# 退改签

东鹰和携程不支持退改签十段，其他都支持十段（都调用工单的tts接口 ）

东鹰是http调用，携程取缓存（AIR\_CABIN\_PROVISION\_uniqueKey，gw查询完写入缓存的，缓存时间是7天）

支持十段的赋值*REFUND\_RULES和CHANGE\_RULES，List*

*不支持赋值REFUND 和CHANGE，String*

*REFUND*(1, "refund", "退票规定"),  
*CHANGE*(2, "change", "改期规定"),  
*ENDORSE*(3, "endorse", "签转规定"),  
*REFUND\_RULES*(4, "refund\_rules", "退票规定列表"),  
*CHANGE\_RULES*(5, "endorse\_rules", "改期规定列表"),  
*EXTENDS*(6, "extendsInfo", "扩展信息"),  
*LUGGALLOW*(7, "luggallow", "行李信息"),  
*MEALINFO*(8, "mealInfo", "餐食信息");

# 下游H5等

## 请求：

使用的model是airplane-model包里的请求SearchProvisionRequest，先转换成网关的model：ProvisionQueryBean，再将网关的转换成flightServer的SearchProvisionRequest

PC端：flightServer的SearchProvisionResponse转换为airplane-model的SearchProvisionResponse

## jsf接口

下游：com.jd.airplane.flight.FlightQueryService接口

queryProvisionInfo（）方法

flightServer：com.jd.airplane.flight.service.IFlightService接口

searchProvision（）方法

## 获取舱位等级

### 工单基础数据接口

同pc端

## 十段的列头名称

* Title：若NumOfTime==0，则直接使用timeType枚举的des（“起飞前”、“起飞后”）

否则进行拼接：timeType.des+numOfTime+timeUnit.des+timePoint.des+(+include?“含”：“不含”+)，如起飞前2小时前（含）

## 行李额与里程

当行李额或者里程其中任意一个为空，就不用逗号分隔

String joinword = ",";  
if(StringUtils.*isEmpty*(luggallow) ||StringUtils.*isEmpty*(mealInfo)){  
 joinword="";  
}

provision.getRuleInfo().put(ProvisionTypeEnum.*EXTENDS*,luggallow + joinword + mealInfo);

# PC端

## 请求：

网关的model：ProvisionQueryBean，再将网关的转换成flightServer的SearchProvisionRequest

## 响应：

flightServer的model：SearchProvisionResponse，转成jipiao的model：SearchProvisionResponse

## 获取舱位等级

### 工单基础数据接口

没有从工单基础数据取到数据则默认“经济舱”

获取到后

成人：seatLevelCh+seatLevel解析+（classNo）：如全价+经济舱（Y），classNo是请求

儿童：seatLevelCh+seatLevel解析：如全价+经济舱，儿童不展示舱位代码

婴儿：不展示舱位名称

seatLevel只有Y（经济舱）、F（头等舱）、C（商务舱）三种

* CabinRequest json : {"airwaysSeatVoSet":[{"airways":"MF","effectTakeoffDate":1538841600000,"saleEffectDate":1538755200000,"seat":"Y"}]}
* CabinResponse json : {"data":{"MF\_Y":{"childSeatNo":"Y","discount":"1.0","isSpecialSeat":0,"letters":"","seatLevel":"Y","seatLevelCh":"全价","seatType":50}},"responseCode":"0000"}
* 

## 十段的列头名称

* Title：若NumOfTime==0，则直接使用timeType枚举的des（“起飞前”、“起飞后”）

否则进行拼接：timeType.des+numOfTime+timeUnit.des+timePoint.des+(+include?“含”：“不含”+)，如起飞前2小时前（含）

## 行李额与里程

当行李额或者里程其中任意一个为空，就不用逗号分隔

String joinword = ",";  
if(StringUtils.*isEmpty*(luggallow) ||StringUtils.*isEmpty*(mealInfo)){  
 joinword="";  
}

provision.getRuleInfo().put(ProvisionTypeEnum.*EXTENDS*,luggallow + joinword + mealInfo);

## 过滤军警残

请求参数中的isArmyFlight

query.getParamMap().get("isArmyFlight")

退改免费，允许签转

# Handler

## 1. SearchProvisionValidHandler

request != null,sourceId > 0

flightSegment != null,is notEmpty(depAir+arrAir+depDate)

## 2. SearchProvisionDataHandler

process方法：

（1） createRequest（将model的IR转换成grab的OR）

（2） FlightGrabServiceImpl.searchProvision(下面一行，AbstractDataCenter的统一执行步骤：

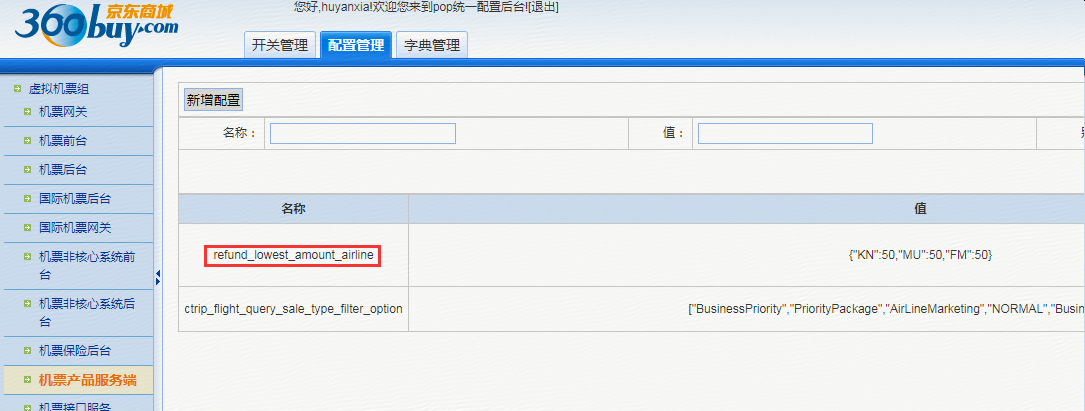
1. execute(请求的grab的OR返回的是grab的OS)
2. executeMonitor
3. executeMethod{convertORequest，process，convertIResult}

（3） createResponse（将grab的OS转换成model的IS）

## 3. SearchProvisionCaculateHandler

refundFee = Math.round(originalPrice.multiply(feeRate).doubleValue()) + discountPrice.doubleValue();//退票费,票面价/公布运价\*费率+折扣（东鹰才会有折扣）

退票最低手续费，若低于配置金额则用最低金额，否则用退票费refundFee



# 日志

## 下游H5-jipiao-flightServer

### 请求：

searchProvisionInfo proQuery: {

"airways": "CZ",

"arrCity": "SHA",

"beginDate": "2018-10-14",

"childSalePrice": "500",

"childSeatCode": "",

"classNO": "Z",

"depCity": "PEK",

"fareItemId": "621906CZCZ39072018-10-14Z&500",

"infantSeatCode": "Z",

"infantVenderPrice": "120",

"needOriginalMessage": false,

"originalPrice": "500",

"paramMap": {

"infantVenderPrice": "120",

"childSeatCode": "",

"seatType": "2",

"originalPrice": "500",

"productCode": "",

"venderPrice": "500",

"childSalePrice": "500"

},

"policyId": "b7506892-adcf-44da-996a-a8e02c18ad9a",

"productCode": "",

"seatType": "2",

"sourceId": "621906",

"uniqueKey": "b7506892-adcf-44da-996a-a8e02c18ad9auniqueKey",

"venderPrice": "500"

}

### flightServer返回的响应：

searchProvisionInfo before airResponseTran responseIn = {"data":{"provision":{"ADT":{"discountPrice":0,"freightPrice":0,"originalPrice":500.0,"ruleInfo":{"CHANGE\_RULES":[{"fee":150,"include":true,"lowestRefundFee":0,"numOfTime":2,"rate":0.3,"timePoint":"BEFORE","timeType":"BEFORE\_DEPARTURE","timeUnit":"HOUR"},{"fee":250,"include":false,"lowestRefundFee":0,"numOfTime":2,"rate":0.5,"timePoint":"AFTER","timeType":"BEFORE\_DEPARTURE","timeUnit":"HOUR"}],"LUGGALLOW":"免费托运20KG","REFUND":"航班预计离站时间前2小时（含）前，收取50%退票费；航班预计离站时间前2小时(不含)后，不得退票","REFUND\_RULES":[{"fee":250,"include":true,"lowestRefundFee":0,"numOfTime":2,"rate":0.5,"timePoint":"BEFORE","timeType":"BEFORE\_DEPARTURE","timeUnit":"HOUR"},{"fee":500,"include":false,"lowestRefundFee":0,"numOfTime":2,"rate":1,"timePoint":"AFTER","timeType":"BEFORE\_DEPARTURE","timeUnit":"HOUR"}],"MEALINFO":"餐食:有","CHANGE":"航班预计离站时间前2小时（含）前，收取30%变更费；航班预计离站时间前2小时(不含)后，收取50%变更费\r\n","ENDORSE":"不允许"}},"INF":{"discountPrice":0,"freightPrice":0,"originalPrice":120,"ruleInfo":{"CHANGE\_RULES":[{"fee":0,"include":true,"lowestRefundFee":0,"numOfTime":0,"rate":0,"timePoint":"BEFORE","timeType":"BEFORE\_DEPARTURE","timeUnit":"HOUR"},{"fee":0,"include":true,"lowestRefundFee":0,"numOfTime":0,"rate":0,"timePoint":"AFTER","timeType":"AFTER\_DEPARTURE","timeUnit":"HOUR"}],"LUGGALLOW":"","REFUND":"免费退票","REFUND\_RULES":[{"fee":0,"include":true,"lowestRefundFee":0,"numOfTime":0,"rate":0,"timePoint":"BEFORE","timeType":"BEFORE\_DEPARTURE","timeUnit":"HOUR"},{"fee":0,"include":true,"lowestRefundFee":0,"numOfTime":0,"rate":0,"timePoint":"AFTER","timeType":"AFTER\_DEPARTURE","timeUnit":"HOUR"}],"MEALINFO":"餐食:有","CHANGE":"免费改签","ENDORSE":"不可签转"}}}},"status":0}

### 给H5的响应：

searchProvisionInfo after airResponseTran responseOut = {"code":200,"data":{"provision":{"ADT":{"classNoCn":"经济舱(Z)","discountPrice":0,"freightPrice":0,"originalPrice":500.0,"ruleInfo":{"REFUND":"航班预计离站时间前2小时（含）前，收取50%退票费；航班预计离站时间前2小时(不含)后，不得退票","LUGGALLOW":"免费托运20KG","CHANGE\_RULES":[{"fee":150,"feeInfo":"￥150/人","rate":0.3,"title":"起飞前2小时前(含)"},{"fee":250,"feeInfo":"￥250/人","rate":0.5,"title":"起飞前2小时后(不含)"}],"REFUND\_RULES":[{"fee":250,"feeInfo":"￥250/人","rate":0.5,"title":"起飞前2小时前(含)"},{"fee":500,"feeInfo":"只退机建燃油","rate":1,"title":"起飞前2小时后(不含)"}],"CHANGE":"航班预计离站时间前2小时（含）前，收取30%变更费；航班预计离站时间前2小时(不含)后，收取50%变更费\r\n","EXTENDS":"免费托运20KG,餐食:有","ENDORSE":"不允许","MEALINFO":"餐食:有"}},"INF":{"discountPrice":0,"freightPrice":0,"originalPrice":120,"ruleInfo":{"REFUND":"免费退票","LUGGALLOW":"","CHANGE\_RULES":[{"fee":0,"feeInfo":"免费","rate":0,"title":"起飞前"},{"fee":0,"feeInfo":"免费","rate":0,"title":"起飞后"}],"REFUND\_RULES":[{"fee":0,"feeInfo":"免费","rate":0,"title":"起飞前"},{"fee":0,"feeInfo":"免费","rate":0,"title":"起飞后"}],"CHANGE":"免费改签","EXTENDS":"餐食:有","ENDORSE":"不可签转","MEALINFO":"餐食:有"}}}}}

## jipiao-flightServer

### 请求：

search the provision request = {

"flightSegment": {

"airCorpCode": "CZ",

"arrAirPortCode": "SHA",

"cabinPriceMap": {

"ADT": {

"classCode": "B",

"originalPrice": 1330.0,

"venderPrice": 1330.0

},

"CHD": {

"classCode": "Y",

"originalPrice": 740.0,

"venderPrice": 740.0

}

},

"depAirPortCode": "CAN",

"depDate": "2018-10-10",

"fareItemId": "621906CZCZ35372018-10-10B&1330",

"policyId": "+LPBO2BoKTB8j0UcWmZCLIPvzegk1dvyOHAtnsQ/SOTuaxFl82q79w==",

"productCode": "",

"seatType": 1,

"uniqueKey": "+LPBO2BoKTB8j0UcWmZCLIPvzegk1dvyOHAtnsQ/SOTuaxFl82q79w=="

},

"isNeedText": false,

"sourceId": 615927

}

### 响应：

search the provision response = {

"data": {

"provision": {

"ADT": {

"discountPrice": 0,

"originalPrice": 1330,

"ruleInfo": {

"REFUND\_RULES": [{

"fee": 266,

"include": false,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0.20,

"timePoint": "BEFORE",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}, {

"fee": 399,

"include": true,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0.30,

"timePoint": "AFTER",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}],

"MEALINFO": "有餐食",

"LUGGALLOW": "",

"CHANGE\_RULES": [{

"fee": 133,

"include": false,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0.10,

"timePoint": "BEFORE",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}, {

"fee": 266,

"include": true,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0.20,

"timePoint": "AFTER",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}],

"ENDORSE": "不允许签转",

"REFUND": "成人退票规则：【2 hours before departure】之前,退票手续费为【20% of ticket fare】;【2 hours before departure】(含)之后,退票手续费为【30% of ticket fare】。\r\n",

"CHANGE": "成人改期规则：【2 hours before departure】之前,改期手续费为【10% of ticket fare】;【2 hours before departure】(含)之后,改期手续费为【20% of ticket fare】。\r\n"

}

},

"CHD": {

"discountPrice": 0,

"originalPrice": 740,

"ruleInfo": {

"REFUND\_RULES": [{

"fee": 37,

"include": false,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0.05,

"timePoint": "BEFORE",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}, {

"fee": 111,

"include": true,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0.15,

"timePoint": "AFTER",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}],

"MEALINFO": "有餐食",

"LUGGALLOW": "",

"CHANGE\_RULES": [{

"fee": 0,

"include": false,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0,

"timePoint": "BEFORE",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}, {

"fee": 37,

"include": true,

"lowestRefundFee": 0,

"numOfTime": 2,

"rate": 0.05,

"timePoint": "AFTER",

"timeType": "BEFORE\_DEPARTURE",

"timeUnit": "HOUR"

}],

"ENDORSE": "不允许签转",

"REFUND": "儿童退票规则：【2 hours before departure】之前,退票手续费为【5% of ticket fare】;【2 hours before departure】(含)之后,退票手续费为【15% of ticket fare】。\r\n",

"CHANGE": "儿童改期规则：【2 hours before departure】之前,改期手续费为【free】;【2 hours before departure】(含)之后,改期手续费为【5% of ticket fare】。\r\n"

}

}

}

},

"status": 0

}

## Datacenter的process

### 工单：

#### 请求：

request type = TTSQueryRefundChangeRuleRequest, json = {

"airways": "ZH",

"arrCity": "cgo",

"childClassNo": "Y",

"childOriginalPrice": "700.0",

"classNO": "K",

"depCity": "HYN",

"depDate": "2018-10-11",

"fareItemId": "674946ZHZH83382018-10-11",

"isSaleINF": 0,

"originalPrice": "399.0",

"policyId": "914d02d1-e7e5-424c-8c53-a24eb06040f4",

"productCode": "",

"seatType": 17

}

#### 响应：

 response type = TTSQueryRefundChangeRuleRespone, json = {

"agencyCode": "674946",

"arrCity": "cgo",

"depCity": "HYN",

"refundChangeRules": [{

"changeRule": "不可改期",

"changeRuleInfos": [{

"alterFeeRate": 1,

"flyTime": 0,

"include": true,

"timePoint": "2",

"timeType": "1",

"timeUnit": "H"

}, {

"alterFeeRate": 1,

"flyTime": 0,

"include": true,

"timePoint": "-2",

"timeType": "-1",

"timeUnit": "H"

}],

"endorseRule": "不可签转",

"luggage": "免费托运20KG;根据相关规定，您可随身携带1件行李登机，体积不得超过20\*40\*55厘米，若超过，请您提前办理托运。",

"meal": "餐食:有餐食",

"originalPrice": 399,

"passengerType": "ADT",

"refundRule": "不可退票",

"refundRuleInfos": [{

"flyTime": 0,

"include": true,

"lowestRefundFee": 0,

"refundFeeRate": 1,

"timePoint": "2",

"timeType": "1",

"timeUnit": "H"

}, {

"flyTime": 0,

"include": true,

"lowestRefundFee": 0,

"refundFeeRate": 1,

"timePoint": "-2",

"timeType": "-1",

"timeUnit": "H"

}]

}, {

"changeRule": "起飞前2小时（含）之前收取5%手续费,起飞前2小时以内及起飞后收取10%手续费",

"changeRuleInfos": [{

"alterFeeRate": 0.05,

"flyTime": 2,

"include": true,

"timePoint": "2",

"timeType": "1",

"timeUnit": "H"

}, {

"alterFeeRate": 0.1,

"flyTime": 2,

"include": false,

"timePoint": "-2",

"timeType": "1",

"timeUnit": "H"

}],

"endorseRule": "不可签转",

"luggage": "免费托运20KG;根据相关规定，您可随身携带1件行李登机，体积不得超过20\*40\*55厘米，若超过，请您提前办理托运。",

"meal": "餐食:有餐食",

"originalPrice": 700,

"passengerType": "CHD",

"refundRule": "起飞前2小时（含）之前收取10%手续费,起飞前2小时以内及起飞后收取20%手续费",

"refundRuleInfos": [{

"flyTime": 2,

"include": true,

"lowestRefundFee": 0,

"refundFeeRate": 0.1,

"timePoint": "2",

"timeType": "1",

"timeUnit": "H"

}, {

"flyTime": 2,

"include": false,

"lowestRefundFee": 0,

"refundFeeRate": 0.2,

"timePoint": "-2",

"timeType": "1",

"timeUnit": "H"

}]

}],

"responseCode": "0000",

"responseMessage": "退改签查询成功",

"responseType": "queryRefundChangeRuleMerge"

}

### 东鹰

#### 请求：

request type = AirplaneRequest, json = {

"agencyCode": "jdfly",

"entityData": {

"airways": "HO",

"arrCity": "sha",

"classNO": "S",

"depCity": "PEK",

"depDate": "2018-10-10",

"fareItemId": "211356\_1",

"param1": "565.0"

},

"header": {},

"parameters": {},

"requestIsCompress": false,

"responseIsDeCompress": false,

"sourceId": 188126,

"timestamp": "2018-10-06"

}

#### 响应：

response type = QueryProvisionResponse, json = {

"agencyCode": "188126",

"arrCity": "sha",

"depCity": "PEK",

"endorse": " 不得签转",

"param1": "免费托运20KG;重量最高不超过50KG;体积不超过40\*60\*100CM",

"param2": "提供餐食",

"rebooking": "起飞前2小时以外，收取公布运价的20%；起飞前2小时以内，收取公布运价的40%。",

"refund": "起飞前2小时以外，收取公布运价的40%；起飞前2小时以内，收取公布运价的60%。",

"refundRuleInfos": [{

"alterFeeRate": "0.2",

"discountPrice": "0",

"feeRate": "0.4",

"flyTime": "2",

"freightPrice": "0",

"isInclude": "false",

"originalPrice": "570",

"passengerType": "ADT",

"timePoint": "2",

"timeType": "1",

"timeUnit": "H"

}, {

"alterFeeRate": "0.4",

"discountPrice": "0",

"feeRate": "0.6",

"flyTime": "2",

"freightPrice": "0",

"isInclude": "false",

"originalPrice": "570",

"passengerType": "ADT",

"timePoint": "-2",

"timeType": "1",

"timeUnit": "H"

}, {

"alterFeeRate": "0.2",

"discountPrice": "0",

"feeRate": "0.4",

"flyTime": "2",

"freightPrice": "0",

"isInclude": "false",

"originalPrice": "620",

"passengerType": "CHD",

"timePoint": "2",

"timeType": "1",

"timeUnit": "H"

}, {

"alterFeeRate": "0.4",

"discountPrice": "0",

"feeRate": "0.6",

"flyTime": "2",

"freightPrice": "0",

"isInclude": "false",

"originalPrice": "620",

"passengerType": "CHD",

"timePoint": "-2",

"timeType": "1",

"timeUnit": "H"

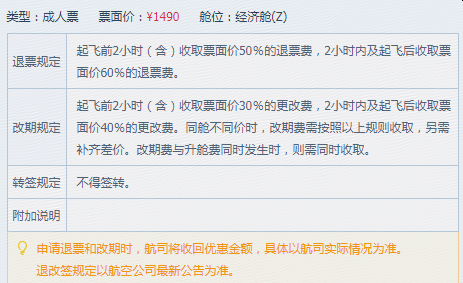
}],

"responseCode": "0000",

"responseType": "queryProvision"

}

### 携程



#### 请求：

request type = FlightProvisionRequest, json = {

"flightInfo": {

"airCorpCode": "SC",

"arrAirPortCode": "ZUH",

"cabinPriceMap": {

"ADT": {

"classCode": "L1",

"originalPrice": 520.0,

"venderPrice": 508.0

}

},

"depAirPortCode": "XMN",

"depDate": "2018-10-27",

"fareItemId": "124207:XMN:ZUH:20181027:SC:SC4913:L1:BusinessPriority:MAgBEAEYoJYD:508:Normal:561051172",

"policyId": "561051172",

"productCode": "",

"seatType": 1,

"uniqueKey": "124207:XMN:ZUH:20181027:SC:SC4913:L1:BusinessPriority:MAgBEAEYoJYD:508:Normal:561051172"

},

"needText": false

}

#### 响应：

response type = ProvisionResponse, json = {

"errorCode": "0000",

"flag": true,

"provision": {

"endorse": "不得签转。",

"mealInfo": " 提供免费餐饮服务。航班延误或取消，不提供经济补偿。",

"rebooking": "起飞前2小时（含）收取票面价20％的更改费，2小时内及起飞后收取票面价30％的更改费。同舱不同价时，改期费需按照以上规则收取，另需补齐差价。改期费与升舱费同时发生时，则需同时收取。",

"refund": "起飞前2小时（含）收取票面价30％的退票费，2小时内及起飞后收取票面价40％的退票费。",

"remark": ""

}

}

## 获取舱位等级

Flight-data.Log

* **getClassText : airways=**MF,classCode=Y,deptDate=1538841600000,saleEffectDate=1538810800804
* CabinRequest json : {"airwaysSeatVoSet":[{"airways":"MF","effectTakeoffDate":1538841600000,"saleEffectDate":1538755200000,"seat":"Y"}]}
* CabinResponse json : {"data":{"MF\_Y":{"childSeatNo":"Y","discount":"1.0","isSpecialSeat":0,"letters":"","seatLevel":"Y","seatLevelCh":"全价","seatType":50}},"responseCode":"0000"}