

Gold Layer Rules Extraction

Entity, Attribute, and Relationship Specification

Entity Name	Attributes	Relationships	Justification
AccountPacketFact	packetid (string), clientid (string), custodianid (string), submissiontimestamp (timestamp), validatedstatus (string), packetstatus (string), error_flag (bool), ... (flattened, supporting fields)	FK to ClientDimension (clientid), FK to CustodianDimension (custodianid), 1:N with WorkflowStateFact, 1:N with SignatureEnvelopeFact, 1:N with WritebackStatusFact, 1:N with AuditEventFact (packetid), reference to EnvelopeDimension via associated envelope(s)	Represents the final, validated onboarding packet for each client/account—fulfilling the use case of export-ready, consumption-focused outputs for the agentic workflow; all attributes ensure sufficient context, validation, lineage, and status; relationships bind packet to workflow events, envelopes, audit, writeback, and reference dimensions, supporting traceability, exception handling, and submission workflows, tightly aligned to business and operational compliance requirements.
WorkflowStateFact	workfloweventid (string), packetid (string), statetransition (string), exceptiontype (string), reviewerid (string), eventtimestamp (timestamp)	FK to AccountPacketFact (packetid)	Models the progression and exception state of each onboarding packet, enabling near-real-time workflow coordination and escalation handling; attributes capture transition types, exceptions, human review intervention, and event audit—critical for exception resolution, compliance traceability, and synchronization with operational steps for both automation and human-in-the-loop decision making.
SignatureEnvelopeFact	envelopeid (string), packetid (string), envelopestatus (string), doclink (string)	FK to AccountPacketFact (packetid), FK to Envelope_Dimension (envelopeid)	Captures the envelope/form artifact representing electronic signatures for account packets; essential for digital submissions, and for tracking status throughout the signature and routing process; attributes structure envelope status and linkage for completeness, supporting the legally binding and compliance aspect of account opening with full traceability of signed forms.
WritebackStatusFact	writebackid (string), packetid (string), statuscode (string), synctimestamp (timestamp)	FK to AccountPacketFact (packetid)	Records each required status update and write-back event (to Salesforce, Edge, custodian, etc.), ensuring lifecycle state is synchronized across platforms; attributes ensure alignment with state transitions, operational hand-off, and system integration—the core enforcement point for workflow completion and traceability.
AuditEventFact	auditeventid (string), packetid (string), eventtype (string), eventtimestamp (timestamp), actorid (string)	FK to AccountPacketFact (packetid, optional)	Immutable log of workflow, decision, and state events, providing a complete audit record for each step; attributes and relationships enforce linkage between operational records and compliance demands (including actor attribution, event type, and time), fully supporting subatomic trace/replay and compliance validation/response.
Client_Dimension	clientid (string), clientname (string), householdid (string), ...	Referenced by AccountPacketFact (client_id), WorkflowStateFact, etc.	Reference/master data for clients, providing identity resolution, de-duplication, and join context for packet facts; attributes are necessary to ensure contextual linkage for all client-facing outputs and regulatory alignment.
Custodian_Dimension	custodianid (string), custodianname (string), formid (string), ...	Referenced by AccountPacketFact (custodian_id), SignatureEnvelopeFact	Reference/master data for custodians and form definitions, supporting packet assembly and ensuring correct routing/validation against custodian-specific rules; required for enforcing business logic and mapping.
Envelope_Dimension	envelopeid (string), templatename (string), doctype (string), ...	Referenced by SignatureEnvelopeFact (envelopeid)	Reference/master metadata for envelope and artifact templates, enabling linkage for legal/compliance context and envelope-based operational artifacts; ensures traceability and mapping between facts and e-signature artifacts in the workflow.

Business Rules

Rule Description	Source Dataset	Target Dataset	Priority	Notes
Only fully validated, complete onboarding packets are included in AccountPacketFact	IntakeFormNormalized, Document_Metadata, CustodianFormIndex	AccountPacketFact	High	Ensures only compliant, consumption-ready onboarding packets reach Gold; supports regulatory, operational, and BI objectives
		AccountPacketFact	High	

Rule Description	Source Dataset	Target Dataset	Priority	Notes
Client intake forms are associated to unique clients/households via clientid, householdid	IntakeFormNormalized, Client_Dimension			Guarantees packet joins are accurate; enables client-level reporting, SLA, compliance
Each packet must be mapped to a valid custodian and correct account type	CustodianFormIndex	AccountPacketFact	High	Ensures that downstream workflow/packet assembly meets custodian-specific rules; supports form population/audit
Workflow state changes are only tracked for validated packets	Workflow State Table, IntakeFormNormalized	WorkflowStateFact	High	Embeds QA/SLA into event logging; prevents orphaned workflow states
Human-in-the-loop actions (review, approval, exception) must be explicitly logged and linked	Workflow State Table, AuditEventLog	WorkflowStateFact, AuditEventFact	High	Supports compliance (audit trail, reviewer attribution, exception handling)
Envelopes for e-signature are only generated for packets requiring electronic signatures	EnvelopeMetadata	SignatureEnvelopeFact	Medium	Limits envelope entries to required packets/events; ensures artifact mapping per business workflow
Write-back events/states must only occur for packets in an "approved" or "complete" status	Workflow State Table, IntakeFormNormalized	WritebackStatusFact	High	Ensures consistent synchronization with source-of-truth systems (Salesforce, Edge, custodians); prevents erroneous system updates
Audit events must be immutable, timestamped, and include context (actor, eventtype, packet)	AuditEventLog	AuditEventFact	High	Core compliance/certification requirement; allows event replay and regulatory traceability
Only packets with all required supporting documents and field completeness are processed	IntakeFormNormalized, Document_Metadata	AccountPacketFact	High	Data quality gate; ensures end-to-end traceability and readiness for custodian submission
Packets with validation errors are flagged and not advanced to write-back or downstream submission	IntakeFormNormalized, Workflow State Table	AccountPacketFact, WritebackStatusFact	High	Operational/business guardrail; errorflag and packetstatus control process continuation
Data lineage from intake to Gold Layer must be preserved for every Gold entity	N/A	All Gold entities	High	Data lineage requirement for audit, including source references in facts/dims

Data Transformation Rules

Rule Description	Source Field	Target Field	Transformation Type	Notes
Map normalized client intake form fields to fact table columns in AccountPacketFact	IntakeFormNormalized.*	AccountPacketFact.*	Field mapping, Flattening	Includes flattening of formfieldsjson and explicit mapping of validatedstatus, packetstatus, etc.
Join client reference data on client_id; enrich AccountPacketFact with client attributes	IntakeFormNormalized.clientid, ClientDimension.clientid	AccountPacketFact.client_id, AccountPacketFact.clientname, etc.	Join	Supports dimensional lookups/ denormalization for Gold consumption
Map custodian/form metadata from CustodianFormIndex into AccountPacketFact	CustodianFormIndex.*	AccountPacketFact.custodianid, AccountPacketFact.formid	Join	Ensures downstream workflow has form/ custodian context
Aggregate and log workflow state transitions for each packet event	Workflow State Table.eventid, .state	WorkflowStateFact.workfloweventid, WorkflowStateFact.statetransition	Aggregation/Join	Each workflow transition is an event linked to one packet
Filter for only packets with validated_status = 'valid' for inclusion in downstream facts	IntakeFormNormalized.validation_status	AccountPacketFact	Filtering	Prevents inclusion of incomplete, errored, or invalid packets
Derive error_flag based on failed validations	IntakeFormNormalized.validation_status/ errors	AccountPacketFact.error_flag	Calculation/ Derivation	Simple binary/ indicator calculation from validation results
Link envelopes to packets using packetid in SignatureEnvelopeFact	EnvelopeMetadata.packetid	SignatureEnvelopeFact.packetid	Join	Maintains 1:N linkage as per e-signature requirements
		WritebackStatusFact	Filtering/Join	

Rule Description	Source Field	Target Field	Transformation Type	Notes
Associate each write-back event with only packets in 'approved' or 'complete' state	Workflow State Table.status, IntakeFormNormalized.packet_status			Synchronizes write-back status only for qualified packets
Join audit events (actor, eventtype, eventtimestamp, packet reference) for all packet steps	AuditEventLog.*, IntakeFormNormalized.form_id	AuditEventFact.*	Join/Projection	Ensures complete workflow replay and compliance mapping
Enrich each fact with dimension references (client/custodian/envelope)	ClientDimension, CustodianDimension, Envelope_Dimension	All facts	Denormalization/Join	Star schema requirement—facilitates downstream reporting/consumption
Include only data from approved NorthRock IT environments	N/A	All Gold entities	Filtering	Security/compliance filter: No extraneous or external data permitted
Track state, status, and artifact lineage from Silver to all Gold Layer entities	Ingestion/source fields, event logs	All facts/dims	Metadata propagation	Required for trace, replay, and audit spanning intake, workflow, and output artifacts
Flatten multi-source document associations for packet output	Document_Metadata, FormDocumentAssoc	AccountPacketFact	Flatten/Join	Ensures all supporting docs are mapped to the final output packet