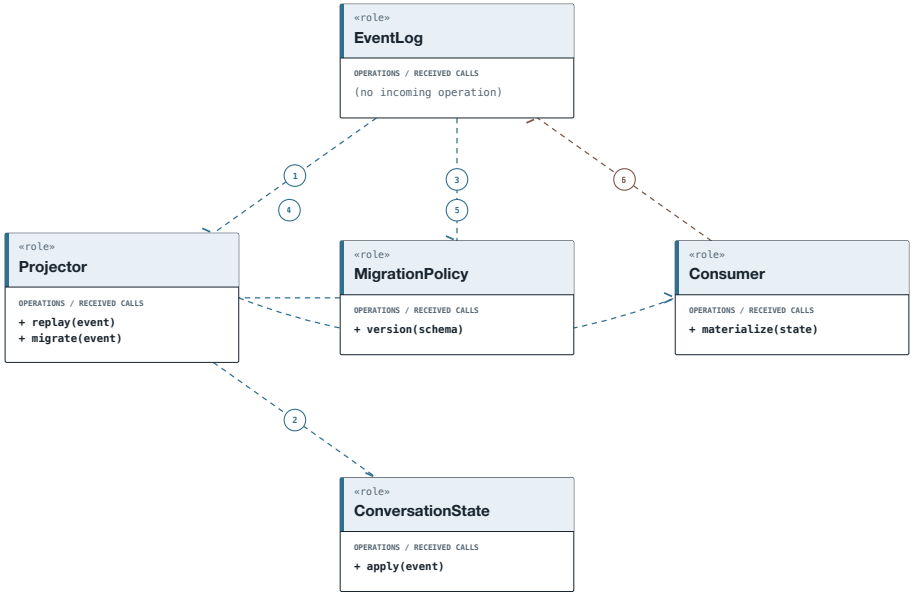
P14 Event-sourced conversation engine

Primitive / UML CLASS VIEW / ANALYTICAL MODEL

Reconstruct state from recorded events.

UML CLASS VIEW

dashed arrow: call dependency · brown: return/failure · analytical, not an observed trace



POINTCUT / PATTERN INTERFACE

CONTEXT	Conversation state is derived from recorded events.
TRIGGER	A new event is appended or history is loaded.
STRUCTURE	Event schema, sequence or identity rules, and a projector.
EFFECT	The current view is reproducible from the event history.

CONTRACT / REQUIRED BEHAVIOR

REQUIRES	Events are immutable enough to replay and schema versions are identifiable.
ENSURES	Applying the same ordered events yields the same semantic state.
INVARIANT	Projection never mutates historical event identity.
VIOLATION	Missing, incompatible, or corrupt events produce recoverable migration or rejection.

RELATIONSHIPS / ANALYTICAL CALLS

number · caller → callee · message

1 EventLog → Projector replay(event)
2 Projector → ConversationState apply(event)
3 EventLog → MigrationPolicy version(schema)
4 MigrationPolicy → Projector migrate(event)
5 Projector → Consumer materialize(state)
6 Consumer ↩ EventLog resume(cursor)

VARIATION / TEST / NEGATIVE CONTROL

VARIATION	Event type unions, snapshots, migrations, local or remote persistence.
TEST_OBLIGATION	Test full replay, snapshot-plus-tail replay, schema evolution, and partial history.
NEGATIVE_CONTROL	A mutable message array without projection semantics is insufficient.