

Xiamen Airlines' NDC implementation experience



- Xiamen Airlines

- NDC 18.2



- Supported Roles: OTA、AGG、TMC

- In cooperation: Top domestic OTAs、
Global AGGs

- Future: more AGG、OTA、TMC partners

- 刘艺凌

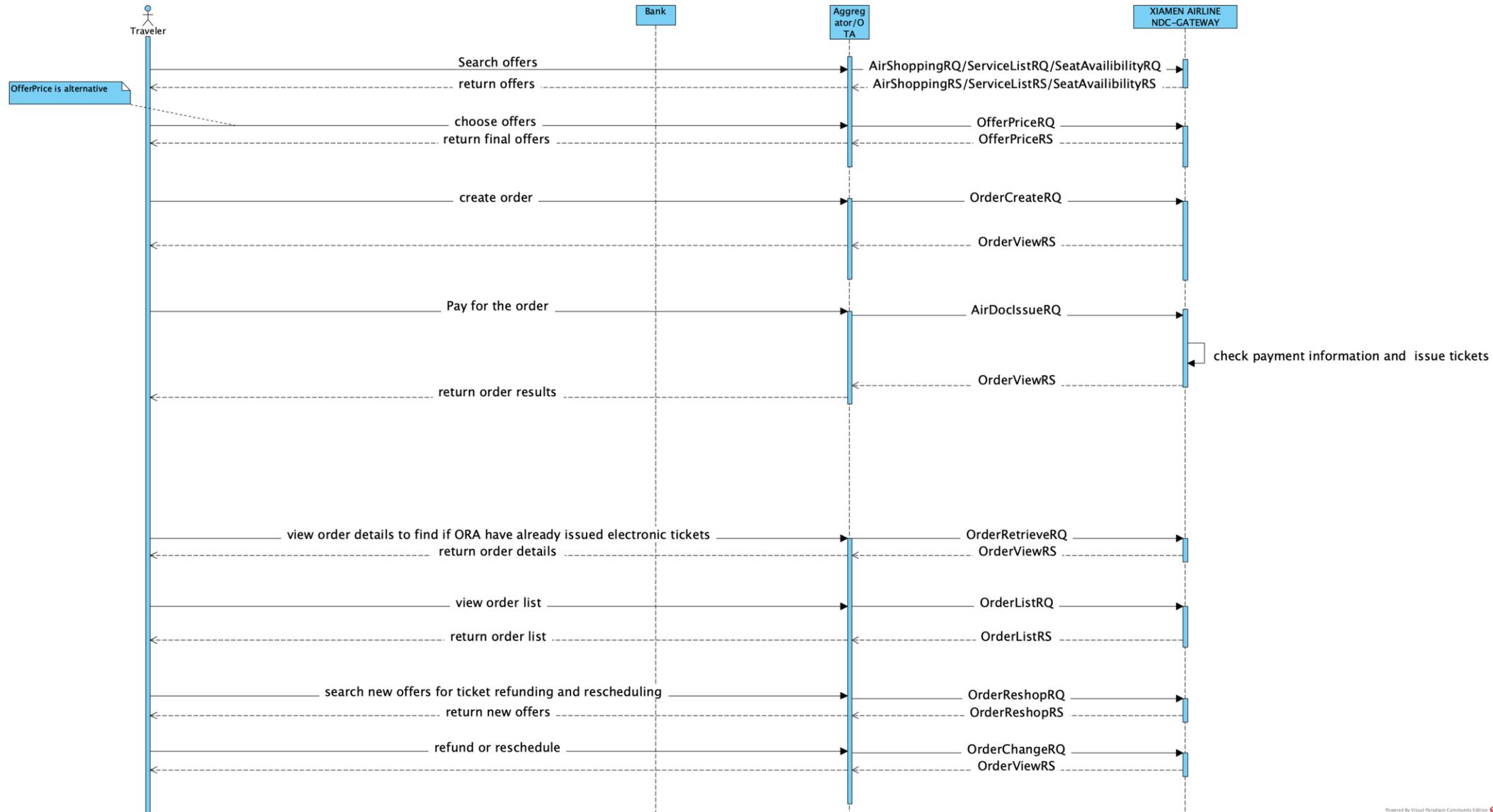


Our implementation

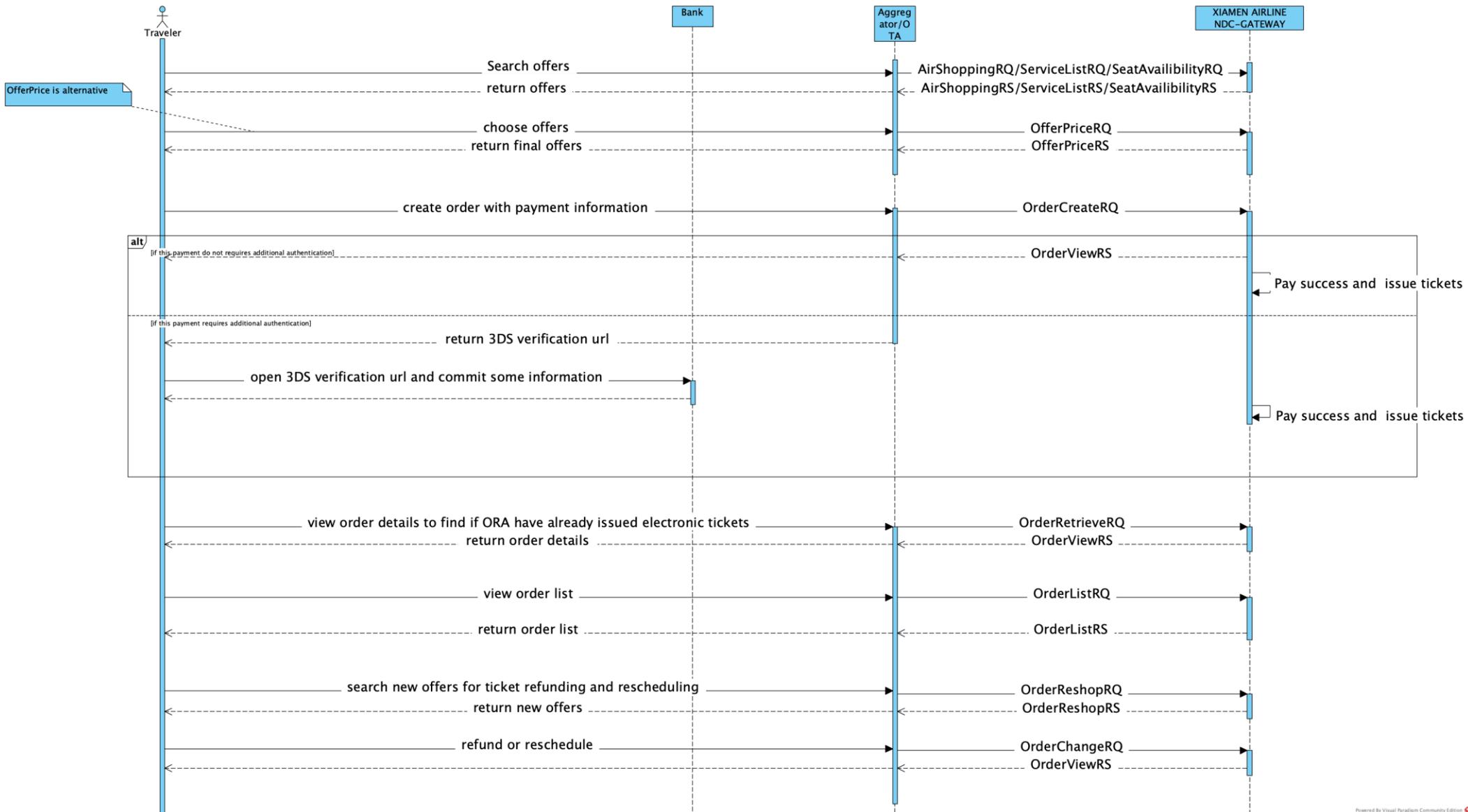
- ShopOrder WorkFlow
- COVID-19 Refund
- NDC Benefit
- Developer Center
- NDC Document Support
- Ancillary Services
- ECIP
- Future
- Discussion topics



ShopOrder WorkFlow



ShopOrder WorkFlow



COVID-19 Refund

通过NDC直连，所有的合作伙伴在厦门航空的退改计算逻辑是一致的，合作伙伴可以通过NDC实时获取到最新的退改费用与规则。

Through the direct connection of NDC, the calculation logic of all partners in Xiamen Airlines is the same. The partners can obtain the latest refund fees and rules in real time through NDC.

通过NDC直连将航空公司的退改支付能力直接开放给OTA\AGG\TMC等合作伙伴。

通过直连NDC将航司政策（包括但不限于退改政策、营销政策、投放政策）实时透传至OTA\AGG\TMC等合作伙伴。

尤其疫情期间，退改规则变化频繁，将退改政策惠及到大部分用户是企业社会价值的体现，这个是直连NDC才显示出这种优势。

Through NDC, Xiamen Airline provided rescheduling and refund abilities and transmitted the policies of airline (including but not limited to refund policy, marketing policy, delivery policy) to business partners such as OTA, AGG and TMC.

Especially during the outbreak, the rules for rescheduling and refund changed quite frequently. It was the social value of a company to benefit the majority of customers from the flexible rescheduling and refund policies, the implementation of which is relied on NDC.



NDC Benefit

对市场的嗅觉更加灵敏、更快响应市场的变化

Sensitive to the market, more responsive to market changes

多币种、多语言带来国际化OTA/AGG/TMC等合作伙伴直连NDC的可能性、便利性。

Multi-currency and multi-language brings the possibility and convenience for international OTA / AGG / TMC and other partners to access NDC.

借助NDC丰富的数据结构，与OTA共同销售附加服务，无论是传统的附加服务（选座、行李、保险）或航司独具特色的附加服

务（餐食、爱你一鹭）。

With the help of NDC's data structure, we provided ancillary services together with OTA including traditional ancillary services (seat selection, luggage, insurance) and some unique ancillary services (meal, customization surprise)



Developer Center: open.xiamenair.com

Solution

Xiamen Airlines open platform will provide professional and high-quality services and solutions for developers

Apply and approve online

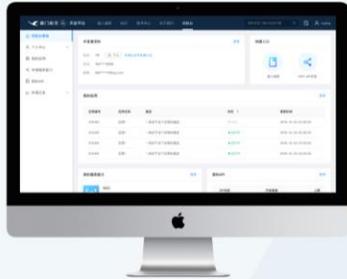
Submit your requirements online through the platform

Application management

Create and manage your application information

Apply for service ability

Get the desired API related to the service ability quickly



Sandbox

Provide online sandbox calls, quickly know the API

Online Documents

Perfect online documents help you understand the open platform better

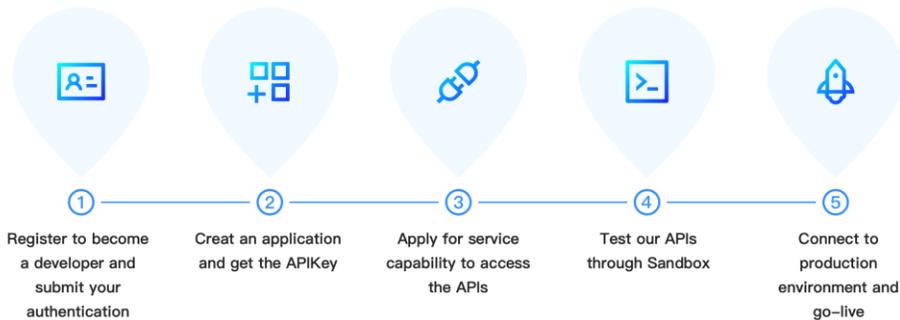
Operational Indicators

Provide API operational indicators query, know the API request data statistics

Access Guide

Welcome!

Start using our APIs with the following steps. For more details, please refer to [the access guide](#)



Apps management

+ Create - Delete

已选择: 1 清空

App Name	Description	Status	Updated Time
XiamenAirl...	Established in 1984 ...	Available	2020-05-18 15:50:49

Service Capability Details-NDC_OFFER

NDC_OFFER Enterprise

Service Capability Details

Description: OFFER supports both demanding and flexible shopping experiences for anonymous or personalized shopping.

Scenes: search for flights,baggage,seat ,light meal, etc

Business Domain: NDC_SHOPPING

Requirements: Enterprise Developer

API List: This service capability will use the following APIs, click to view the corresponding documents

NDC_182_ServiceList NDC_182_SeatAvailability NDC_182_OfferPrice NDC_182_AirShopping



NDC Document Support

- 1 General Introduction
 - 1.1 The version of NDC schemas
 - 1.2 Precautions
 - 1.3 Products that can be sold by available NDC message pairs
 - 1.4 Description of the general part of the request messages
 - 1.4.1 Request header settings
 - 1.4.2 Description of general parameters of NDC request messages
 - 1.4.3 Description of general part of NDC response messages
- 2 Explanation of payment methods
- 3 Message pairs and use case descriptions
- 4 Instruction of NDC message implementation of Xiamen Airlines
- 5 Other instructions:
- 6 Specification of ErrorCode

1 General Introduction

1.1 The version of NDC schemas

1.1.2

1.2 Precautions

- When testing the ndc interface of Xiamen Airlines, please book a long-term flight that avoids holidays, and issue and refund the ticket on the same day
- When using the foreign card settlement, you need to open the IP whitelist in advance to access the 3ds authentication address

1.3 Products that can be sold by available NDC message pairs

- Domestic/International flights (AirShoppingRQ/RS)
- Coupon
- Insurance (Still Improving)
- Light Meal (ServiceListRQ/RS)
- Seat Selection (SeatAvailabilityRQ/RS)
- Baggage (ServiceListRQ/RS)
- Special Service (Still Improving)

1.4 Description of the general part of the request messages

1.4.1 Request header settings

Xiamen Airlines requires that when using messages other than AirShoppingRQ / AirShoppingRS, OfferPriceRQ / OfferPriceRS, SeatAvailabilityRQ / SeatAvailabilityRS to request an interface, Set the login user ID in the header. UserID is placed in the head of httpheader, the key of which is user_id. This field represents the unique ID of user who the hashcode of user ID. (This user_id should indicate the uniqueness of the logged user. This field is required except interface. For the convenience of testing and troubleshooting, the user_id can be a fixed value in testing environment. user_id in product environment)
Of course, if the passenger purchases the ticket without login on your platform, user_id can be filled as the mobile phone number of the order contact person.

1.4.2 Description of general parameters of NDC request messages

The request messages of NDC contains six attributes that are AugmentationPoint, MessageDoc, Party, PayloadAttributes. The Request attribute will vary with the requests, but the structure of the other five attributes is consistent. The struc



NDC-OTA Message pair examples ☆	
16 requests	
▶	ticket rescheduling
POST	AirDocIssueRQ/OrderViewRS
POST	OrderReshopRQ/OrderReshopRS
POST	OrderCancelRQ/OrderCancelRS
POST	AirShoppingRQ/AirShoppingRS
POST	OrderRuleRQ/OrderRuleRS
POST	OfferPriceRQ/OfferPriceRS
POST	OrderRetrieveRQ/OrderViewRS
POST	OrderChangeRQ/OrderViewRS
POST	Query Baggage
POST	OrderCreateRQ/OrderViewRS
POST	Order Create with flight+baggage+seat+light ...
POST	Query seat
POST	Query light meals

- 1 通用说明
 - 1.1 使用的IATA版本号
 - 1.2 注意事项
 - 1.3 NDC消息对可销售的产品列表
 - 1.4 请求消息通用部分说明
 - 1.4.1 请求头部设置
 - 1.4.2 NDC请求消息通用参数说明
 - 1.4.3 响应消息通用部分说明
- 2 支付方式说明
- 3 消息对及用例说明

1 通用说明

1.1 使用的IATA版本号

1.1.2

1.2 注意事项

- 对接厦航ndc接口进行测试时, 请预定远期的、避开节假日的航班, 并且当天出票要在当天退票
- 使用外卡支付时, 需要提前开通IP白名单才可访问3ds认证地址

1.3 NDC消息对可销售的产品列表

- 国内机票、国际机票(AirShoppingRQ/RS)
- 优惠券
- 保险 (完善中)
- 轻食(ServiceListRQ/RS)
- 选座(SeatAvailabilityRQ/RS)
- 行李(ServiceListRQ/RS)
- 特殊服务 (完善中)

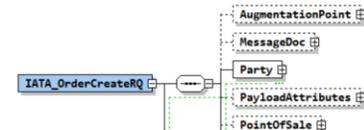
1.4 请求消息通用部分说明

1.4.1 请求头部设置

厦航要求在使用除了AirShoppingRQ/AirShoppingRS、OfferPriceRQ/OfferPriceRS、ServiceListRQ/ServiceListRS、SeatAvailabilityRQ/SeatAvailabilityRS之外的消息对请求接口的时候, 在头部设置登录用户ID。
登录用户ID放HttpHeader头部, key为用户_id。该字段表示您系统中登录用户的唯一ID或者能表示登录用户唯一性的ID或者是登录用户ID hash过后的值 (能表示登录用户唯一性即可, 该字段除了调用airShopping接口之外都是必传的。为了测试和排查问题方便, 测试环境user_id可以传固定值, 生产环境请传登录用户唯一ID)
当然, 如果旅客在您平台上非登录购票, user_id可以填写为订单联系人的手机号或者邮箱

1.4.2 NDC请求消息通用参数说明

NDC的请求消息都会包含AugmentationPoint、MessageDoc、Party、PayloadAttributes、PointOfSale、Request等6个属性。请求消息的Request属性随着请求不同而不同, 但其他5个属性结构一致, 如下:



Ancillary Services

Create order with flight+baggage+seat+light meal



Airline Ticket

Multiple domestic and international routes take more people to explore the world



Insurance

Include aviation accident insurance, baggage insurance etc. Guarantee passengers' travel in all aspects.



Meal

Enjoy a more comprehensive experience of Xiamen Airlines' well received and high-quality food service



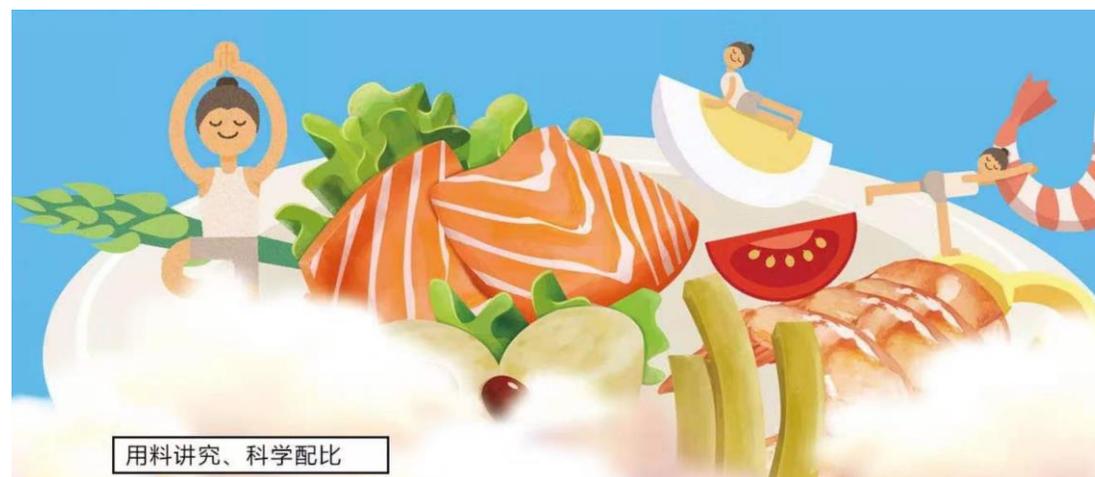
Seat selection

You can choose your favorite seat when booking

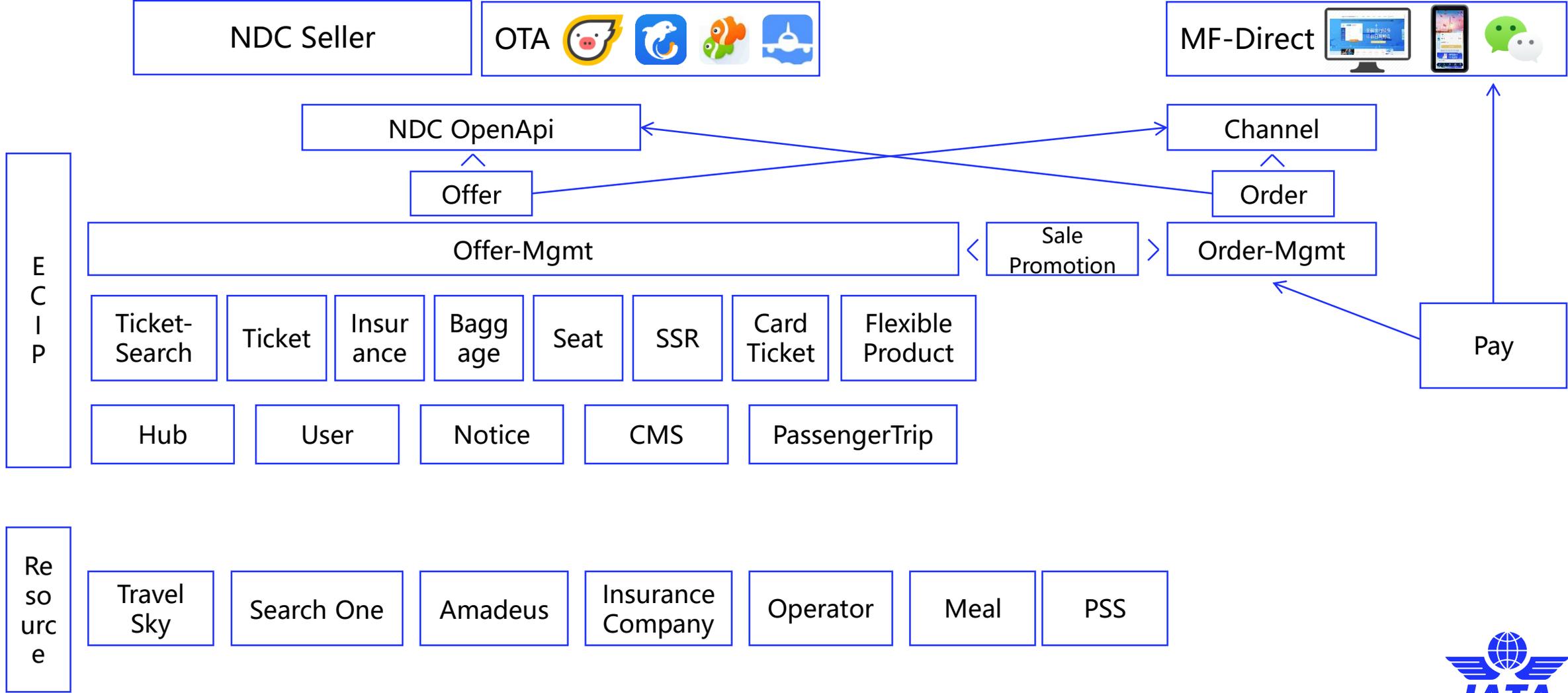


Baggage

Pay extra baggage in advance, save time, money and free from worry



ECIP



Future

- Dynamic Pricing
- Dynamic Packaging
- OneOrder
- NDC@Scale
- More Partners: TMC、AGG、OTA
- Interline

Discussion topics

- How to show promotion content
- promotion relationship with offer

```
<OfferItemID>e44ce73e0ca9423385af7ac94124993d</OfferItemID>
<Price>
  <BaseAmount CurCode="CNY">37.000000</BaseAmount>
  <Discount>
    <DiscountAmount CurCode="CNY">3693</DiscountAmount>
    <PreDiscountedAmount CurCode="CNY">3730.000000</PreDiscountedAmount>
  </Discount>
  <LoyaltyUnitAmount CurCode="CNY"/>
  <TaxSummary>
    <AllRefundableInd>>false</AllRefundableInd>
    <Tax>
      <Amount CurCode="CNY">50.000000</Amount>
      <TaxCode>CN</TaxCode>
    </Tax>
    <Tax>
      <Amount CurCode="CNY">0</Amount>
      <TaxCode>YQ</TaxCode>
    </Tax>
    <TotalTaxAmount CurCode="CNY">50.000000</TotalTaxAmount>
  </TaxSummary>
  <TotalAmount CurCode="CNY">87.000000</TotalAmount>
</Price>
<Service>
  <PaxRefID>1</PaxRefID>
  <ServiceAssociations>
    <PaxJourneyRefID>93530685cfd84c37acdbc120cf7fe86d</PaxJourneyRefID>
  </ServiceAssociations>
  <ServiceID>7bbfd10e00e0445e8d031f4fa7c46166</ServiceID>
</Service>
</OfferItem>
```

Discussion topics

- AirShoppingRS Inventory

```
1 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
2 <IATA_AirShoppingRS xmlns:xmair="https://www.xiamenair.com">
3   <Response>
4     <DataLists></DataLists>
28   <OffersGroup></OffersGroup>
50   <ShoppingResponse>
51     <ShoppingResponseID>85ab3cd70cf44f91b1b55345536c4316</ShoppingResponseID>
52   </ShoppingResponse>
53 </Response>
54 <AugmentationPoint>
55   <xmair:XMAirAugment>
56     <xmair:InventoryOfOfferItem>
57       <xmair:OfferItemRefID>e44ce73e0ca9423385af7ac94124993d</xmair:OfferItemRefID>
58       <xmair:Inventory>8</xmair:Inventory>
59     </xmair:InventoryOfOfferItem>
70     <xmair:InventoryOfOfferItem>
71       <xmair:OfferItemRefID>07f8440abebc41deb8f752d7744c5b8b</xmair:OfferItemRefID>
72       <xmair:Inventory>8</xmair:Inventory>
73     </xmair:InventoryOfOfferItem>
74     <xmair:InventoryOfOfferItem>
75       <xmair:OfferItemRefID>24a813e1bbff41f39cd342c46065f249</xmair:OfferItemRefID>
76       <xmair:Inventory>A</xmair:Inventory>
77     </xmair:InventoryOfOfferItem>
78     <xmair:InventoryOfOfferItem>
79       <xmair:OfferItemRefID>4944c7beff81411eaa7bdc7aa82d6ee6</xmair:OfferItemRefID>
80       <xmair:Inventory>A</xmair:Inventory>
81     </xmair:InventoryOfOfferItem>
82   </xmair:XMAirAugment>
83 </AugmentationPoint>
84 </IATA_AirShoppingRS>
```

Discussion topics

- FareComponent structured data

```
Body Cookies Headers (8) Test Results Status: 200 OK Time: 86 ms Size: 14.78 KB Save Download
Pretty Raw Preview XML
128 <OffersGroup>
129   <CarrierOffers>
130     <Offer>
131       <BaggageAllowance>
132         <BaggageAllowanceRefID>J</BaggageAllowanceRefID>
133         <PaxJourneyRefID>93530685cfd84c37acdbc120cf7fe86d</PaxJourneyRefID>
134         <PaxRefID>1</PaxRefID>
135       </BaggageAllowance>
136       <MatchPercent>0</MatchPercent>
137       <OfferExpirationDateTime>2020-05-18T10:33:41.341+08:00</OfferExpirationDateTime>
138       <OfferID>c99eefb5d8a14065a68e832c1982ebba</OfferID>
139     <OfferItem>
140       <FareDetail>
141         <FareComponent>
142           <FareBasisCode>J</FareBasisCode>
143           <FareRule>
144             <Penalty>
145               <DescText>改期：航班计划离站时间7天（含）前变更，免收变更手续费；航班计划离站时间7天内（不含）至48小时（含）前变更，每次收取客票票价5%的变更手续费；航班计划离站时间48小时内（不含）至4小时（含）前变更，每次收取客票票价5%的变更
146             手续费；航班计划离站时间之前4小时（不含）及航班起飞后变更，每次收取客票票价10%的变更手续费；
147             退票：航班计划离站时间7天（含）前退票，收取客票票价5%的退票手续费；航班计划离站时间7天内（不含）至48小时（含）前退票，收取客票票价5%的退票手续费；航班计划离站时间48小时内（不含）至4小时（含）前退票，收取客票票价5%的退票手续费；航班计划离站时间之前4小时（不含）及
148             航班起飞后退票，收取客票票价10%的退票手续费。</DescText>
149           </Penalty>
150           <RuleCode>CUST;DS;ac62ba0d3b0d411cac3575c0a69d3725;3a2590f56bcd4ffea4fadec26efb889a;eca75c5a21a6444daa22bde1e760163d</RuleCode>
151         </FareRule>
152         <PaxSegmentRefID>MF8262-XIC-CKG-2020-10-10@J</PaxSegmentRefID>
153       </FareComponent>
154       <FareRefText>商务舱</FareRefText>
155     </OfferItem>
156   </Offer>
157 </CarrierOffers>
158 </OffersGroup>
```



Discussion topics

- Standardization process of payment
- OrderChangeNotifRQ Use Case
- NDC management mode



Thank you

[openplatform-](#)

