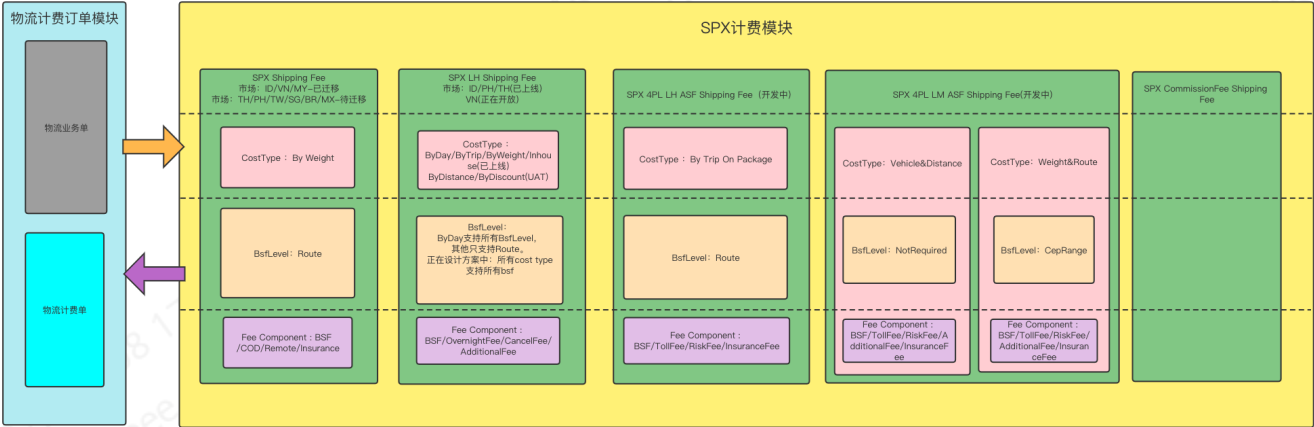


SPX计费业务梳理

缩略语/术语	全称	说明
LH	Line Haul	
LM	Last Mile	
Bsf	Basic Shipping Fee	

一、业务架构图

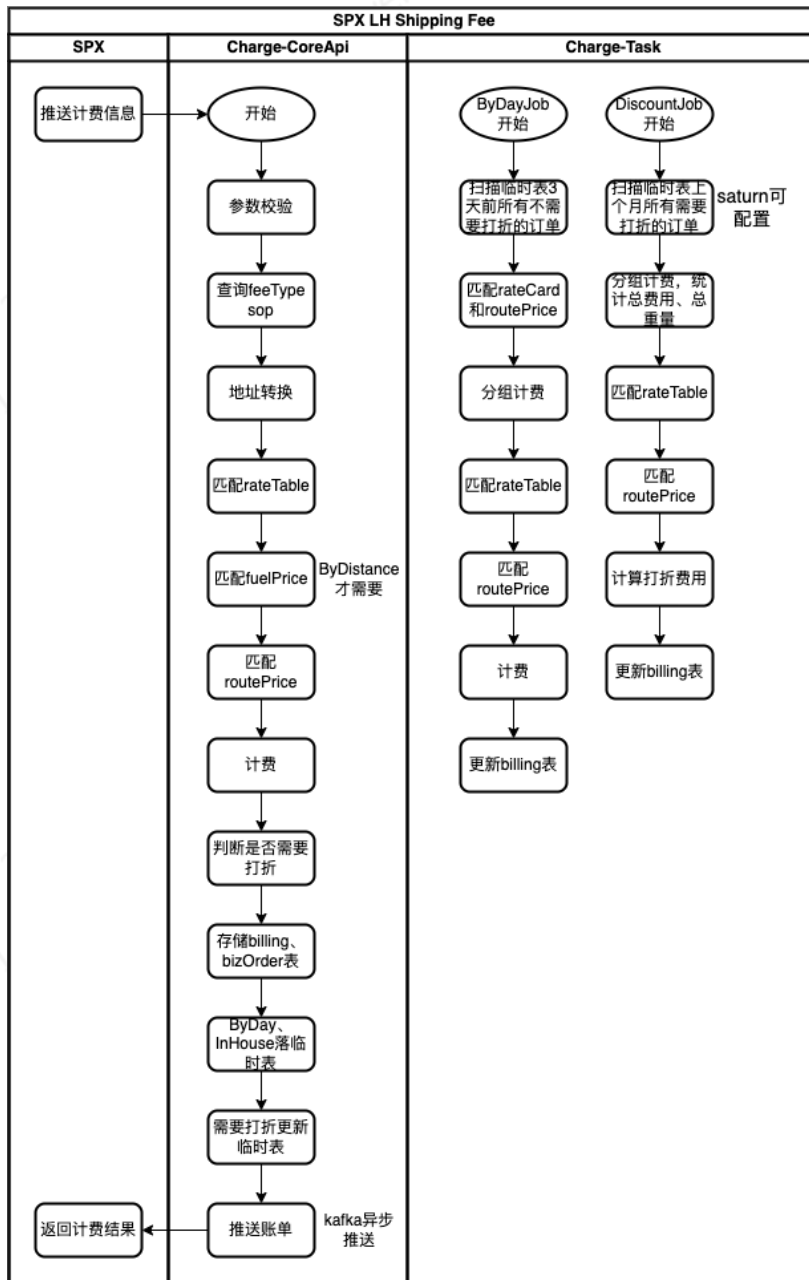


二、系统架构图

三、业务时序图及调用链路图

3.1 SPX ShippingFee

3.2 SPX LH ShippingFee



billing: finance_billing_tab

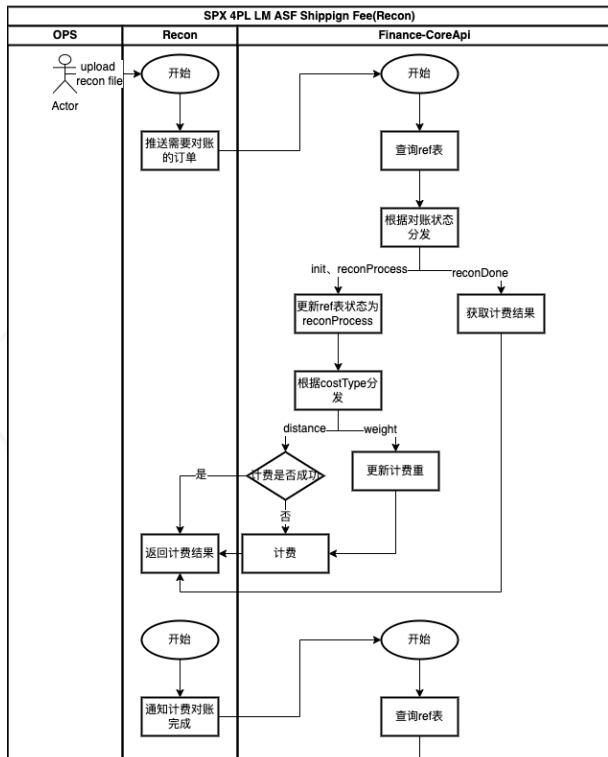
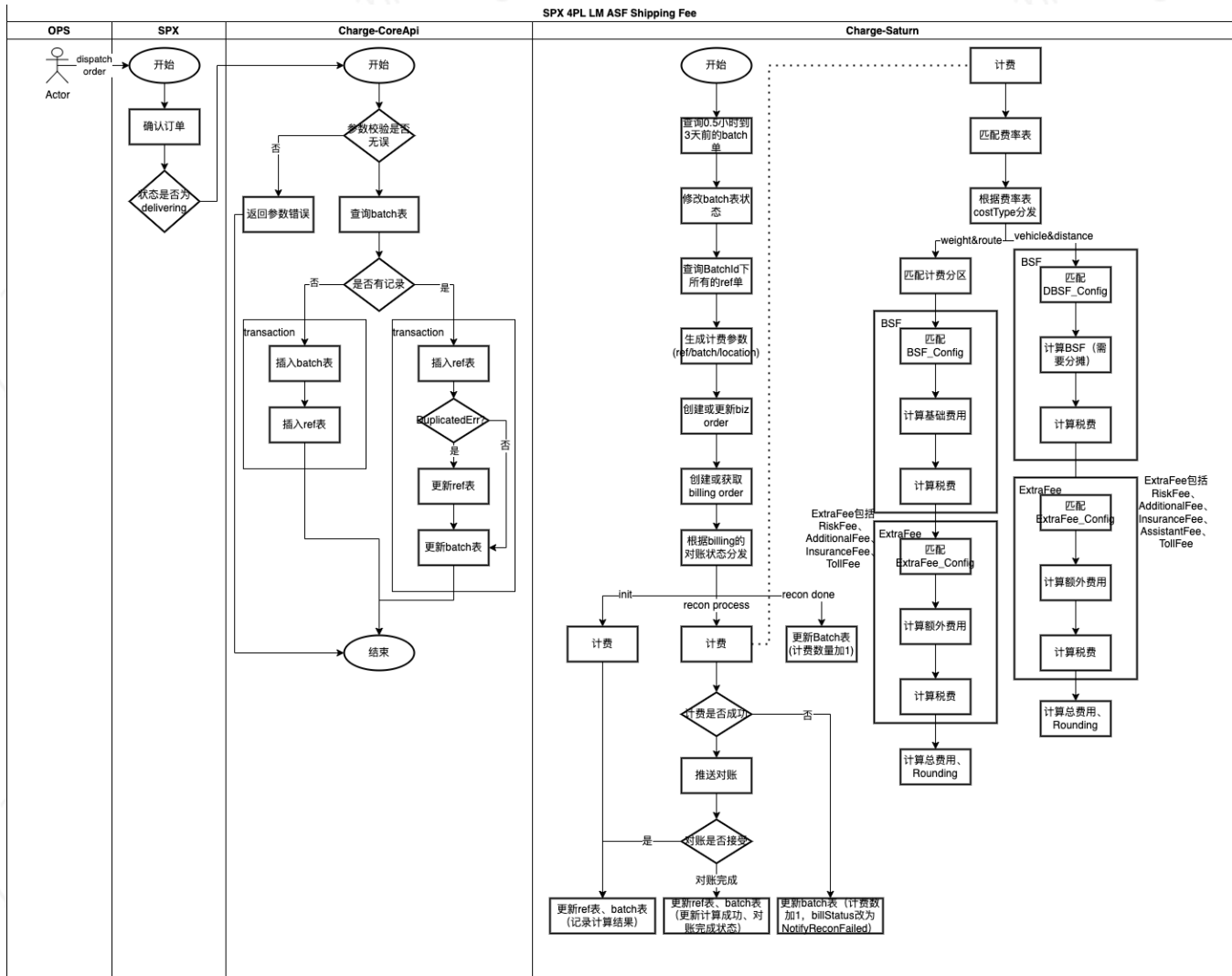
bizOrder: biz_order_tab

临时表: spx_lh_cost_calculate_tab

ByDayJob: CalculateSpxLhCostByDayJob

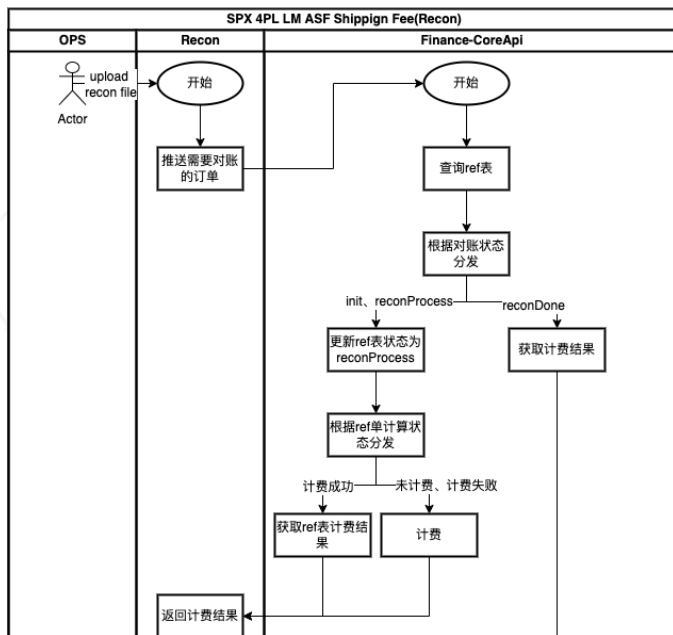
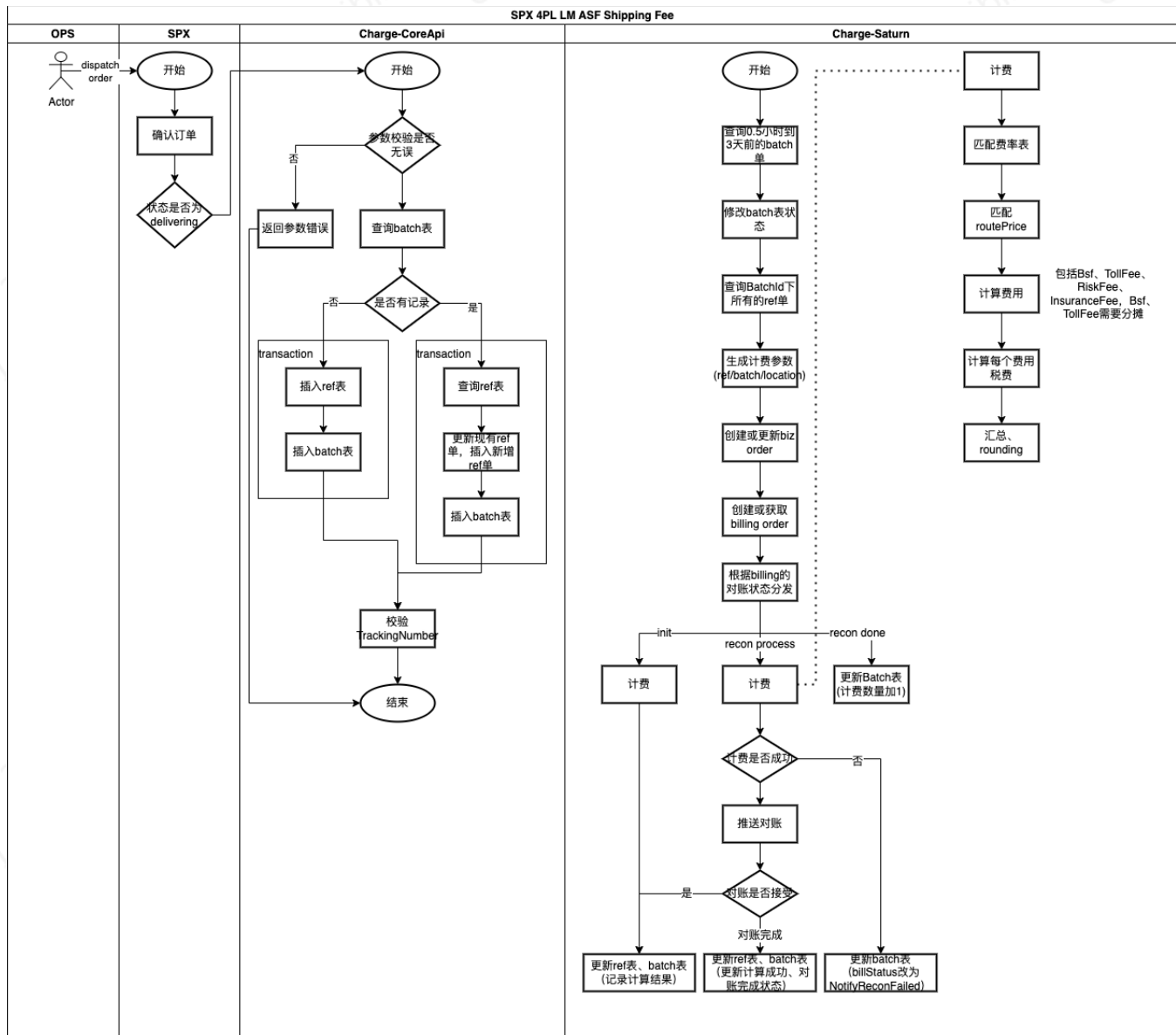
DiscountJob: CalculateSpxLhCostDiscountJob

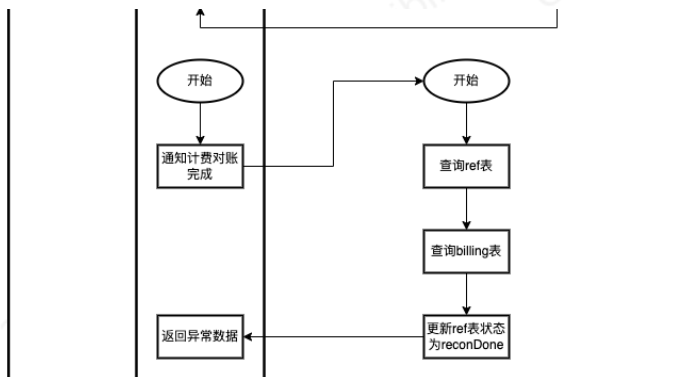
3.3 SPX 4PL LM ASF Shipping Fee





3.4 SPX 4PL LH ASF Shipping Fee

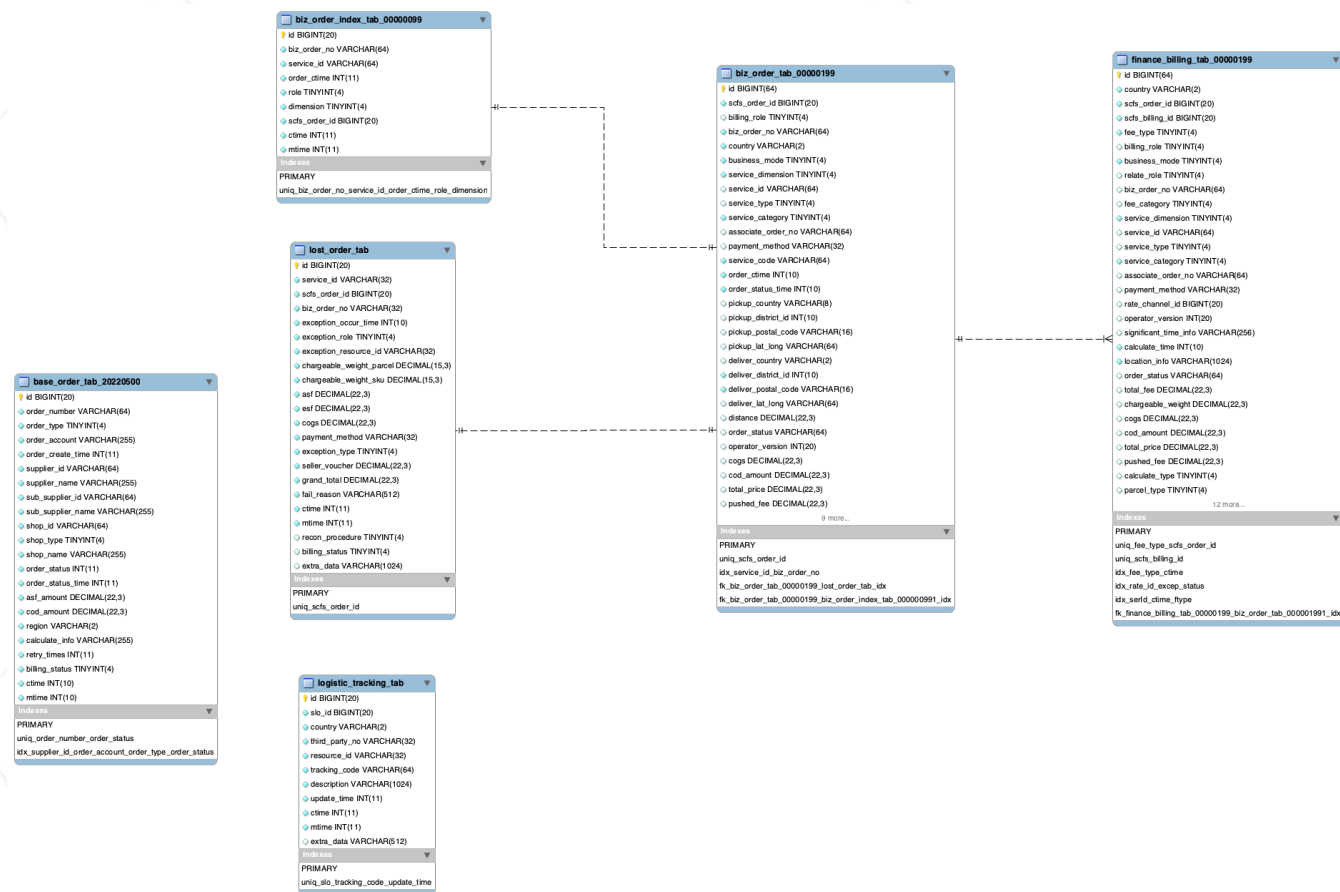




3.5 SPX CommissionFee

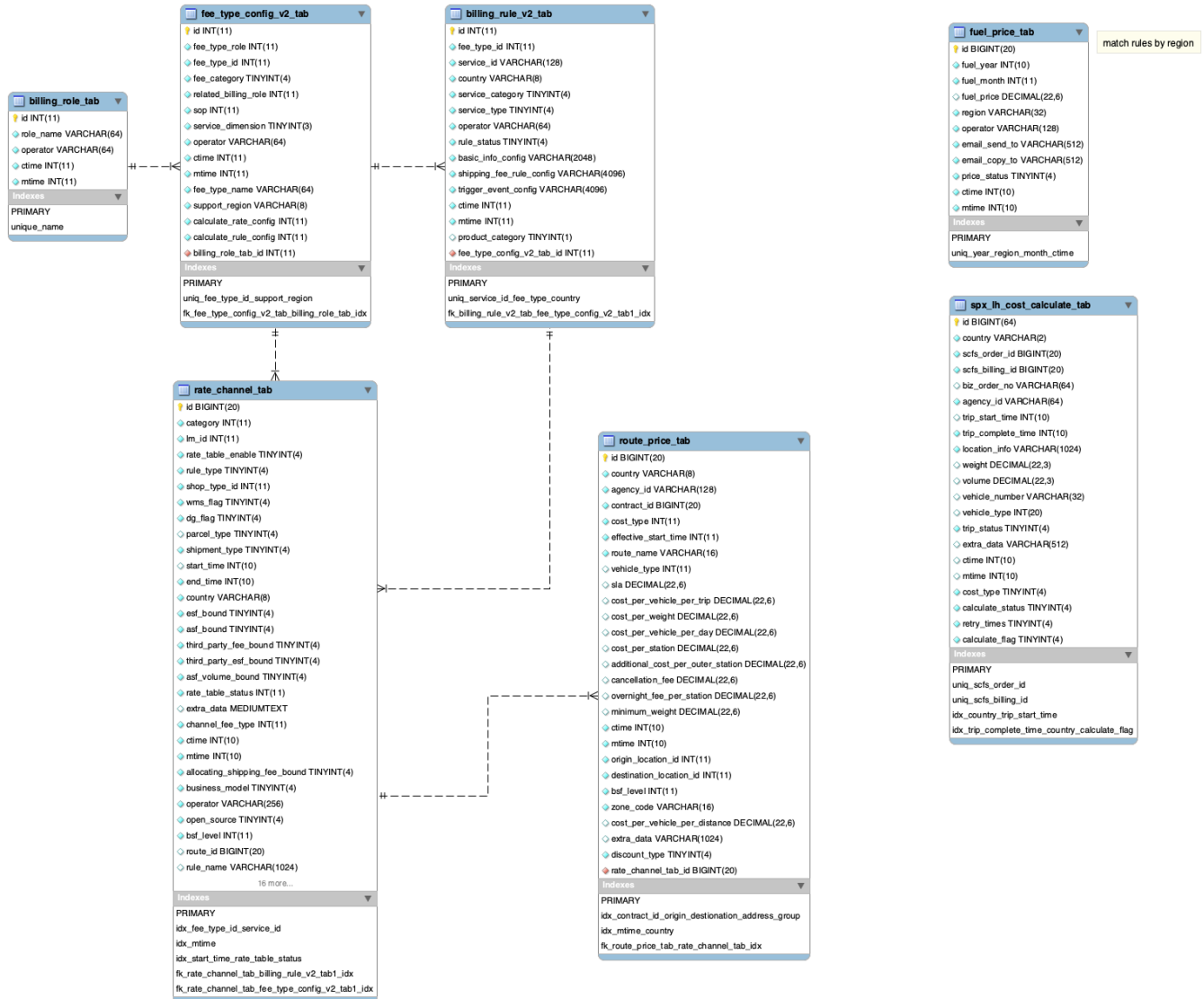
四、ER图

4.1 物流运费单



4.2 SPX ShippingFee

4.3 SPX LH ShippingFee



4.4 SPX 4PL LM ASF ShippingFee

Weight&Route

Vehicle&distance

4.5 SPX 4PL LH ASF ShippingFee

billing_role_tab
id INT(11)
role_name VARCHAR(64)
operator VARCHAR(64)
ctime INT(11)
mtime INT(11)
Indexes
PRIMARY
unique_name

fee_type_config_v2_tab
id INT(11)
fee_type_role INT(11)
fee_type_id INT(11)
fee_category TINYINT(4)
related_billing_role INT(11)
sop INT(11)
service_dimension TINYINT(3)
operator VARCHAR(64)
ctime INT(11)
mtime INT(11)
fee_type_name VARCHAR(64)
support_region VARCHAR(8)
calculate_rate_config INT(11)
calculate_rule_config INT(11)
billing_role_tab_id INT(11)
Indexes
PRIMARY
uniq_fee_type_id_support_region
fk_fee_type_config_v2_tab_billing_role_tab_idx

billing_rule_v2_tab
id INT(11)
fee_type_id INT(11)
service_id VARCHAR(128)
country VARCHAR(8)
service_category TINYINT(4)
service_type TINYINT(4)
operator VARCHAR(64)
rule_status TINYINT(4)
basic_info_config VARCHAR(2048)
shipping_fee_rule_config VARCHAR(4096)
trigger_event_config VARCHAR(4096)
ctime INT(11)
mtime INT(11)
product_category TINYINT(1)
fee_type_config_v2_tab_id INT(11)
Indexes
PRIMARY
uniq_service_id_fee_type_country
fk_billing_rule_v2_tab_fee_type_config_v2_tab1_idx

route_price_tab
id BIGINT(20)
country VARCHAR(8)
agency_id VARCHAR(128)
contract_id BIGINT(20)
cost_type INT(11)
effective_start_time INT(11)
route_name VARCHAR(16)
vehicle_type INT(11)
sla DECIMAL(22,6)
cost_per_vehicle_per_trip DECIMAL(22,6)
cost_per_weight DECIMAL(22,6)
cost_per_vehicle_per_day DECIMAL(22,6)
cost_per_station DECIMAL(22,6)
additional_cost_per_outer_station DECIMAL(22,6)
cancellation_fee DECIMAL(22,6)
overnight_fee_per_station DECIMAL(22,6)
minimum_weight DECIMAL(22,6)
ctime INT(10)
mtime INT(10)
origin_location_id INT(11)
destination_location_id INT(11)
bsf_level INT(11)
zone_code VARCHAR(16)
extra_data VARCHAR(1024)
cost_per_vehicle_per_distance DECIMAL(22,6)
discount_type TINYINT(4)
rate_channel_tab_id BIGINT(20)
vat_config_tab_id BIGINT(20)
Indexes
PRIMARY
idx_contract_id_origin_destination_address_group
idx_mtime_country
fk_route_price_tab_rate_channel_tab1_idx
fk_route_price_tab_vat_config_tab1_idx

rate_channel_tab
id BIGINT(20)
category INT(11)
lm_id INT(11)
rate_table_enable TINYINT(4)
rule_type TINYINT(4)
shop_type_id INT(11)
wms_flag TINYINT(4)
dg_flag TINYINT(4)
parcel_type TINYINT(4)
shipment_type TINYINT(4)
start_time INT(10)
end_time INT(10)
country VARCHAR(8)
esf_bound TINYINT(4)
asf_bound TINYINT(4)
third_party_fee_bound TINYINT(4)
third_party_esf_bound TINYINT(4)
asf_volume_bound TINYINT(4)
rate_table_status INT(11)
extra_data MEDIUMTEXT
channel_fee_type INT(11)
ctime INT(10)
mtime INT(10)
allocating_shipping_fee_bound TINYINT(4)
business_model TINYINT(4)
operator VARCHAR(256)
open_source TINYINT(4)
bsf_level INT(11)
route_id BIGINT(20)
rule_name VARCHAR(1024)
Indexes
PRIMARY
idx_fee_type_id_service_id
idx_mtime
idx_start_time_rate_table_status
fk_rate_channel_tab_billing_rule_v2_tab1_idx
fk_rate_channel_tab_fee_type_config_v2_tab1_idx

vat_config_tab
id BIGINT(20)
rate_id BIGINT(20)
fee_component TINYINT(4)
vat_option TINYINT(4)
vat_formula TINYINT(4)
params MEDIUMTEXT
ctime INT(10)
mtime INT(10)
vat_percent DECIMAL(22,6)
rate_channel_tab_id BIGINT(20)
Indexes
PRIMARY
uniq_rate_id_fee_component
fk_vat_config_tab_rate_channel_tab1_idx

tax_rate_rule_tab
id BIGINT(20)
region VARCHAR(8)
tax_rate_type TINYINT(4)
application_type TINYINT(4)
fallback_rate DECIMAL(22,6)
effective_start_time INT(10)
effective_end_time INT(10)
s3_url VARCHAR(512)
operator VARCHAR(256)
ctime INT(11)
mtime INT(11)
vat_config_tab_id BIGINT(20)
Indexes
PRIMARY
fk_tax_rate_rule_tab_vat_config_tab1_idx

tax_rate_detail_tab
id BIGINT(20)
region VARCHAR(8)
tax_rule_id BIGINT(20)
origin_location_id INT(10)
destination_location_id INT(10)
taxable_rate DECIMAL(22,6)
taxpayer_exception VARCHAR(64)
last_effective_date VARCHAR(64)
ctime INT(11)
mtime INT(11)
tax_rate_rule_tab_id BIGINT(20)
Indexes
PRIMARY
idx_tax_rule_id
fk_tax_rate_detail_tab_tax_rate_rule_tab1_idx

4.6 SPX CommissionFee

4.7 SPX Open Fee

五、业务计费公式

5.1 SPX ShippingFee

费用类型	BasicShippingFeeRule	计费公式
basic shipping fee	OrderWeight	<ul style="list-style-type: none">■ BsfStrategyFlat、BsfWeightRange、BsfDimensionRange: BaseFee■ BsfIncrement: BaseFee+IncrementFee*math.Ceil((weight-StartWeight)/IncrementUnit)■ BsfMultiply: BaseFee*weight
	ThreePLAndDistance	<ul style="list-style-type: none">■ BsfStrategyFlat、BsfWeightRange: BaseFee■ BsfIncrement: BaseFee+IncrementFee*math.Ceil((distance-StartDistance)/IncrementUnit)■ BsfMultiply: BaseFee*distance
Fuel Fee		
Insurance Fee		
COD Service Fee		
Pickup Service Fee		
VAT Fee		

5.2 SPX LH ShippingFee

费用类型	By Trip	By Trip(多段)	By Weight	By Day	By Distance	In-House
Basic Cost	=CostPerVehiclePerTrip	多段Trip的CostPerVehiclePerTrip求和	=CostPerWeight*Weight	=CostPerVehiclePerDay/TripNumberByDay	=CostPerVehiclePerDistance	=0
Additional Station Cost	=CostPerStation*(len(TripPath)-2)+AdditionalCostPerOuterStation*OuterStationNumber	=0	=0	=0	=CostPerStation*(len(TripPath)-2)	=0
Total Trip Cost	=Basic Cost + Additional Station Cost					
Cancellation Fee	=CancellationFee *只有Cancelled的Trip才收Cancellation Fee，且这类trip不收取Total Trip Cost和Overnight Fee			=0	=0 *cancel不收basic cost和additional station cost	=0
Overnight Fee	=OverNightFeePerStation*OverNightNumber	=0	=0	=0	=0	=0

*In-House

*discount rate

费用 / discount type	Weight	Billing Amount
Basic Cost	Weight*CostPerWeight	Weight*CostPerWeight
After Discount Basic Cost	Weight*(CostPerWeight-PriceDeductionPer)	BasicCost*(1-DiscountPercent)

5.3 SPX 4PL LM ASF ShippingFee

	费用类型	匹配规则	计费公式
weight&route	basic shipping fee	根据起点地址和终点postcode及weight匹配规则	<ul style="list-style-type: none"> ■ BsfStrategyFlat、BsfWeightRange: BaseFee ■ BsfIncrement: BaseFee+IncrementFee*math.Ceil((weight-StartWeight)/IncrementUnit) 注: math.Ceil(x), x向下取整
	risk fee	根据额外费用类型匹配	max(MinCharge, cogs*percentage/100.0)
	additional fee	根据额外费用类型匹配	max(MinCharge, cogs*percentage/100.0+FixedCharge)
	insurance fee	根据额外费用类型匹配	1、cogs <= startAmount: insuranceFee = 0 2、cogs > startAmount <ul style="list-style-type: none"> • RangeFixedValue: fixedValue • RangeFixedPercent: cogs*percentage/100.0 • RangeMaxFixedValPercent: max(fixedValue, cogs*percentage/100.0) • RangeExcessFixedPercent: (cogs-startAmount)*percentage/100.0 • RangeExcessMaxFixedValuePercent: max(fixedValue, (cogs-startAmount)*percentage/100.0)
	toll fee	SPX传的PlanTollFee	PlanTollFee/TotalTrackingNumber
	vat fee	根据rateId及计算税费的费用类型匹配税率	baseFee*percentage/100.0 (目前LM只有这一种税率计算公式)
vehicle&distance	basic shipping fee	根据vehicleType和distance匹配规则得到baseFee	baseFee/TotalTrackingNumber
	toll fee	SPX传的PlanTollFee	PlanTollFee/TotalTrackingNumber
	risk fee	根据额外费用类型匹配 (percentage)	cogs*percentage/100.0
	additional fee	根据额外费用类型匹配 (percentage)	cogs*percentage/100.0
	insurance fee	根据额外费用类型匹配	1、cogs <= startAmount: insuranceFee = 0 2、cogs > startAmount <ul style="list-style-type: none"> ■ RangeFixedValue: fixedValue ■ RangeFixedPercent: cogs*percentage/100.0 ■ RangeMaxFixedValPercent: max(fixedValue, cogs*percentage/100.0) ■ RangeExcessFixedPercent: (cogs-startAmount)*percentage/100.0 ■ RangeExcessMaxFixedValuePercent: max(fixedValue, (cogs-startAmount)*percentage/100.0)
	assistant fee	根据额外费用类型匹配 (parcel、stop、fixedValue)	1、根据配置类型判断是否满足条件 <ul style="list-style-type: none"> ■ EitherAssistantFee: TotalTrackingNumber >= parcel QuantityOfStop >= stop ■ BothAssistantFee: TotalTrackingNumber >= parcel && QuantityOfStop >= stop ■ ParcelAssistantFee: TotalTrackingNumber >= parcel ■ StopAssistantFee: QuantityOfStop >= stop assistantFee = fixedValue/TotalTrackingNumber 2、不满足上述条件 assistantFee = 0
	vat fee	根据rateId及计算税费的费用类型匹配税率	baseFee*percentage/100.0 (目前LM只有这一种税率计算公式)

注: percentage带单位%, 计算需要除以100.0

5.4 SPX 4PL LH ASF ShippingFee

费用类型	计费公式
Basic Shipping Fee	BasicShippingFee/QtyOrder
Toll Fee	TollFee/QtyOrder
Risk Fee	Cogs*RiskFeePercentage
Additional Fee	0
Insurance Fee	Cogs*InsuranceFeePercentage
Assistant Fee	0

5.5 SPX CommissionFee

六、接口清单

接口梳理google doc文档地址: https://docs.google.com/spreadsheets/d/1EKwXgF_SJxtobQpP4WKKmij8nI8Ac7ePt9Khc04tEw/edit#gid=1137386268

6.1 SPX ShippingFee

path: /core/spx/calculate_shipping_fee

代码位置: application/http_controller/core_api/spx_api/calculate_usecase.go:158

coreApi

path	代码位置	功能描述
/core/spx/calculate_shipping_fee	application/http_controller/core_api/spx_api/calculate_usecase.go:160	
/core/spx/billing_order_index	application/http_controller/core_api/spx_api/calculate_usecase.go:97	
/core/spx/fork	application/http_controller/core_api/spx_api/calculate_usecase.go:118	
/core/spx/fork_billing	application/http_controller/core_api/spx_api/calculate_usecase.go:137	
/core/spx/recalculate_shipping_fee	application/http_controller/core_api/spx_api/calculate_usecase.go:729	
/core/spx/spx_recalculate/sum_task/create	application/http_controller/core_api/spx_api/calculate_usecase.go:804	插入批量重算任务
/core/spx/spx_recalculate/sum_task/task_id/hand/message	application/http_controller/core_api/spx_api/calculate_usecase.go:66	
/core/spx/fix_data	application/http_controller/core_api/spx_api/calculate_usecase.go:905	
/core/spx/service_point/sync_billing_order	application/http_controller/core_api/spx_api/service_point_usecase.go:15	service point spx推送可计费状态计费单

定时任务

异步任务作业名	代码位置	功能描述
PushChargeStatusToSpxJob	application/task_api/rpc_job/spx/push_charge_status_to_spx/push_charge_status_to_spx.go:40	

6.2 SPX LH ShippingFee

path: /core/spx_lh_cost/calculate_lh_cost

代码位置: application/http_controller/core_api/spx_lh_fee/calculate_usecase.go:43

coreApi

path	代码位置	功能描述
/core/spx_lh_cost/calculate_lh_cost	application/http_controller/core_api/spx_lh_fee/calculate_usecase.go:53	提供给spx调用的计算接口
/core/spx_lh_cost/calculate_lh_discount_fee	application/http_controller/core_api/spx_lh_fee/calculate_usecase.go:293	提供给task计算discount的计算接口, 不会暴露给spx, 主要用来自己手动重试计算任意时期的打折数据
/core/spx_lh_cost/rate_card_list	application/http_controller/core_api/spx_lh_fee/calculate_usecase.go:194	校验spx的rate card

定时任务

异步任务作业名	代码位置	功能描述
CalculateSpxLhCostByDayJob	application/task_api/rpc_job/spx_lh_cost/calculate_spx_lh_cost_by_day_job.go:34	
CalculateSpxLhCostDiscountJob	application/task_api/rpc_job/spx_lh_cost/calculate_spx_lh_cost_discount_job.go:25	定时处理打折的line haul
RecalculateSpxLhCostDiscountJob	application/task_api/rpc_job/spx_lh_cost/crontask_recalculate_discount.go:26	重算兜底
SendFuelPriceModifyEmailBOMJob	application/task_api/rpc_job/fuel_price/send_fuel_price_modify_email_job.go:21	月初定时发邮件提醒业务配置fuelPrice
SendFuelPriceModifyEmailEOMJob	application/task_api/rpc_job/fuel_price/send_fuel_price_modify_email_job.go:21	月末定时发邮件提醒业务配置fuelPrice

6.3 SPX 4PL LM ASF ShippingFee

path: /core/spx_4pl_cost/lm/calculate_4pl_cost

代码位置: application/http_controller/core_api/spx/spx_4pl_lm_cost_api/spx_4pl_lm_cost.go:18

模块			path/异步任务作业名	代码位置	功能描述
计费配置	LM	rate_table	/api/admin/spx_4pl_lm/rate_table/create	application/http_controller/admin/spx/spx_4pl_asf_lm/rate_table/controller.go:350	创建费率表
			/api/admin/spx_4pl_lm/rate_table/update	application/http_controller/admin/spx/spx_4pl_asf_lm/rate_table/controller.go:165	更新费率表 (包括更新生效时间、default zone、bsf bound rule以及提交审批)
			/api/admin/spx_4pl_lm/rate_table/base_info	application/http_controller/admin/spx/spx_4pl_asf_lm/rate_table/controller.go:325	查询费率表 (包括基础信息、default zone、bsf bound rule、risk level、additional level)

		/api/admin/spx_4pl_lm/rate_table/history	application/http_controller/admin/rate_table/rate_table/controller.go:301	查询费率表历史版本 (rateId、effectiveTime、rateStatus)
		/api/admin/spx_4pl_lm/rate_table/detail	application/http_controller/admin/spx/spx_4pl_asf_lm/rate_table/controller.go:187	查询费率表及绑定的其他详细配置信息
task (cep range、weight&route bsf、vehicle&distance bsf)		/api/admin/spx_4pl_lm/task/import_file	application/http_controller/admin/spx/spx_4pl_asf_lm/task/controller.go:46	文件上传任务创建并发送kafka (LM部分不存在同步处理任务)
		/api/admin/spx_4pl_lm/task/list	application/http_controller/admin/spx/spx_4pl_asf_lm/task/controller.go:33	查询已创建的任务
		/api/admin/spx_4pl_lm/task/export_file	application/http_controller/admin/spx/spx_4pl_asf_lm/task/controller.go:78	导出上传文件 (前端暂时没使用, 导出功能用的list里的url)
		/api/admin/spx_4pl_lm/task/delete	application/http_controller/admin/spx/spx_4pl_asf_lm/task/controller.go:90	同步删除对应任务写入数据库的数据
文件上传异步任务	ImportFileJob		domain/rate_table/job/async_import_file.go:31	异步处理上传文件
zone_code	/api/admin/spx_4pl_lm/zone_code/list		application/http_controller/admin/spx/spx_4pl_asf_lm/zone/controller.go:18	模糊搜索zone_code
bsf (weight、distance共用)	/api/admin/spx_4pl_lm/basic_shipping_fee/list		application/http_controller/admin/spx/spx_4pl_asf_lm/basic_shipping_fee/controller.go:22	分页查询所有bsf配置
risk_fee (weight、distance共用)	/api/admin/spx_4pl_lm/risk_fee/create		application/http_controller/admin/spx/spx_4pl_asf_lm/risk_fee/controller.go:24	创建risk_fee (先创建税率配置; risk_fee先删除再创建)
	/api/admin/spx_4pl_lm/risk_fee/list		application/http_controller/admin/spx/spx_4pl_asf_lm/risk_fee/controller.go:44	查询risk_fee配置
additional_fee (weight、distance共用)	/api/admin/spx_4pl_lm/additional_fee/create		application/http_controller/admin/spx/spx_4pl_asf_lm/additional_fee/controller.go:24	创建additional_fee
	/api/admin/spx_4pl_lm/additional_fee/list		application/http_controller/admin/spx/spx_4pl_asf_lm/additional_fee/controller.go:44	查询additional_fee
assistant_fee (distance)	/api/admin/spx_4pl_lm/assistant_fee/create		application/http_controller/admin/spx/spx_4pl_asf_lm/assistant_fee/controller.go:24	创建assistant_fee
	/api/admin/spx_4pl_lm/assistant_fee/list		application/http_controller/admin/spx/spx_4pl_asf_lm/assistant_fee/controller.go:44	查询assistant_fee
insurance (weight、distance共用)	/api/admin/spx_4pl_lm/insurance_fee/create		application/http_controller/admin/spx/spx_4pl_asf_lm/insurance_fee/controller.go:31	创建insurance_fee
	/api/admin/spx_4pl_lm/insurance_fee/detail		application/http_controller/admin/spx/spx_4pl_asf_lm/insurance_fee/controller.go:51	查询insurance_fee
LH	rate_table	/api/admin/spx_4pl_lh/rate_table/history	application/http_controller/admin/rate_table/rate_table/controller.go:301	查询费率表历史版本 (rateId、effectiveTime、rateStatus)
		/api/admin/spx_4pl_lh/rate_table/create	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:43	创建rate_table、route_price和所有费用的vat配置
		/api/admin/spx_4pl_lh/rate_table/update	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:63	更新rate_table和route_price (先删后建)
		/api/admin/spx_4pl_lh/rate_table/detail	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:54	查询rate_table和route_price详情
		/api/admin/spx_4pl_lh/rate_table/copy	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:72	复制rate_table、route_price和所有费用的vat配置
		/api/admin/spx_4pl_lh/rate_table/mass_create	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:81	上传文件批量创建 (可能创建多个rateId)
		/api/admin/spx_4pl_lh/rate_table/export	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:93	根据筛选条件批量导出route_price
	route_price	/api/admin/spx_4pl_lh/route_price/mass_create	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:102	批量创建route_price (单个rateId)
		/api/admin/spx_4pl_lh/route_price/export	application/http_controller/admin/spx/spx_4pl_asf_lh/rate_table/controller.go:111	导出现有route_price (单个rateId)

Com mon	rate_table	/api/admin /spx_4pl_common /rate_table/list	application/http_controller/admin/spx /spx_4pl_asf_lm/rate_table/controller.go:376	查询rate_table列表	
		/api/admin /spx_4pl_common /rate_table/delete	application/http_controller/admin/rate_table /rate_table/controller.go:183	删除rate_table	
		/api/admin /spx_4pl_common /rate_table/copy	application/http_controller/admin/spx /spx_4pl_asf_lm/rate_table/controller.go:142	复制rate_table (lm复制基础信息)	
		/api/admin /spx_4pl_common /rate_table/contract_id_list	application/http_controller/admin/spx /spx_4pl_asf_lm/rate_table/controller.go:426	获取费率表id列表	
		approval	/api/admin /spx_4pl_common /approval/cancel	application/http_controller/admin/spx /common/controller.go:53	取消submit的rate_table
		billing_order	/api/admin /spx_4pl_common /billing_order/list	application/http_controller/admin/spx /common/controller.go:62	查询billing_order列表
			/api/admin /spx_4pl_common /billing_order/detail	application/http_controller/admin/spx /common/controller.go:71	查询billing_order详情 (包括计费配置、结果等)
计费 核心	LM	spx交互	/core/spx_4pl_cost/lm /calculate_4pl_cost	application/http_controller/core_api/spx /spx_4pl_lm_cost_api/spx_4pl_lm_cost.go:18	SPX推送TripInfo
		定时任务	CalculateSpxLmCostJob	application/task_api/rpc_job/spx_lm /calculate_spx_lm_cost_job.go:68	定时扫batch表计费
			CalculateSpxLmFeedBackJob	application/task_api/rpc_job/spx_lm /calculate_spx_lm_feed_back_job.go:34	定时补偿之前计费失败的task
			CalculateLmFeeBillingJob	application/task_api/rpc_job/spx_lm /calculate_spx_lm_cost_billing_job.go:36	定时汇总billing
		test	/core/spx_4pl_cost/lm /test_for_calculate_lm_fee	application/http_controller/core_api /spx_4pl_fee_api/spx_lm_api /calculate_usecase.go:56	测试核心计费流程 (bizOrderNo维度, 可以对应多个task)
			/core/spx_4pl_cost/lm /test_for_calculate_task_lm_fee	application/http_controller/core_api /spx_4pl_fee_api/spx_lm_api /calculate_usecase.go:41	测试核心计费流程 (只计算batchId+bizOrderNo维度)
			/core/spx_4pl_cost/lm /test_for_saturn_calculate_lm_fee	application/http_controller/core_api /spx_4pl_fee_api/spx_lm_api /calculate_usecase.go:71	测试定时任务调用后的计费流程 ()
	LH	spx交互	/core/spx_4pl_cost/lh /calculate_4pl_cost	application/http_controller/core_api/spx /spx_4pl_lh_cost_api/spx_4pl_lh_cost.go:18	SPX推送TripInfo
		定时任务	CalculateSpxLh4PlCostJob	application/task_api/rpc_job/spx_lh_cost /trigger_calculate_spx_lh_cost_job.go:67	触发计算
			CalculateSpxLh4PlFeedBackJobName	application/task_api/rpc_job/spx_lh_cost /feed_back_calculate_spx_lh_cost_job.go:31	处理中补偿
			CalculateLhFeeBillingJob	application/task_api/rpc_job/spx_lh_cost /calculate_spx_lh_cost_billing_job.go:35	汇总billing单
		test	/core/spx_4pl_cost/lh /test_calculate_4pl_cost	application/http_controller/core_api /spx_4pl_fee_api/spx_lh_api /spx_lh_br_4pl_controller.go:32	
			/core/spx_4pl_cost/lh /test_for_saturn_calculate_lh_fee	application/http_controller/core_api /spx_4pl_fee_api/spx_lh_api /spx_lh_br_4pl_controller.go:46	
			/core/spx_4pl_cost/lh /test_saturn	application/http_controller/core_api /spx_4pl_fee_api/spx_lh_api /spx_lh_br_4pl_controller.go:54	
Com mon					
对账	LM				
	LH				

	Com mon	recon	/core/spx_4pl_cost/recon /calculate_4pl_cost	application/http_controller/core_api/spx /spx_4pl_cost_recon_api/spx_4pl_cost_recon. go:21	对账拉取计费结果 (BizOrderNo+ShippingBatchId)
			/core/spx_4pl_cost/recon /approve	application/http_controller/core_api/spx /spx_4pl_cost_recon_api/spx_4pl_cost_recon. go:32	对账完成通知

6.4 SPX 4PL LH ASF ShippingFee

见6.3

6.5 SPX CommissionFee

协议：http(DR灾备)

path：/core/spx/service_point/sync_billing_order

代码位置：application/http_controller/core_api/spx_api/service_point_usecase.go:15

协议：grpc

path：/charge_protobuf.SpxServicePointApiService/SyncBillingOrder

代码位置：application/grpc_controller/core_api/spx_service_point_controller.go:27

待确定接口：

/charge_protobuf.SpxRecalculateService/SpxRecalculate
/charge_protobuf.SpxRecalculateService/SpxRecalculateBillingCount
/charge_protobuf.SpxRecalculateService/GetOverWriteRateIdChain

定时任务

异步任务作业名	代码位置	功能描述
commissionFeePeriod	internal/crontask/commission_fee_task/commission_fee_period.go:52	spx commission fee 周期计算
commissionFeeFailedRecalculate	internal/crontask/commission_fee_task/commission_fee_recalculate.go:43	spx commission fee 失败重算
commissionFeePeriodLostCalculate	internal/crontask/commission_fee_task/commission_fee_period_lost_calculate.go:38	