident (Cont.)

3. 往下拉找到“Raise a Case”，点击“Open request”
4. 选择“Developer Product Services”
5. 填写你的问题 并附加相关的 XML

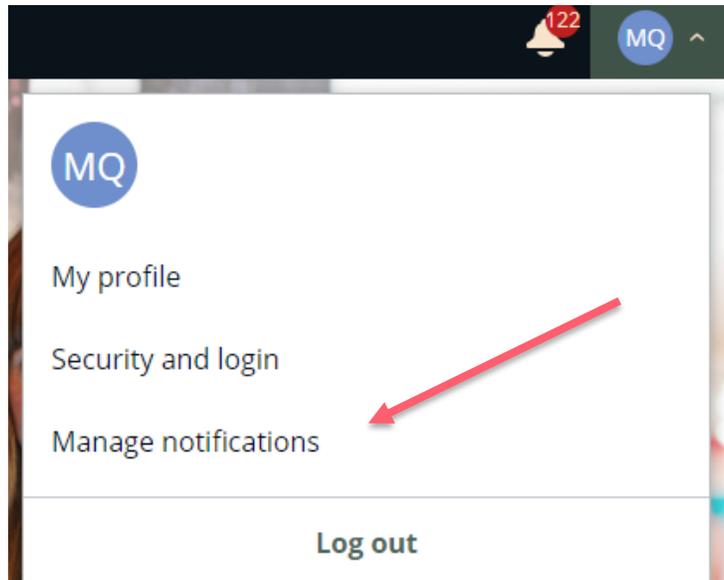


# UAPI CERTIFICATION

- 所有顾客需先通过UAPI认证以获得生产环境账号
- 提交以下信息至MyTravelport以获取认证：
  - 工作流程文档
  - UAPI问卷答案
  - XML请求与响应
- XML 请求与响应 (具体细节请与API顾问确认)
  - 2 位成人 + 2 位儿童 (不同岁数)
  - 往返行程
  - 至少一段转机航段
  - 私有运价 (如果PNR会储存运价)
- uAPI与系统前后台互动流程图

# SUBSCRIBING EMAIL ALERTS

- Travelport 警报邮件订阅 (强烈推荐):
  - 服务警报 Service alerts
  - 产品公告 Product advisory
  - 开发者公告 Developer advisory (Travelport Universal API)
  - 工单/个案更新通知 Incident updates



## Manage notifications

### MyTravelport

#### Notification

- Service Alerts
- New alerts
- Status updates
- Resolved alerts

#### Email

##### Email types

- Training advisory
- Helpdesk surveys
- Partner messages
- Product advisory
- Developer advisory
  - Travelport Universal API
  - Software Development Kit (SDKs)
  - Travelport Classic APIs
  - RESTful API Microservices
- Incident updates





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**Note about examples:**

All screen examples and other inserts associated with system output are provided for illustration purposes only. They are provided as illustrative examples of system functionality and are not meant to represent actual screen responses, rates, etc.