Data migration

```
• updated_at + id
    • 3.1
    3.23.3
    • 3.4
    • 3.5
       • 3.5.1
      • 3.5.2
      • 3.5.3
       • 3.5.4
       • 3.5.5
   check list

    open account

       data migrationswitch to pay_core
1
2
3
updated_at + id
3.1
-updated_at updated_at + id-
updated_at updated_at + id
                            ● pay_server数据核对
                                                          会额核对
                                                                                      全流量切换
     整体步骤
                                  🕗 商户数据迁移
                                                             ④ 商户切换
                                                                                  ⑥ pay_server废弃支付核心业务
```

- pay_server pay_server pay_server
 pay_server pay_core pay_account_core
 pay_account_corepay_server
 pay_core pay_core pay_server pay_server
 pay_server pay_core pay_server

3.2

		account_records	
payment	payment_records	payment_records	
		inbound_fund_reqeust_records	
		offchain_inbound_fund_records	
		enchain_inbound_fund_records	
		payment_deposit_records	
		transactions	
rebound	rebound_records	rebound_records outbound_fund_request_records	
		transactions	
refund	refund_records	refound_records outbound fund request records	
		transactions	
conversion	conversion_records	conversion_records	
		transactions	
balance adjustment	balance_adjustment_requests	balance_adjustment_requests transactions	
payout	payout_records	payout_records outbound_fund_request_records	
		transactions	

	account_records
payment	payment_records
	inbound_fund_reqeust_records
	offchain_inbound_fund_records
	onchain_inbound_fund_records
	payment_deposit_records
	transactions
	defi_swap_transaction_records
	hedging_records
	whitelist_addresses
rebound	rebound_records outbound_fund_request_records
	transactions
refund	refound_records outbound_fund_request_records
	transactions

conversion	conversion_records transactions
balance adjustment	balance_adjustment_requests transactions
payout	payout_records outbound_fund_request_records transactions
	fiat_payout_records
	victor_fi_counterparties

3.3

refund payment

payment_records conversion_records balance_adjustment_requests(+) balance_adjustment_requests() rebound_records refund_records
payeut_records

3.4

updated_at + id

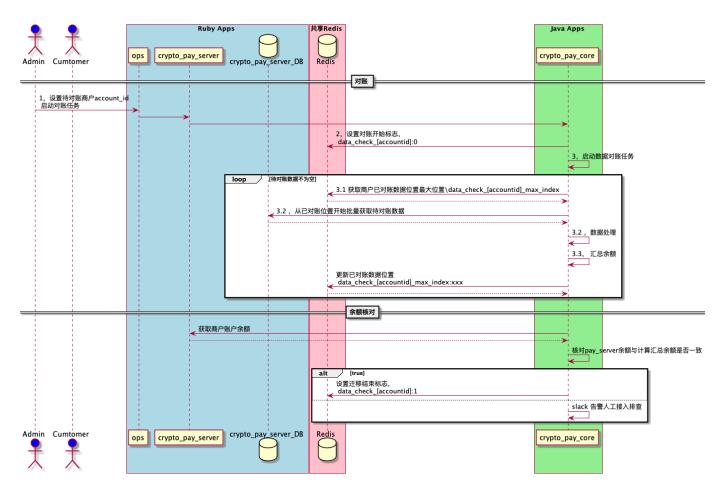
update_at update_at ID

pay_server update_at railsupdated_at job00:00:0100:00:0000:00:00job1jobjob

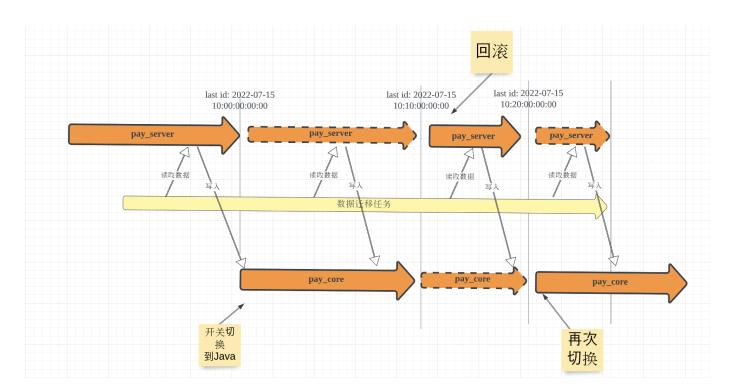
3.5

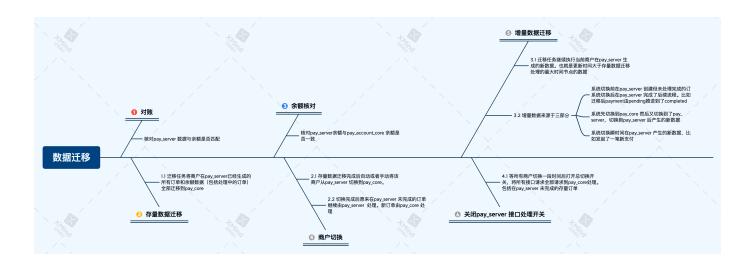
3.5.1

pay_server pay_server-

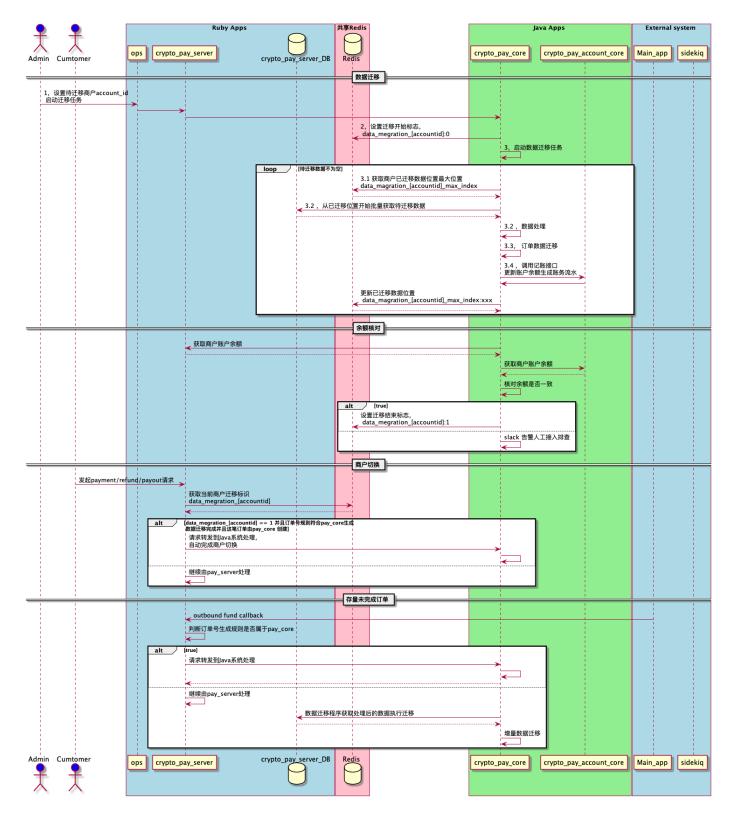


3.5.2





数据迁移



- 1. pay_server pay_core.
- 2.
- 3. updated_at
- 4. pay_server crypto_pay_account_core
- 5. pay_server pay_server pay_core pay_core inbound/outboundjobpay_corepay_server pay_server pay_server

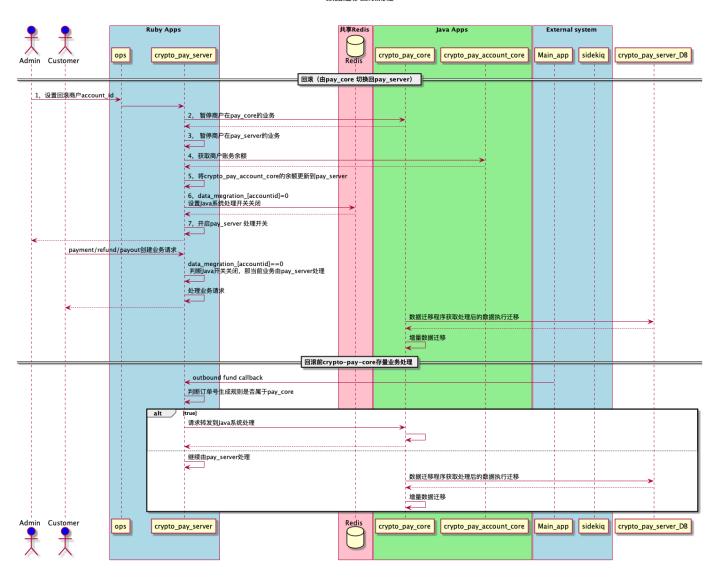
3.5.3

pay_core pay_server pay_core



crypto.com pay

数据迁移回滚流程



1ops pay_server API

2pay_server crypto-pay-core:v1:roll_back_accounts (rides)

32pay_core

4pay_server account_core pay_server

5pay_server account_id pay_core pay_server

62 crypto-pay-core:v1:roll_back_accounts (rides) 7 crypto-pay-core:v1:in_roll_back_accounts (rides)

- pay_core
 - 1 ops_pay_server API
 - 2 pay_server account_id pay_server pay_core
 - 3, crypto-pay-core:v1:in_roll_back_accounts (rides)
 - 1. pay_server pay_core pay_corepay_server
 - 2. 2pay_server pay_core pay_server pay_server
 - 3. **5** pay_core pay_server pay_server pay_core pay_server pay_server 100USDpay_core50USDpayout50USDpay_core pay_server pay_server 100USDpay_server 50USD 4. pay_core pay_server pay_server pay_core inbound/outboundjobpay_corepay_server pay_server

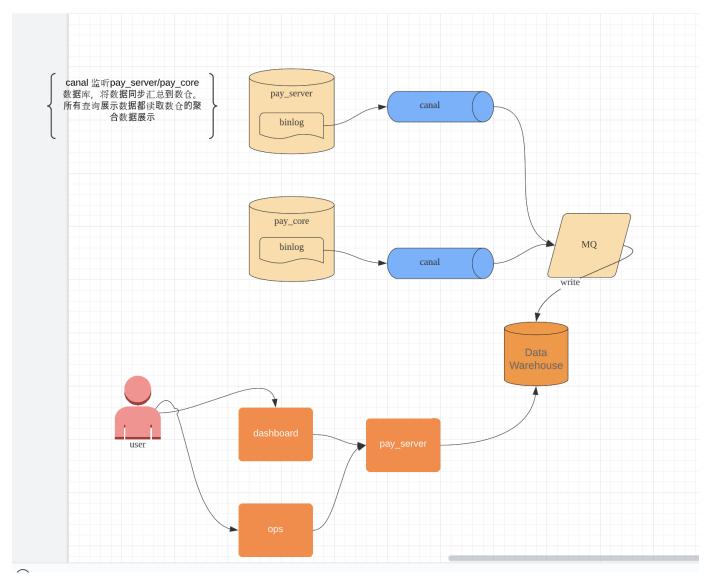
3.5.4

- pay_corepay_server subscription/invoice pay_core
- 3.5.5
- bug
- pay_server capture
- updated_at
- pay_server

QΑ

1@CJ

- pay_core



1canalpay_serverpay_core binlogbinlogMQdata team MQ

2dashboard opspay_server

3pay_serverpay_server pay_core

4Javapay_serverpay_account_core pay_server/pay_core pay_account_core

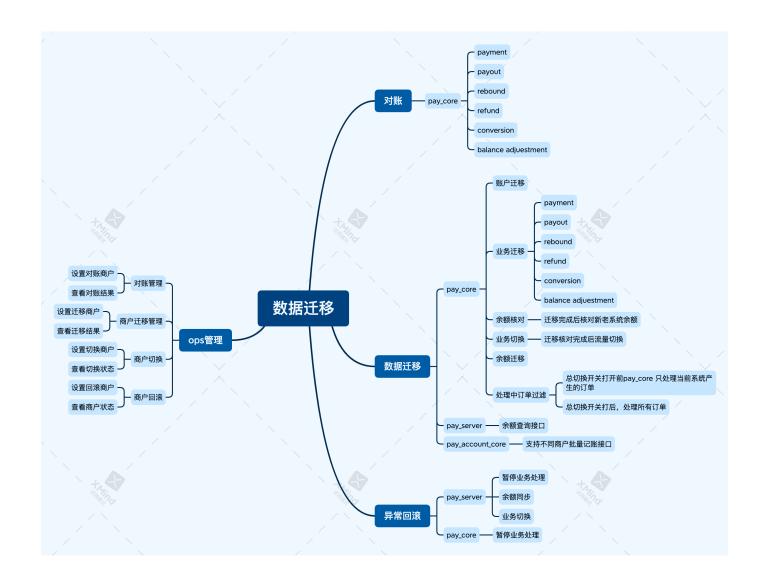
. 1graphql 2 3 4 5pay_core

1data team 2TIDBMysqlPG

pay_server Java

•

dashboard



			yapi
pay_core		pay_server accountaccount_core	https://yapi-pay.3ona.co /project/95/interface/api /1143
pay_core	account_id	account_id ,account_core	https://yapi-pay.3ona.co /project/95/interface/api /1149

pay_core		account_id	https://yapi-pay.3ona.co /project/95/interface/api /1131
pay_core	transaction- balance	account_id transaction	https://yapi-pay.3ona.co /project/95/interface/api /1137
pay_core		accountpay_core	https://yapi-pay.3ona.co /project/95/interface/api /1155
pay_core			https://yapi-pay.3ona.co /project/95/interface/api /1161
pay_core	payment_records		https://yapi-pay.3ona.co /project/95/interface/api /1209
pay_core	event_record	event_record event_record	
pay_core	event_record transaction		
pay_core	transactionevent_record		



https://docs.google.com/spreadsheets/d/11aL0d41dBsGUx6Fe2BltQ1ShMB2vRE7eyt1blsgFDR8/edit?pli=1#gid=90517436

check list

		status	date
:	yong.bao	done	
podpod:	benko		

		yong.bao	done	
		benko		
	Job			
	1crypto_pay_account_core 2crypto_pay_core 3crypto_pay_server	yong.bao benko	crypto_pay_acc ount_core crypto_pay_core crypto_pay_ser ver	2022-9-30 2022-9-30 2022-10-13
		yong.bao	done	2022-9-29
	crypto_pay_core pay_server	yong.bao	done	2022-9-29
SM	crypto_pay_core pay_server	yong.bao	done	2022-9-29
	account_id	yong.bao	hedging_records inbound_fund_r equest_records offchain_inboun d_fund_records onchain_inb ound_fund_r ecords defi_swap_t ransaction_ records whitelist_a ddresses	2022-9-30
	JVM • Memory • CPU • GC	yong.bao	JVM Memory: CPU GC	2022-10-06 jobpodpod

server	issue	owner	status
pay_core(data_migration)	podpay_server pay_core pod	yong.bao	
pay_core			

liviMode=true, payment record exist, inbound_fund_request_record not exist

```
irb(main):074:0> query = <<-SQL
irb(main):075:0" select count(*) from payment_records a where a.
live_mode is true
irb(main):076:0" and not exists (select 1 from
inbound_fund_request_records b where a."id"=b.reference_id)
irb(main):077:0" SQL
=> " select count(*) from payment_records a where a.live_mode is true
\n and not exists (select 1 from inbound_fund_request_records b where
a.\"id\"=b.reference_id)\n"
irb(main):078:0> result = ActiveRecord::Base.connection.execute(query)
=> #<PG::Result:0x00005c8ed8c51480 status=PGRES_TUPLES_OK ntuples=1
nfields=1 cmd tuples=1>
irb(main):079:0> pp result.values
[[12869]]
=> [[12869]]
irb(main):080:0>
```

liviMode=true and status= captured, payment_deposit_record not exist

```
irb(main):015:0>
irb(main):016:0> query = <<-SQL</pre>
irb(main):017:0" select count(*) from payment_records a where a.
live_mode is true and a.status='captured'
irb(main):018:0" and not exists (select 1 from
payment_deposit_records b where a."id"=b."id")
irb(main):019:0" SQL
=> " select count(*) from payment_records a where a.live_mode is true
and a.status='captured' \n and not exists (select 1 from
payment_deposit_records b where a.\"id\"=b.\"id\")\n"
irb(main):020:0> result = ActiveRecord::Base.connection.execute(query)
=> #<PG::Result:0x00005c8ed3ebce68 status=PGRES_TUPLES_OK ntuples=1
nfields=1 cmd_tuples=1>
irb(main):021:0> pp result.values
[[7]]
=> [[7]]
```

liviMode=true and status= captured, payment_deposit_record exist, transaction_record not exist

```
irb(main):022:0>
irb(main):023:0> query = <<-SQL
irb(main):024:0" select count(*) from payment_records a,
payment_deposit_records b
                  where a.live_mode is true and a.status='captured'
irb(main):025:0"
and a. "id" = b. "id"
irb(main):026:0" and not exists (select 1 from transactions c where
a."id"::text=c.resource_id)
irb(main):027:0" SQL
=> " select count(*) from payment_records a, payment_deposit_records b
\n where a.live_mode is true and a.status='captured' and a.\"id\"=b.\"
id\"\n and not exists (select 1 from transactions c where a.\"id\"::
text=c.resource_id)\n"
irb(main):028:0> result = ActiveRecord::Base.connection.execute(query)
=> #<PG::Result:0x00005c8ed4e37e60 status=PGRES_TUPLES_OK ntuples=1
nfields=1 cmd tuples=1>
irb(main):029:0> pp result.values
[[1]]
=> [[1]]
```

type = reboundstatus != pendingoutbound_fund_request_records not exist

```
irb(main):030:0>
irb(main):031:0> query = <<-SQL</pre>
irb(main):032:0" select count(*) from rebound_records a where a.
status != 'pending' and
irb(main):033:0" not exists (select 1 from
outbound_fund_request_records o where a."id"::text = o.action_id
irb(main):034:0" or a.onchain_inbound_fund_record_id::text = o.
action id)
irb(main):035:0" SQL
=> " select count(*) from rebound_records a where a.status !=
'pending' and \n not exists (select 1 from
outbound_fund_request_records o where a.\"id\"::text = o.action_id \n
or a.onchain_inbound_fund_record_id::text = o.action_id)\n"
irb(main):036:0> result = ActiveRecord::Base.connection.execute(query)
=> #<PG::Result:0x00005c8ed55d7a80 status=PGRES_TUPLES_OK ntuples=1
nfields=1 cmd_tuples=1>
irb(main):037:0> pp result.values
[[0]]
=> [[0]]
```

```
irb(main):038:0>
irb(main):039:0> query = <<-SQL
irb(main):040:0" select count(*) from refund_records a where a.
status='done' and
irb(main):041:0"
                 not exists (select 1 from
outbound_fund_request_records o where a."id"::text=o.action_id)
irb(main):042:0" SQL
=> " select count(*) from refund_records a where a.status='done' and
\n not exists (select 1 from outbound_fund_request_records o where a.\"
id\"::text=o.action id)\n"
irb(main):043:0> result = ActiveRecord::Base.connection.execute(query)
=> #<PG::Result:0x00005c8ed739c610 status=PGRES TUPLES OK ntuples=1
nfields=1 cmd_tuples=1>
irb(main):044:0> pp result.values
[[358]]
=> [[358]]
```

type = payout, status != pending and crypto_coin, payout record exist, outbound_fund_request_records not exist

```
irb(main):045:0>
irb(main):046:0> query = <<-SQL
irb(main):047:0" select count(*) from payout_records a where a.status!
='pending'
irb(main):048:0" and a.payout_account_data->>
'account_type'='crypto_coin' and a.payout_account_data->> 'currency'!
= 'USD'
irb(main):049:0" and not exists (select 1 from
outbound_fund_request_records o where a."id"::text=o.action_id)
irb(main):050:0" SQL
=> " select count(*) from payout_records a where a.status!='pending'
\n and a.payout account data->> 'account type'='crypto coin' and a.
payout_account_data->> 'currency'!='USD'\n and not exists (select 1
from outbound_fund_request_records o where a.\"id\"::text=o.action_id)
\n"
irb(main):051:0> result = ActiveRecord::Base.connection.execute(query)
=> #<PG::Result:0x00005c8ed7694660 status=PGRES_TUPLES_OK ntuples=1
nfields=1 cmd tuples=1>
irb(main):052:0> pp result.values
[[111]]
=> [[111]]
```

```
query = <<-SQL
   SELECT count(*) from outbound_fund_request_records where action_type
is null
SQL
result = ActiveRecord::Base.connection.execute(query)
pp result.values</pre>
```

payout transactionmete_data/meta_data mode

PMmass payoutmass payout

• 205-7event_record event_record transactions

refundmerchant 50 USDcustomer100USD50USDmerchant

- Accounts::PaymentRefundRequested
- Accounts::PaymentRefundOngoingChecked

Accounts::PaymentRefundOngoingChecked Accounts::PaymentRefundOngoingChecked Accounts::PaymentRefundRequested locked_amount transactions(resource_type = refund_freeze)

```
SELECT refund_request_id,sum(locked_amount::DECIMAL) from (
SELECT event_json ->> 'refund_request_id' as refund_request_id,
event_json ->> 'debit_currency',event_json ->> 'locked_amount' as
locked_amount,*
from event_records where aggregate_id = 'a5b1e789-fc2b-478b-a0be-
3fbbc2607563' and event_type = 'Accounts::PaymentRefundOngoingChecked'
) sub GROUP BY refund request id;
SELECT * from transactions where resource_id in (
'364315a4-73a7-46d3-9165-530dbc299ae6',
'71f70db5-5e7b-4046-aee8-01c25a5b8ac0',
'c5a9ab1e-f72b-42d8-8d32-58e81283356e'
364315a4-73a7-46d3-9165-530dbc299ae6
                                            38.12
71f70db5-5e7b-4046-aee8-01c25a5b8ac0
                                            46.53
c5a9ab1e-f72b-42d8-8d32-58e81283356e
                                            21.82
```

transactionsevent_record dashboardtransaction

refundtransactionevent_record

```
SELECT * from (
SELECT resource_id,amount,resource_type,id from transactions where
account_id = 'a5ble789-fc2b-478b-a0be-3fbbc2607563'
and wallet = 'TUSD' and resource_type in ('Refund')
) a LEFT JOIN (
SELECT event_json ->> 'refund_request_id' as resource_id,event_json ->>
'debit_currency',event_json ->> 'debit_amount' as amount,*
from event_records where aggregate_id = 'a5ble789-fc2b-478b-a0be-
3fbbc2607563'
and event_type in ('Accounts::
OnchainPaymentRefundTransferred','Accounts::
PaymentRefundTransferBypassed','Accounts::PaymentRefundTransferred')
and event_json ->> 'debit_currency' = 'TUSD'
)b on a.resource_id = b.resource_id
where b.resource_id is null;
```

• refund_freeze created_at Refund

refundtransactionsrefund_freezerefund20refund_freeze refund

```
sumologic:
((_index=app_prod_eks)) "4a07609589f74e86aldf8a944111e2cb"
| where %"kubernetes.labels.app.kubernetes.io/name" = "crypto-pay-core"
refund_id: 9baldaa6-71fb-466c-8416-c9fbafa00901
data: https://mcoproduct.atlassian.net/wiki/spaces/CP/pages/2458910725
/2022-10-21+New+transaction+engine+migration+dirty+data+patch
```

refundrefund_freezerefund_freezerefund

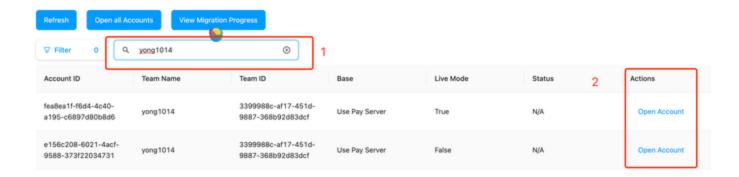
Migration

open account data migration switch to pay_core

open account

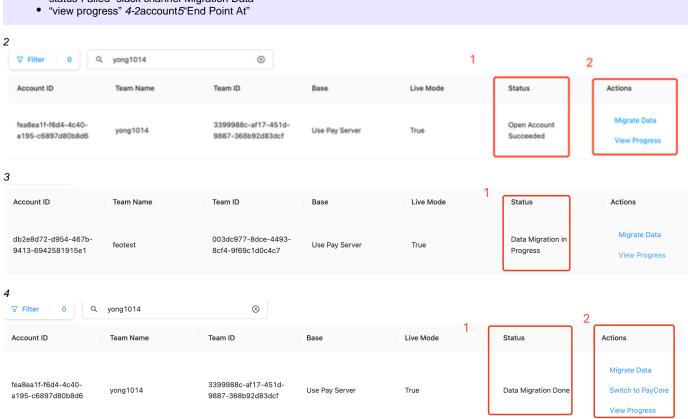
- 1. "1-1" account
- 2. "1-2" "open account" "status" "Open Account Succeeded" 2-1" Migration Data"

Sen account pay_server account_record pay_account_core Java"data migration"



data migration

- 1. "2-2" "Migration Data"
- 2. data migration account 50 w/h" status" "Data Migration in Progress" 3-1" status" "Data Migration Done" 4-1" Switch to Paycore" 4-2
 - Migration Data
 - "Migration Data"
 - status"Failed" slack channel"Migration Data"

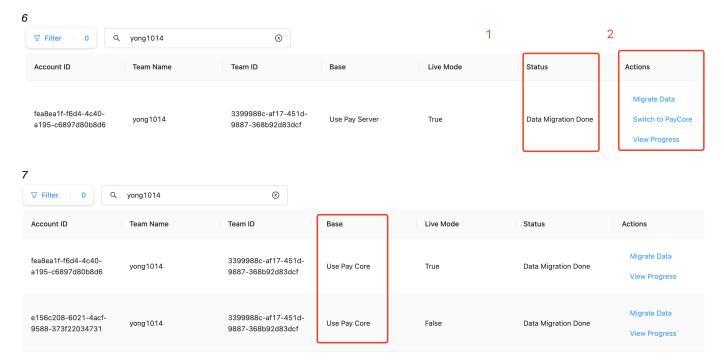


Туре	BizType	Status	End Point At	End Point Id
stock_data_migratio n	rebound_records		2022-09-15 19:09:19	4970070a-eead- 49cc-9be3- fb28e2403390
stock_data_migratio n	payment_records		2022-09-15 19:13:48	773ff436-0386- 47ec-a803- a0d26972ace6
stock_data_migratio n	conversion_records		2022-09-15 19:03:29	6f2fadb2-b016- 49a1-ab25- 61ef37cc88b7
stock_data_migratio n	payout_records		2022-03-14 17:48:01	e4202b0a-b4a0- 4e3c-9a5f- 536766e0ed4b
stock_data_migratio n	payment_deposit_re cords	▽	2022-09-15 19:13:48	773ff436-0386- 47ec-a803- a0d26972ace6

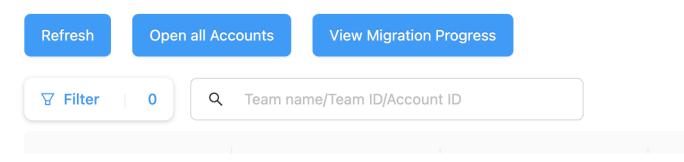
switch to pay_core

1. "Switch to Paycore" 6-2pay_server pay_core pay_core Base "Use Pay Server" "Use Pay Core"(7)

2.



5



- "Open all Accounts" pay_server pay_account_core "Open Accounts""View Migration Progress" PM

ata Migration"Pay_server 2