

# Smartrouter Scoping Project — Full Report

2026-02-18

## Smartrouter Scoping Project Plan

Last Updated: 2026-02-18 Status: In Progress

---

### Overview

Field	Details
<b>Project Name</b>	Smartrouter Scoping Project
<b>Start Date</b>	2026-02-18
<b>Target Completion</b>	TBD
<b>Owner</b>	TBD
<b>Status</b>	Planning

---

### Goals & Success Criteria

#### Purpose

This is a scoping project to figure out how much effort it would take to integrate Athia AI/ML into Deuna's payments service to optimize payment acceptance rates via intelligent processor selection (routing), message configuration, and smart retries — all within Deuna's tech stack.

#### Success Criteria

- Measurable approval lift
- Stability during PSP outages
- Latency target: p95 < 200ms

#### In Scope (P0)

- Processor/Message selector
- Smart Retry logic
- Feedback Loop implementation

#### Out of Scope

- 3DS optimization (Phase 2)
- User-facing messaging (Phase 3)
- Installment optimization

## Stakeholders

See TEAMS.md for the full source of truth on all people and roles.

Name	Company	Role
Pablo	Deuna	CTO
Israel	Deuna	Data POC
Farhan	Deuna	Claude/LLM Access POC
Mark Walick	Deuna	PM Lead
Rakesh	Aidaptive	Engineer
Naoki	Aidaptive	Engineer

## Milestones & Timeline

Milestone	Duration	Status	Notes
Phase 0: Assess level of effort/complexity	2 days	In Progress	\$6K budget, started 2026-02-18
Phase 1: Model running in production for 2 processors with basic feature store	2 weeks	Pending	Core delivery
Phase 2: Add monitoring + integrate with experimentation	Week 3	Pending	Immediately after Phase 1
Phase 3: Drift detection, CI/CD, experiment ramp-up, additional model techniques	TBD	Pending	

## Key Use Cases (P0)

ID	Use Case	Description
P-01	Outage detection & failover	Fail over/back via persistent timeout codes; random sampling of down PSP to detect recovery
P-02	Overall transaction routing optimizer	Optimize Deuna's existing static rules based on historical outcomes
P-03	Per-transaction optimal route selection	Rank top 3 routes based on prior outcomes for fast retry
P-04	Message manipulation	Toggle CIT/MIT, AVS, MCC variables in authorization requests; top 3 recommendations
P-05	Retry optimization	Subs/MIT focused; enterprise darktime reduction; delayed retry based on reputation

## Work Breakdown / Task Tracking

### Backlog

- Confirm Claude access and LLM budget provisioned (Pablo → Farhan)
- Confirm Snowflake read access provisioned — Rakesh verified (2026-02-18, info from Israel)
- Naoki to test Snowflake access once online — coordinate with Rakesh
- Provision Deuna corp accounts for Rakesh and Naoki
  - Snowflake instance access for both accounts
  - Code (repo) access for both accounts
  - Claude Code credits for both accounts
- Complete Phase 0: assess level of effort/complexity (2 days, \$6K)
- Build training platform (currently prototype-only — see Technical Gaps)
- Deliver P-01 through P-05 use cases

### In Progress

- (nothing yet)

### Done

- (nothing yet)

---

## Schema Understanding & Data Notes

Extracted 2026-02-18 from PAYMENT\_ML Snowflake database. Full schema reference: SCHEMA.md

### Overall Assessment

The schema is very well structured for the P0 use cases. The data is organized into clean source views in the SOURCES schema, and a massive denormalized flat table (ABTESTING.ALL\_VIEWS\_FLAT) that joins everything together — ideal for quick EDA and feature engineering without complex joins.

---

### Key Tables for P0 Use Cases

**VW\_ATHENA\_PAYMENT\_ATTEMPT** — most important table for routing & retry - Tracks every individual attempt with sequence order, processor used, error code/category, hard/soft decline type, retry indicator, and approved status - DYNAMIC\_ROUTING\_DETAIL (VARIANT/JSON) column likely contains rich routing decision metadata — needs exploration - PAYMENT\_ATTEMPT\_SEQUENCE\_ORDER + PAYMENT\_LAST\_ATTEMPT\_INDICATOR make it easy to reconstruct the full retry chain per payment - Directly supports **P-03** (per-transaction route selection) and **P-05** (retry optimization)

**VW\_SMART\_ROUTING\_ATTEMPTS** — current routing engine event log - Captures per-attempt routing decisions: algorithm type, processor selected, process time, result status, skip reason - PROPERTIES\_RESULT\_PROCESS\_TIME is a direct latency signal for the p95 < 200ms target - PROPERTIES\_RESULT\_SKIPPED\_REASON tells us why processors were bypassed — key for **P-01** (outage detection) - PROPERTIES\_ALGORITHM\_TYPE reveals what routing strategies are already in use

**VW\_ROUTING\_MERCHANT\_RULE + related views** — existing rules engine - Deuna already has a rules-based routing system with conditions, members, options, and priority ordering - This is the foundation for **P-02** (optimize existing static rules) — we don't start from scratch - SHADOW\_MODE in VW\_ROUTING\_MERCHANT\_RULE\_MEMBER suggests there's already infrastructure for testing new processors without live traffic

---

## Feature Richness for ML Models

The data has strong signal across multiple dimensions:

Feature Group	Key Columns	Usefulness
Retry history	NUM_ATTEMPTS_ORDER, PREVIOUS_ORDER_ERROR_CODE, PREVIOUS_ORDER_PROCESSOR, AVG_SEC_BETWEEN_PAYMENT_ATTEMPS	Direct retry optimization signals
Error signals	ERROR_CODE, ERROR_CATEGORY, HARD_SOFT, EVENT_ERROR_STANDARD_ERROR_CODE	Distinguish hard vs soft declines; normalized error codes in events
Card signals	CARD_BIN, CARD_BRAND, BANK, CARD_COUNTRY	Processor affinity by card type
User behavior	TARGET_USER_FRAUD_RATE_COHORT, TARGET_USER_TENURE_IN_DAYS, TARGET_USER_FREQUENCY_VALUE, TOTAL_MINUTES_BROWSING, TOTAL_NUM_SESSIONS	User risk and engagement signals
RFM	TARGET_USER_FREQUENCY_VALUE, TARGET_USER_RECENCY_VALUE, TARGET_USER_MONETARY_VALUE	Customer value for routing priority
Geo	LATITUDE, LONGITUDE, ORDER_COUNTRY_CODE, WEATHER_MAIN	Geography-based processor routing
Device	TARGET_USER_BROWSER, TARGET_USER_OS, TARGET_USER_DEVICE	Device fingerprinting
Message config	MCI_MSI_TYPE, ORDER_MCI_MSI_TYPE, PAYMENT_ATTEMPT_METHOD_TYPE	CIT/MIT toggle tracking for <b>P-04</b>
3DS	CHALLENGE_3DS_INDICATOR, CHALLENGE_3DS_STATUS	Available now; scoped to Phase 2

---

## Starting Point Recommendation

- Use ABTESTING.ALL\_VIEWS\_FLAT for initial EDA — everything is already joined
- Switch to individual SOURCES views for model training to avoid data leakage and redundancy
- Explore DYNAMIC\_ROUTING\_DETAIL VARIANT column in VW\_ATHENA\_PAYMENT\_ATTEMPT early — may contain routing features not exposed elsewhere

---

## Notable Data Quality Observations

- **Typo in source data:** PATMENT\_TIME in VW\_ATHENA\_PAYMENT (should be PAYMENT\_TIME) — minor but worth noting for pipelines
- **Airline-specific data:** VW\_ORDER\_AIRLINE\_DETAIL\_ALL and VW\_ORDER\_AIRLINE\_INFORMATION\_DETAIL\_ALL suggest Volaris is a key merchant with rich flight/passenger metadata
- SOURCES schema has no raw tables — only views, meaning underlying raw tables are managed upstream by Deuna's data team (Israel's domain)

---

## Technical Gaps (from SOW)

### Testing/Experimentation Platform — Production Ready

- A/B testing infrastructure, multi-variant experiments, automated winner selection
- Model registry with versioning, real-time inference (FastAPI sidecar)
- Missing: canary deployments

### Training Platform — Prototype Only (needs significant work)

- No automated retraining, no orchestration, no CI/CD
- No data validation, no monitoring, no drift detection
- No feature store, no lineage tracking, no rollback capability
- No hyperparameter tuning, no algorithm comparison

---

## Decisions Log

Date	Decision	Rationale	Made By
2026-02-18	Latency target updated from p95 < 50ms to p95 < 200ms	Revised from original SOW spec	Rakesh (discussed with Pablo)

---

## Open Questions

#	Question	Owner	Status
1	TBD	TBD	Open

---

## Risks & Issues

ID	Description	Likelihood	Impact	Mitigation	Status
R1	TBD	Low/Med/High	Low/Med/High	TBD	Open

---

## Notes & Meeting Log

### 2026-02-18

- Project plan file created. Details to be filled in.
- Israel is the main POC for data and related topics.
- Pablo is the CTO.
- All data is in Snowflake database; we will get read access to all tables. Snowflake URL: <VLTAXPW-RMONTES.snowflakecomputing.com>

- Need Claude access and budget for LLM. Farhan is the main POC; Pablo will be talking to Farhan to get this access.
- Mark Walick is the PM lead for this project.

---

## Project Plan Exports

Date	File	Notes
2026-02-18	project-plan-2026-02-18.pdf	Initial export
2026-02-18	project-plan-2026-02-18-v2.pdf	Updated with schema notes, stakeholders, todos
2026-02-18	project-plan-2026-02-18-v3.pdf	Updated with TEAMS.md reference, Mark Walick correction
2026-02-18	project-plan-2026-02-18-v4.pdf	Self-contained: includes project plan + teams + schema
2026-02-18	schema-2026-02-18.pdf	Initial Snowflake schema snapshot

---

## Documents & SOW Snapshots

Document	Date	Version	File
SOW: Athia Embedded into Acceptance - Phase 1	2026-02-16	v1	PDF

---

## References & Links

- CLAUDE.md (project conventions)
- Data Dictionary
- Athia Data Model
- Snowflake Login ([VLTAXPW-RMONTES.snowflakecomputing.com](https://VLTAXPW-RMONTES.snowflakecomputing.com))

---

## Teams & Stakeholders

Source of truth for all people involved in the Smartrouter Scoping Project. **Last Updated:** 2026-02-18

---

## Deuna

Name	Role	Responsibilities
Pablo	CTO	Executive sponsor; coordinating Claude/LLM access via Farhan

Name	Role	Responsibilities
Israel	Data POC	Main point of contact for data and Snowflake access
Farhan	Claude/LLM Access POC	Provisioning Claude access and budget
Mark Walick	PM Lead	Product management lead

## Aidaptive

Name	Role	Responsibilities
Rakesh	Engineer	Engineering lead; Snowflake access verified
Naoki	Engineer	Engineering; Snowflake access pending test

## Key Contacts by Topic

Topic	Owner	Notes
Data / Snowflake	Israel (Deuna)	All data questions, schema, access
Claude / LLM Budget	Farhan (Deuna)	Pablo coordinating with Farhan
Project Management	Mark Walick (Deuna)	
Engineering	Rakesh + Naoki (Aidaptive)	Coordinate with each other on access/setup
Executive Decisions	Pablo (Deuna)	CTO sign-off

## Snowflake Schema Reference

Database: PAYMENT\_ML Instance: VLTAXPW-RMONTES.snowflakecomputing.com Extracted: 2026-02-18

## Overview

Schema	Type	Object	Columns
ABTESTING	Table	ALL_VIEWS_FLAT	~319 (denormalized flat table)
ABTESTING	Table	ALL_VIEWS_FLAT_SAMPLE	~319 (sample of above)
SOURCES	View	VW_ATHENA_CHANNEL	2
SOURCES	View	VW_ATHENA_ORDER	85
SOURCES	View	VW_ATHENA_ORDER_COMPLEMENT	11
SOURCES	View	VW_ATHENA_PAYMENT	46
SOURCES	View	VW_ATHENA_PAYMENT_ATTEMPT	39
SOURCES	View	VW_ATHENA_PAYMENT_EVENTS	28
SOURCES	View	VW_ATHENA_TARGET_USER	40
SOURCES	View	VW_ORDER_AIRLINE_DETAIL_ALL	29
SOURCES	View	VW_ORDER_AIRLINE_INFORMATION_DETAIL_ALL	51

Schema	Type	Object	Columns
SOURCES	View	VW_ROUTING_MERCHANT_RULE	14
SOURCES	View	VW_ROUTING_MERCHANT_RULE_CONDITION	16
SOURCES	View	VW_ROUTING_MERCHANT_RULE_MEMBER	15
SOURCES	View	VW_ROUTING_MERCHANT_RULE_OPTION	8
SOURCES	View	VW_ROUTING_MERCHANT_RULE_OPTION_VALUES	8
SOURCES	View	VW_SMART_ROUTING_ATTEMPTS	40

## Schema: ABTESTING

Denormalized flat tables joining all Athena views — used for A/B testing analysis.

### ALL\_VIEWS\_FLAT / ALL\_VIEWS\_FLAT\_SAMPLE

Both tables share the same ~319 columns. ALL\_VIEWS\_FLAT\_SAMPLE is a sampled subset.

Key column groups:

Group	Columns
Identity	SOURCE_TABLE_NAME, CHANNEL_ID, CHANNEL_NAME, COMMERCE_ID, TARGET_USER_ID, USER_ACCOUNT_ID
Order	ORDER_ID, ORDER_DATE, ORDER_TIME, ORDER_STATUS, ORDER_TOKEN, COMMERCE_STORE_CODE
Order Indicators	ORDER_APPROVED_INDICATOR, ORDER_REJECTED_INDICATOR, ORDER_SEND_TO_SMART_ROUTING_INDICATOR, ORDER_RECOVERED_BY_SMART_ROUTING_INDICATOR, ORDER_APPROVED_BY_FIRST_PROCESSOR_INDICATOR, ORDER_DENIED_BY_FRAUD_INDICATOR, ORDER_DENIED_BY_PROCESSOR_INDICATOR
Order Amounts	ORDER_ORIGINAL_GMV_AMOUNT, ORDER_GMV_AMOUNT_USD, ORDER_AUTH_AMOUNT_USD, ORDER_CAPTURE_AMOUNT_USD, ORDER_TOTAL_AMOUNT_USD
Payment	PAYMENT_ID, PAYMENT_DATE, PAYMENT_STATUS, PROCESSOR_NAME, PAYMENT_AMOUNT_USD
Payment Attempt	PAYMENT_ATTEMPT_ID, PAYMENT_ATTEMPT_SEQUENCE_ORDER, PAYMENT_ATTEMPT_STATUS, PAYMENT_ATTEMPT_PROCESSOR_NAME, PAYMENT_ATTEMPT_ERROR_CODE, PAYMENT_ATTEMPT_APPROVED_INDICATOR
Event	EVENT_TYPE, EVENT_STATUS, EVENT_CREATED_AT, EVENT_ERROR_CODE, EVENT_ERROR_STANDARD_ERROR_CODE
Card	CARD_BIN, CARD_BRAND, CARD_LAST_FOUR, CARD_COUNTRY, BANK
Fraud	FRAUD_PROCESSOR_NAME, FRAUD_RISK_LEVEL, FRAUD_RISK_SCORE, FRAUD_STATUS

Group	Columns
User	TARGET_USER_BROWSER, TARGET_USER_OS, TARGET_USER_DEVICE, TARGET_USER_FRAUD_RATE_COHORT, TARGET_USER_TENURE_IN_DAYS
Routing Rules	RULE_ID, PROPERTIES_RULES_LABEL, MERCHANT_PAYMENT_PROCESSOR_NAME, COMMERCE_ROUTING_MERCHANT_RULE_VERSION_ID
Geo	LATITUDE, LONGITUDE, ORDER_CITY_NAME, ORDER_STATE_NAME, ORDER_COUNTRY_CODE, WEATHER_MAIN
Airline	PNR, FLIGHT_NUMBER, CARRIER_CODE, DESTINATION_IATA_CODE, TOTAL_PASSENGER

## Schema: SOURCES

Raw source views feeding the ABTESTING schema. Join key across most views: COMMERCE\_ID, ORDER\_ID, PAYMENT\_ID, PAYMENT\_ATTEMPT\_ID.

### VW\_ATHENA\_CHANNEL (2 cols)

Channel lookup table.

Column	Type
CHANNEL_ID	NUMBER(5,0)
CHANNEL_NAME	VARCHAR

### VW\_ATHENA\_ORDER (85 cols)

Core order-level data including status, amounts, payment method, behavioral signals, and geo.

Column	Type	Notes
COMMERCE_ID	VARCHAR	Merchant ID
TARGET_USER_ID	VARCHAR(32)	User ID
USER_ACCOUNT_ID	VARCHAR(32)	
CHANNEL_ID	NUMBER	
ORDER_ID	VARCHAR	Primary key
ORDER_DATE / ORDER_TIME	DATE / TIME	
ORDER_STATUS	VARCHAR	
ORDER_APPROVED_INDICATOR	BOOLEAN	
ORDER_SEND_TO_SMART_ROBOT_INDICATOR	BOOLEAN	Was smart routing used?
ORDER_RECOVERED_BY_SMART_ROUTING_INDICATOR	BOOLEAN	Did smart routing recover?
ORDER_DENIED_BY_FRAUD_INDICATOR	BOOLEAN	
ORDER_ORIGINAL_GMV_AMOUNT	DECIMAL	
/ _USD		

Column	Type	Notes
ORDER_AUTH_AMOUNT_USD	FLOAT	
ORDER_TOTAL_AMOUNT_USDFLOAT		
PAYMENT_CURRENCY	VARCHAR	
CARD_LAST_FOUR /	VARCHAR	
CARD_COUNTRY		
DEVICEID / REQUEST_IP	VARCHAR	
USER_IS_GUEST	BOOLEAN	
TOTAL_MINUTES_BROWSER	NUMBER	Behavioral feature
TOTAL_EVENTS_BEFORE_PURCHASE	NUMBER	Behavioral feature
TOTAL_NUM_SESSIONS	NUMBER	Behavioral feature
LATITUDE / LONGITUDE	NUMBER	
WEATHER_MAIN	VARCHAR	
ORDER_TOKEN	VARCHAR(100)	

### VW\_ATHENA\_ORDER\_COMPLEMENT (11 cols)

Fraud and 3DS signals at the order level.

Column	Type
COMMERCE_ID	VARCHAR
CHANNEL_ID	NUMBER
ORDER_ID	VARCHAR
FRAUD_PROCESSOR_NAME	VARCHAR
FRAUD_RISK_LEVEL	VARCHAR
FRAUD_RISK_SCORE	FLOAT
FRAUD_STATUS	VARCHAR
SITEDOMAIN	VARCHAR
WEBSITENAME	VARCHAR
CHALLENGE_3DS_INDICATOR	BOOLEAN
CHALLENGE_3DS_STATUS	VARCHAR

### VW\_ATHENA\_PAYMENT (46 cols)

Payment-level data: processor, card info, error codes, routing rules.

Column	Type	Notes
PAYMENT_ID	VARCHAR(250)	Primary key
ORDER_ID	VARCHAR	FK → Order
PAYMENT_DATE /	DATE / TIME	Note: typo in source (PATMENT)
PATMENT_TIME		
PAYMENT_STATUS	VARCHAR	
PROCESSOR_NAME	VARCHAR	
CARD_BIN / CARD_BRAND /	VARCHAR	
BANK		
NUM_ATTEMPTS_ORDER	NUMBER	
NUM_ATTEMPTS_SMART_ROUTING	NUMBER	

Column	Type	Notes
ERROR_MESSAGE / ERROR_CODE / ERROR_CATEGORY	VARCHAR	
PAYMENT_AMOUNT_USD	FLOAT	
HARD_SOFT	VARCHAR	Hard vs soft decline
RULE_ID	VARCHAR	Routing rule applied
PROPERTIES_RULES_LABEL	VARCHAR	
MERCHANT_PAYMENT_PROCESSOR_NAME	VARCHAR	
MERCHANT_PAYMENT_PROCESSOR_CODE	VARCHAR	
PREVIOUS_ORDER_ERROR_CODE	VARCHAR	Prior attempt context
PREVIOUS_ORDER_PROCESSOR_NAME	VARCHAR	
AUTHORIZATION_CODE	VARCHAR	
COMMERCE_ROUTING_MERCHANT_RULE_VERSION_ID	VARCHAR(36)	

### **VW\_ATHENA\_PAYMENT\_ATTEMPT (39 cols)**

Individual attempt-level data — key table for retry optimization.

Column	Type	Notes
PAYMENT_ATTEMPT_ID	VARCHAR(32)	Primary key
PAYMENT_ID	VARCHAR(250)	FK → Payment
ORDER_ID	VARCHAR	FK → Order
PAYMENT_ATTEMPT_SEQUENCE_ORDER	NUMBER	Attempt number
PAYMENT_LAST_ATTEMPT_INDICATOR	BOOLEAN	
PAYMENT_ATTEMPT_STATUS	VARCHAR	
PAYMENT_ATTEMPT_PROCESSOR_NAME	VARCHAR	Which processor used
PAYMENT_ATTEMPT_PROCESSOR_CODE	VARCHAR	
PAYMENT_ATTEMPT_ERROR_CODE	VARCHAR	
PAYMENT_ATTEMPT_ERROR_CATEGORY	VARCHAR	
PAYMENT_ATTEMPT_HARD_SOFT_TYPE	VARCHAR	
PAYMENT_ATTEMPT_RETRY_INDICATOR	VARCHAR	
PAYMENT_ATTEMPT_APPROVED_INDICATOR	BOOLEAN	
PAYMENT_ATTEMPT_ACCEPTANCE_RATE_INDICATOR	BOOLEAN	
PAYMENT_ATTEMPT_AMOUNT_USD	FLOAT	
PAYMENT_ATTEMPT_CARD_BRAND / CARD_BIN / BANK	VARCHAR	
DENIED_BY_PSP_OR_FRAUD	VARCHAR	
DYNAMIC_ROUTING_DETAIL	VARIANT	JSON routing detail
RULE_ID	VARCHAR	
MERCHANT_PAYMENT_PROCESSOR_ID	VARCHAR	
COMMERCE_ROUTING_MERCHANT_RULE_VERSION_ID	VARCHAR(36)	

### **VW\_ATHENA\_PAYMENT\_EVENTS (28 cols)**

Event stream for each payment attempt — captures state transitions.

Column	Type	Notes
PAYMENT_ATTEMPT_ID	VARCHAR(32)	FK → Attempt
PAYMENT_ATTEMP_EVENT_INDEX	NUMBER	Event order within attempt
EVENT_TYPE	VARCHAR	
EVENT_STATUS	VARCHAR	
EVENT_CREATED_AT	TIMESTAMP_NTZ	
EVENT_ORIGINAL_TOTAL_AMOUNT	NUMBER	
EVENT_ERROR_CODE	VARCHAR	
EVENT_ERROR_STANDARD_ERROR_CODE	VARCHAR	Normalized error code
EVENT_ERROR_STANDARD_ERROR_MESSAGE	VARCHAR	
EVENT_ERROR_DEUNA	VARCHAR	Deuna-specific error
EVENT_REFUND_VOID_REASON	VARCHAR	

---

### VW\_ATHENA\_TARGET\_USER (40 cols)

User profile and behavioral signals.

Column	Type	Notes
TARGET_USER_ID	VARCHAR(32)	Primary key
COMMERCE_ID	VARCHAR	
TARGET_USER_BROWSER / OS / DEVICE / EQUIPMENT	VARCHAR	Device fingerprint
TARGET_USER_FAVORITE_PAYMENTMETHOD	VARCHAR	
TARGET_USER_FAVORITE_CARD / BANK	VARCHAR	
TARGET_USER_ACCESS_COUNT	VARCHAR	
TARGET_USER_FIRST_PURCHASE_DATE	VARCHAR	
TARGET_USER_LAST_PURCHASE_DATE	VARCHAR	
TARGET_USER_USER_FRAUD_NUMBER	VARCHAR	
TARGET_USER_FRAUD_RATE	VARCHAR	
TARGET_USER_TENURE_IN_DAYS	NUMBER	
TARGET_USER_FREQUENCY_VAULT	NUMBER	RFM frequency
TARGET_USER_RECENCY_VAULT	NUMBER	RFM recency
TARGET_USER_MONETARY_VAULT	NUMBER	RFM monetary
TARGET_USER_NUM_ORDERS	NUMBER	

---

### VW\_ORDER\_AIRLINE\_DETAIL\_ALL (29 cols)

Airline booking details (Volaris-specific). Joined via ORDER\_ID.

Key fields: PNR, BOOKING\_IS\_INTERNATIONAL, NAVITAIRE\_CARRIER\_CODE, TOTAL\_FLIGHT\_NUMBERS, TOTAL\_PASSENGER, ROUND\_FLIGHT\_IND

---

### VW\_ORDER\_AIRLINE\_INFORMATION\_DETAIL\_ALL (51 cols)

Flight + passenger details per order. Joined via ORDER\_ID.

Key fields: FLIGHT\_NUMBER, CARRIER\_CODE, ORIGIN\_IATA\_CODE, DESTINATION\_IATA\_CODE, PASSENGER\_TYPE, PASSENGER\_FREQUENT\_FLYER\_CODE, SERVICE\_CLASS, TOTAL\_AMOUNT\_USD

---

### **VW\_ROUTING\_MERCHANT\_RULE (14 cols)**

Merchant routing rules configuration.

Column	Type
ID	NUMBER
MERCHANT_ID	VARCHAR
LABEL	VARCHAR
STATUS	VARCHAR
PRIORITY	NUMBER
TRIGGER_	VARCHAR
IS_DEFAULT	VARCHAR
IGNORE_NEXT_RULES	VARCHAR
MERCHANT_RULE_PARENT	NUMBER
CREATED_AT / UPDATED_AT / DELETED_AT	TIMESTAMP

---

### **VW\_ROUTING\_MERCHANT\_RULE\_CONDITION (16 cols)**

Conditions that trigger routing rules.

Key fields: MERCHANT\_RULE\_ID, MERCHANT\_RULE\_OPTION\_ID, OPERAND, OPERAND\_FIELD\_TO\_EVALUATE, OPERATOR, METADATA\_FIELD\_NAME

---

### **VW\_ROUTING\_MERCHANT\_RULE\_MEMBER (15 cols)**

Processors assigned to routing rules.

Key fields: MERCHANT\_RULE\_ID, PAYMENT\_PROCESSOR\_ID, MERCHANT\_PAYMENT\_PROCESSOR\_ID, STRATEGY, SORT, SHADOW\_MODE, CAPABILITIES, FRAUD\_PROCESSOR

---

### **VW\_ROUTING\_MERCHANT\_RULE\_OPTION (8 cols)**

Available routing rule option types.

Key fields: ID, LABEL, OPERATORS\_AVAILABLE

---

### **VW\_ROUTING\_MERCHANT\_RULE\_OPTION\_VALUES (8 cols)**

Allowed values for routing rule options.

Key fields: ID, MERCHANT\_RULE\_OPTION, VALUE\_

---

### **VW\_SMART\_ROUTING\_ATTEMPTS (40 cols)**

Event stream from the smart routing engine — per-attempt routing decisions.

Column	Type	Notes
ATTEMPT_ID	NUMBER	
PROPERTIES_TRANSACTION_ID	VARCHAR	Links to payment
PROPERTIES_MERCHANT_ID	VARCHAR	
PROPERTIES_ALGORITHM_TYPE	VARCHAR	Which routing algorithm
RULE_ID	NUMBER	Rule applied
PROPERTIES_GATEWAY	BOOLEAN	
PROPERTIES_PAYMENT_PROCESSOR_ID	VARCHAR	
PROPERTIES_PROCESSOR_CODE	VARCHAR	
PROPERTIES_RESULT_STATUS	VARCHAR	
PROPERTIES_RESULT_ERROR_MESSAGE	VARCHAR	
PROPERTIES_RESULT_PROCESSOR_DATE	VARCHAR	Latency signal
PROPERTIES_RESULT_SKIPPED_REASON	VARCHAR	Why processor was skipped
PROPERTIES_FRANCHISE / COUNTRY / CITY / STATE	VARCHAR	
PROPERTIES_ORDER_VALUE	NUMBER	
ORIGINAL_TIMESTAMP / RECEIVED_AT	TIMESTAMP	

## Key Relationships

### VW\_ATHENA\_CHANNEL

CHANNEL\_ID → VW\_ATHENA\_ORDER

### VW\_ATHENA\_ORDER

ORDER\_ID → VW\_ATHENA\_ORDER\_COMPLEMENT

ORDER\_ID → VW\_ATHENA\_PAYMENT

ORDER\_ID → VW\_ORDER\_AIRLINE\_DETAIL\_ALL

ORDER\_ID → VW\_ORDER\_AIRLINE\_INFORMATION\_DETAIL\_ALL

TARGET\_USER\_ID → VW\_ATHENA\_TARGET\_USER

### VW\_ATHENA\_PAYMENT

PAYMENT\_ID → VW\_ATHENA\_PAYMENT\_ATTEMPT

RULE\_ID → VW\_ROUTING\_MERCHANT\_RULE

### VW\_ATHENA\_PAYMENT\_ATTEMPT

PAYMENT\_ATTEMPT\_ID → VW\_ATHENA\_PAYMENT\_EVENTS

PROPERTIES\_TRANSACTION\_ID → VW\_SMART\_ROUTING\_ATTEMPTS

### VW\_ROUTING\_MERCHANT\_RULE

ID → VW\_ROUTING\_MERCHANT\_RULE\_CONDITION

ID → VW\_ROUTING\_MERCHANT\_RULE\_MEMBER

### ABTESTING.ALL\_VIEWS\_FLAT

Denormalized join of all above views