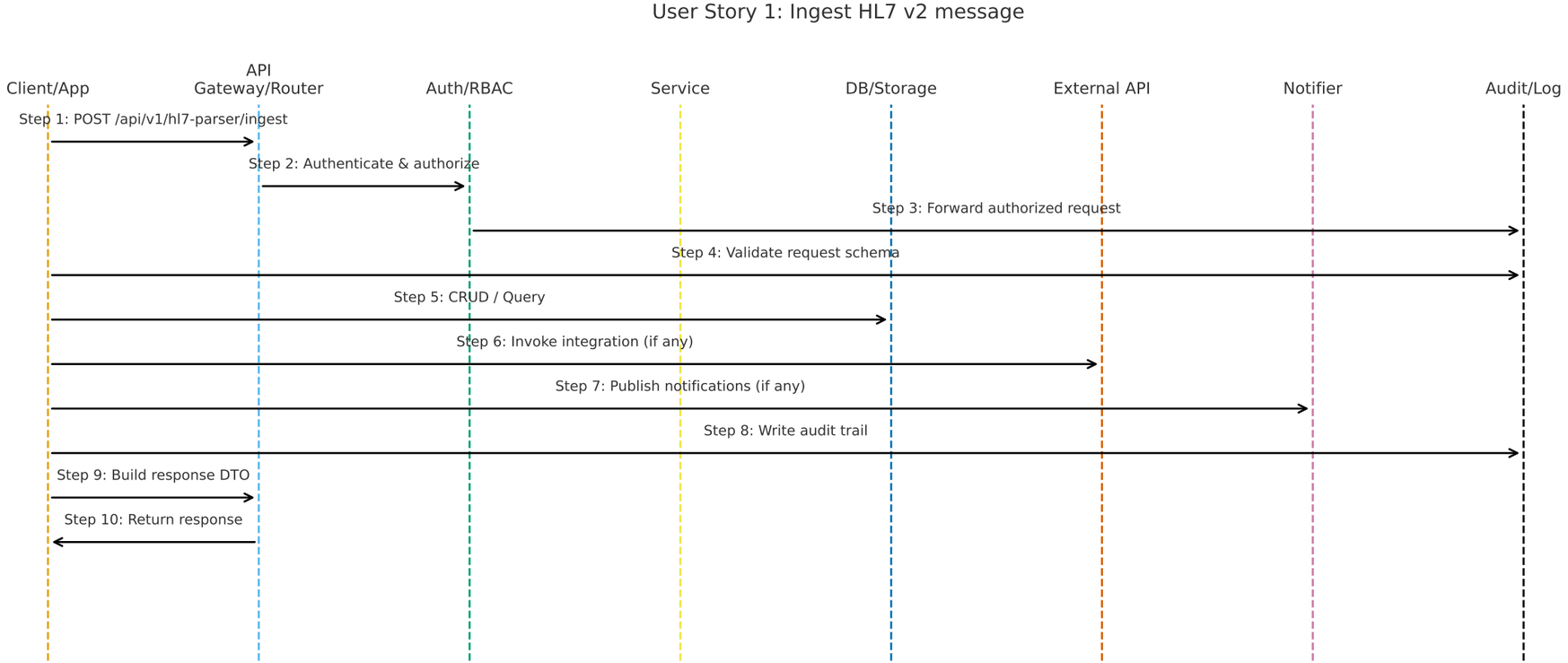
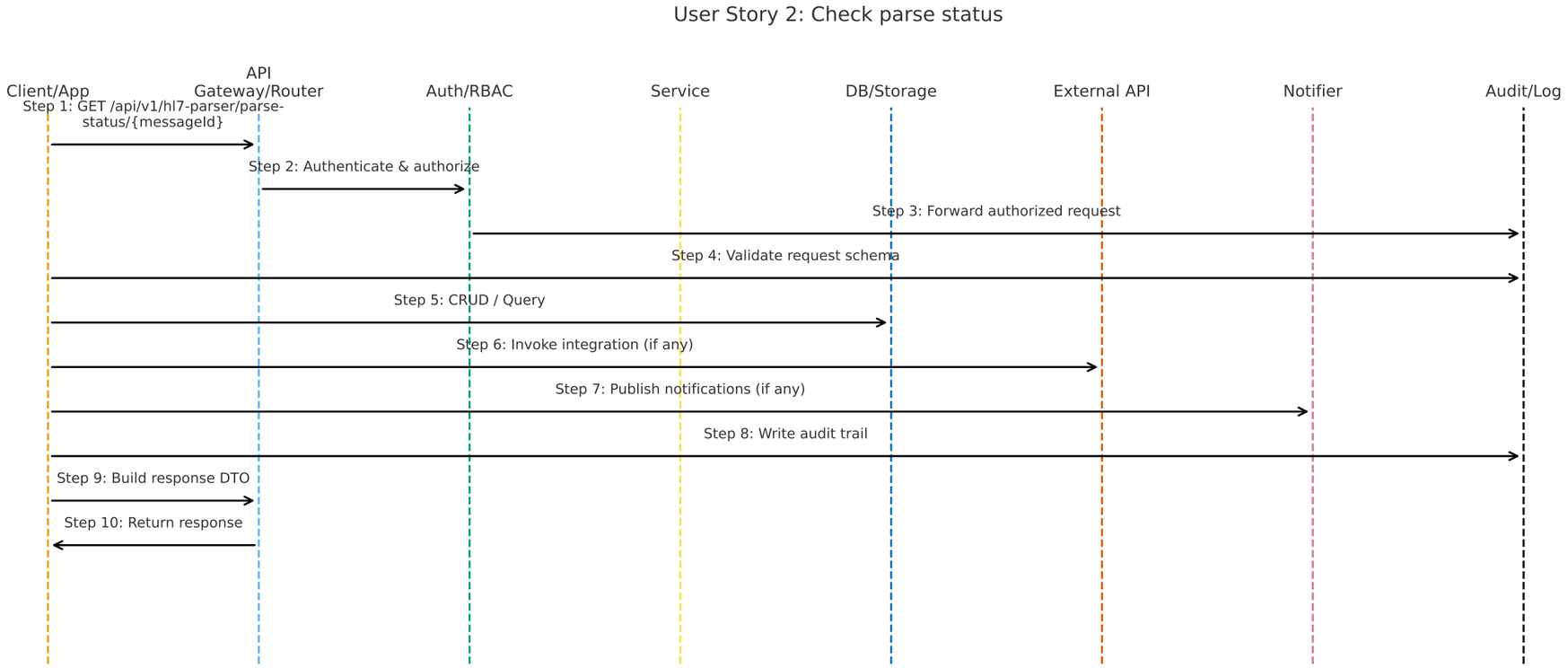
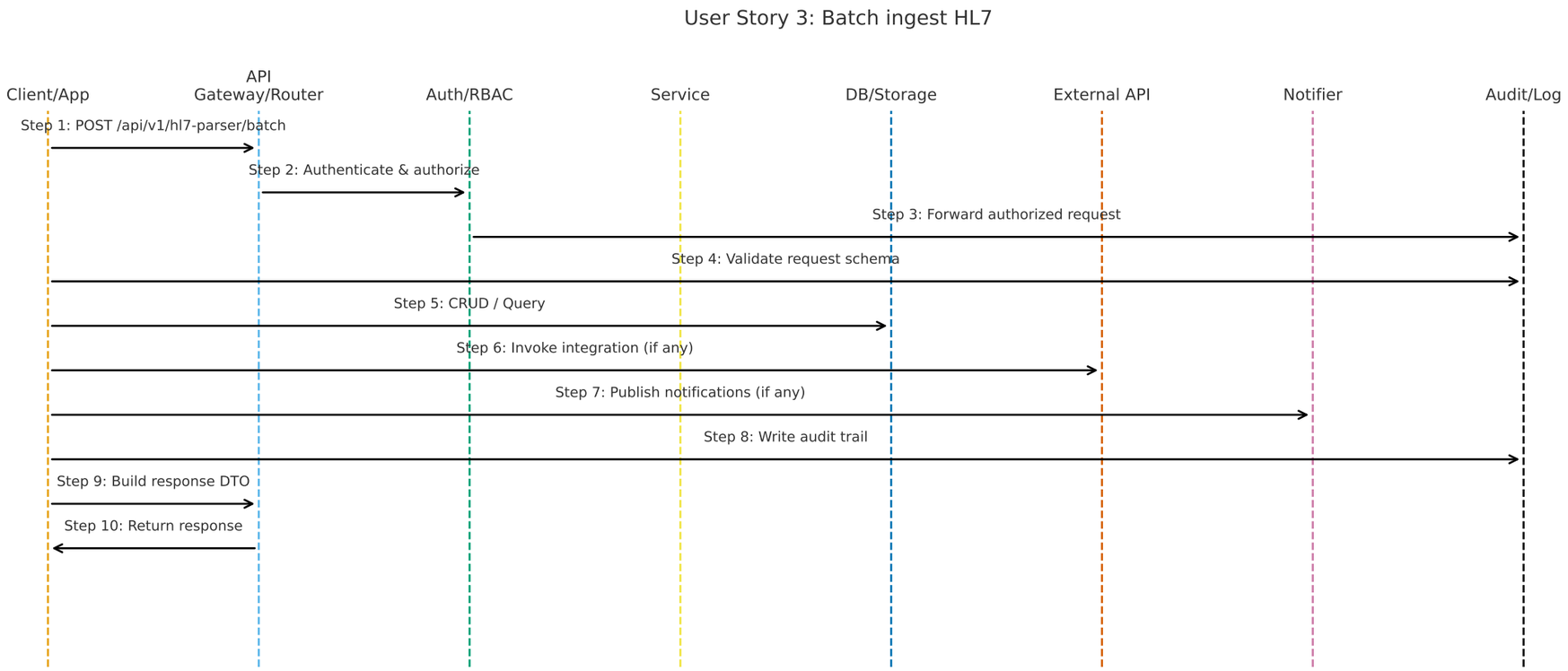
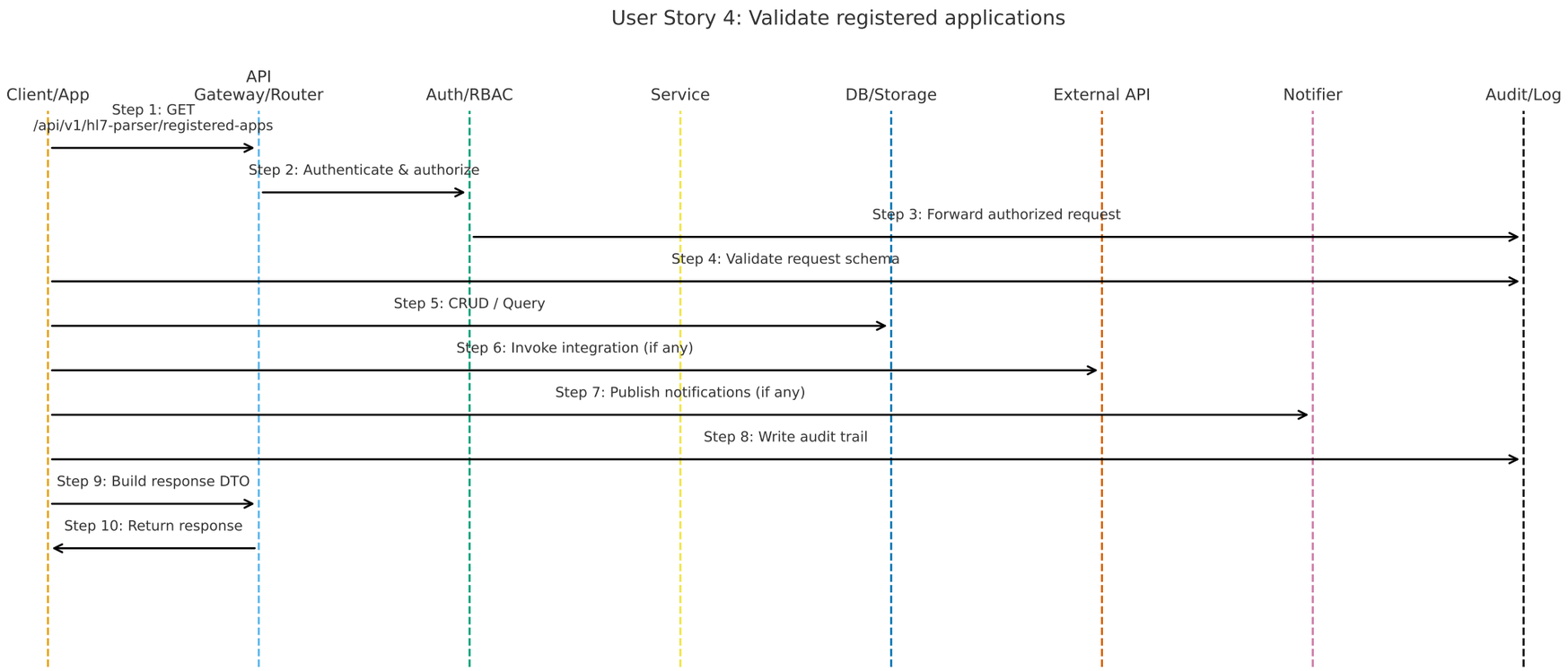
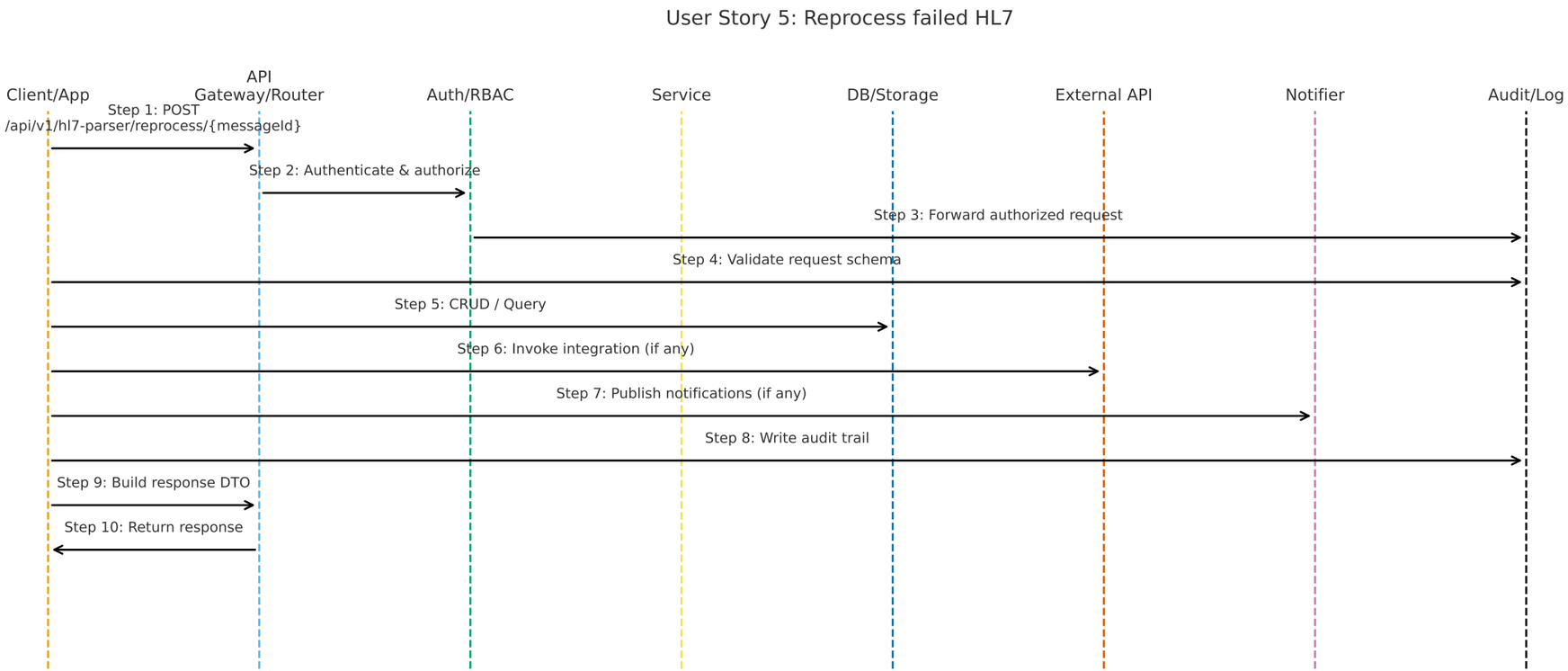
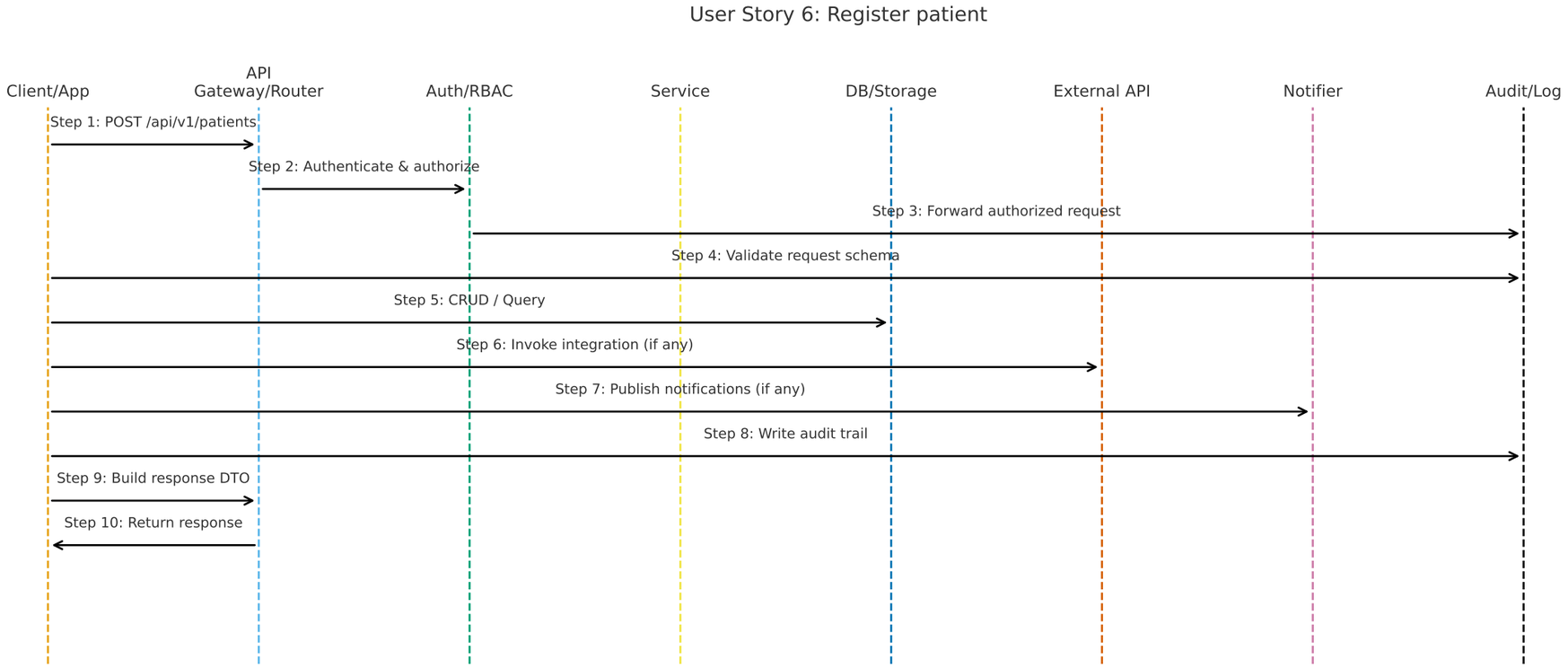

User Story 1: Ingest HL7 v2 message
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/hl7-parser/ingest
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

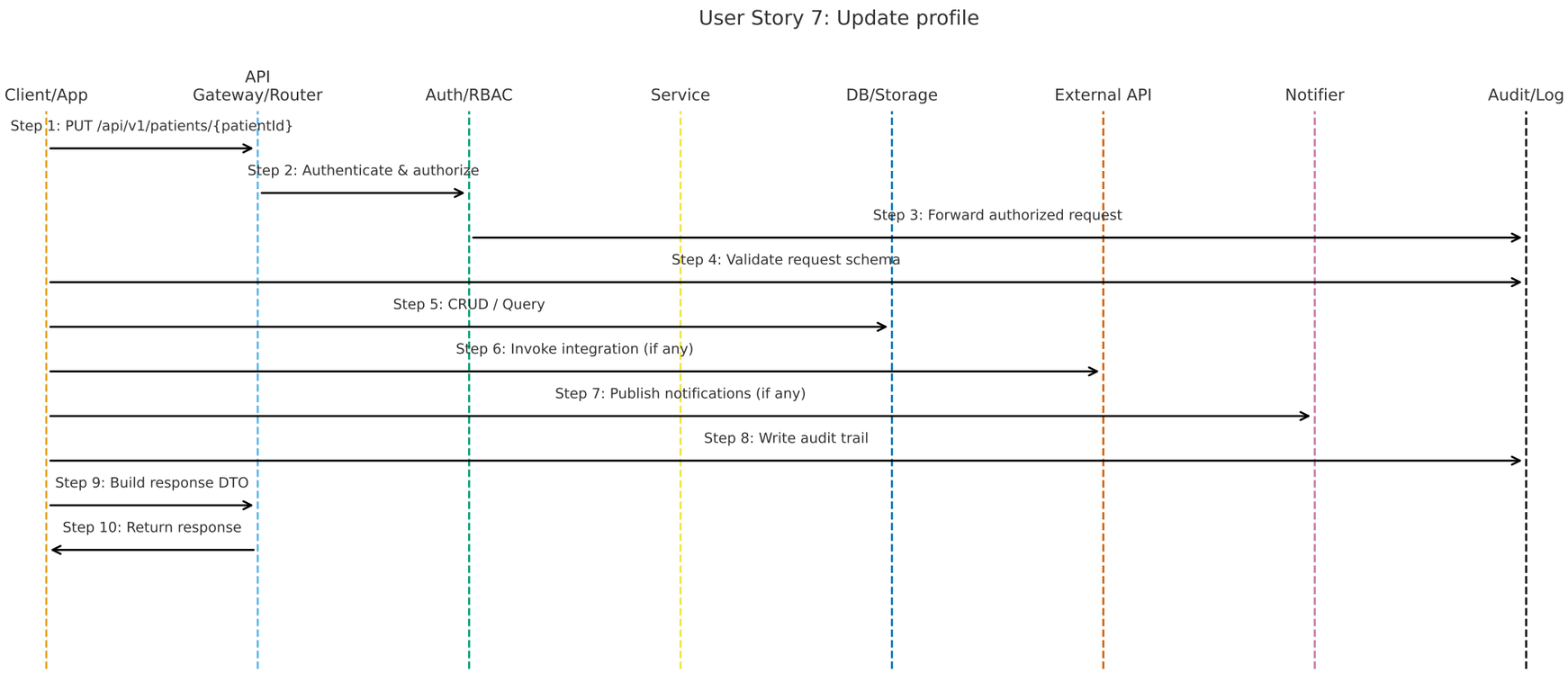

User Story 2: Check parse status
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/hl7-parser/parse-status/{messageId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

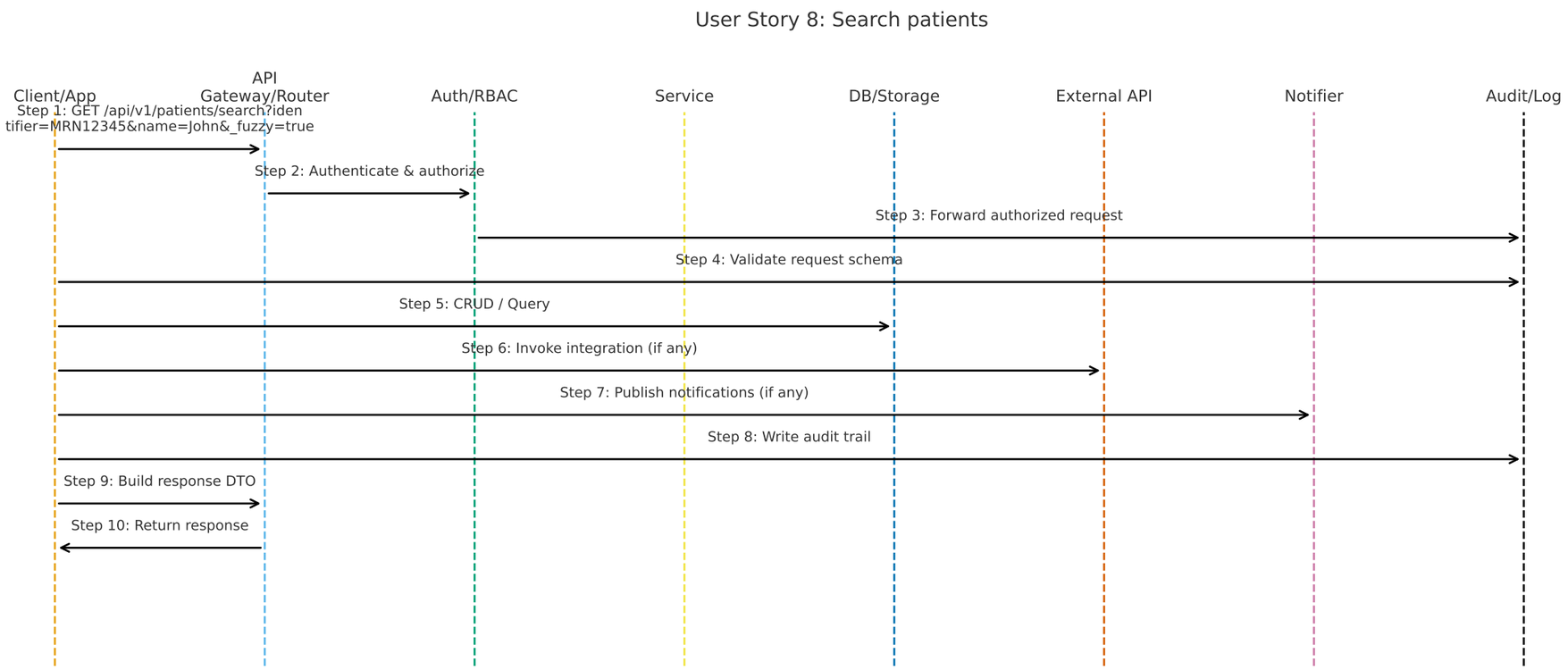

User Story 3: Batch ingest HL7
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/hl7-parser/batch
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

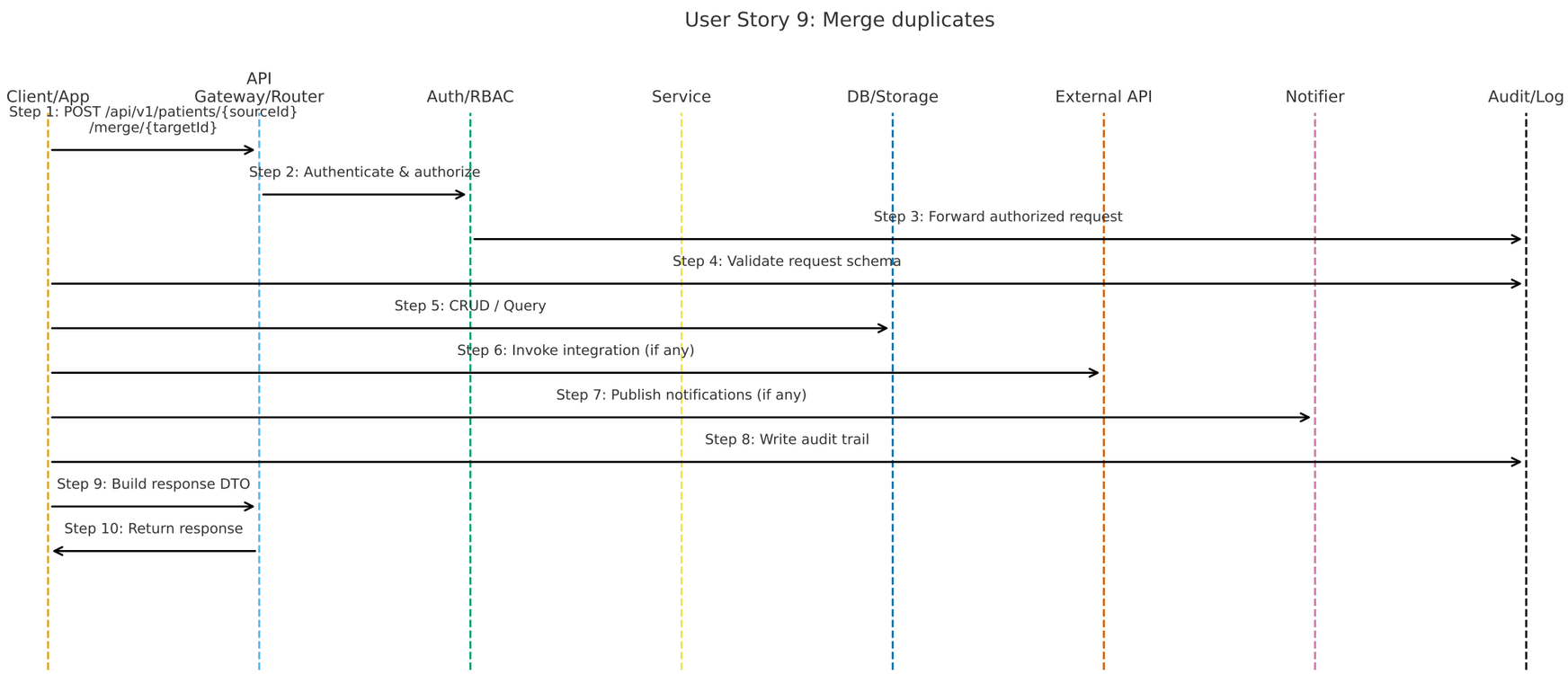

User Story 4: Validate registered applications
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/hl7-parser/registered-apps
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

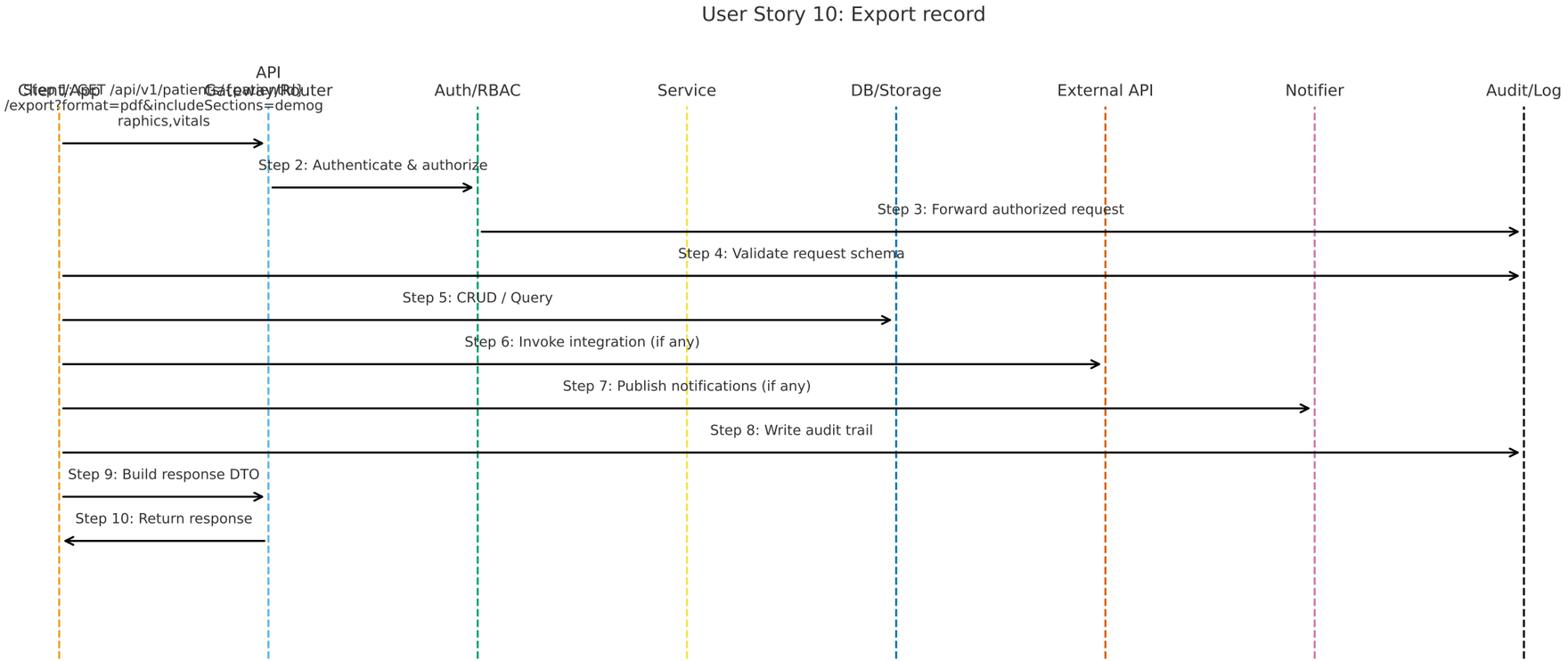

User Story 5: Reprocess failed HL7
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/hl7-parser/reprocess/{messageId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

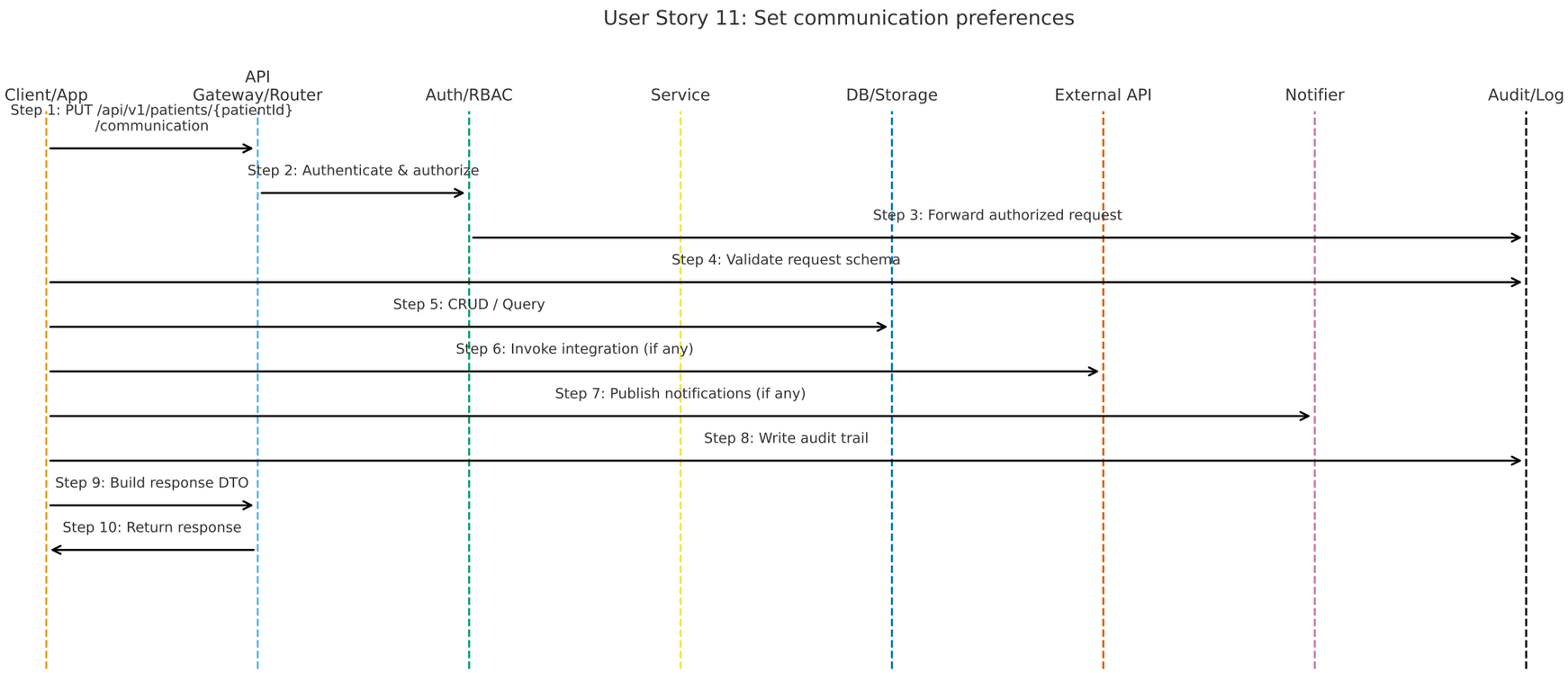

User Story 6: Register patient
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/patients
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

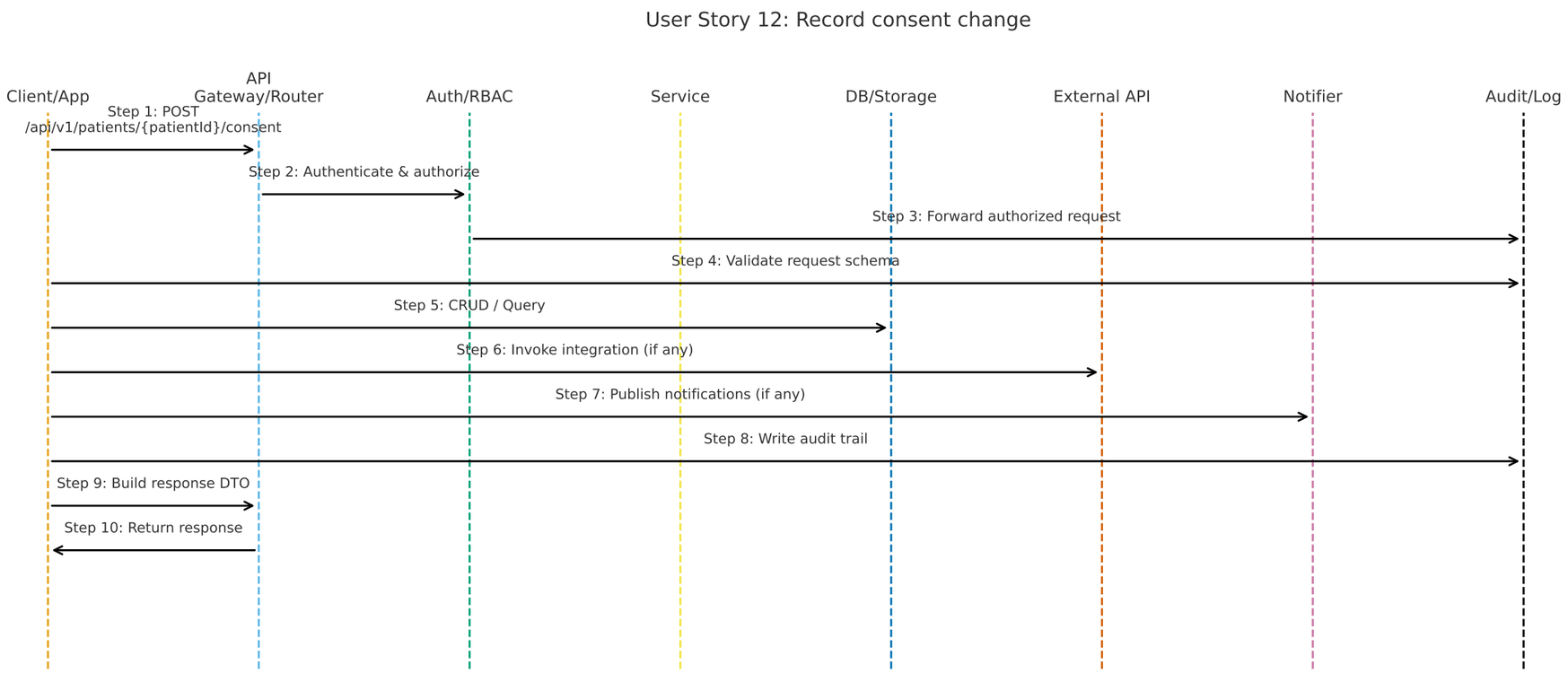

User Story 7: Update profile
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: PUT /api/v1/patients/{patientId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

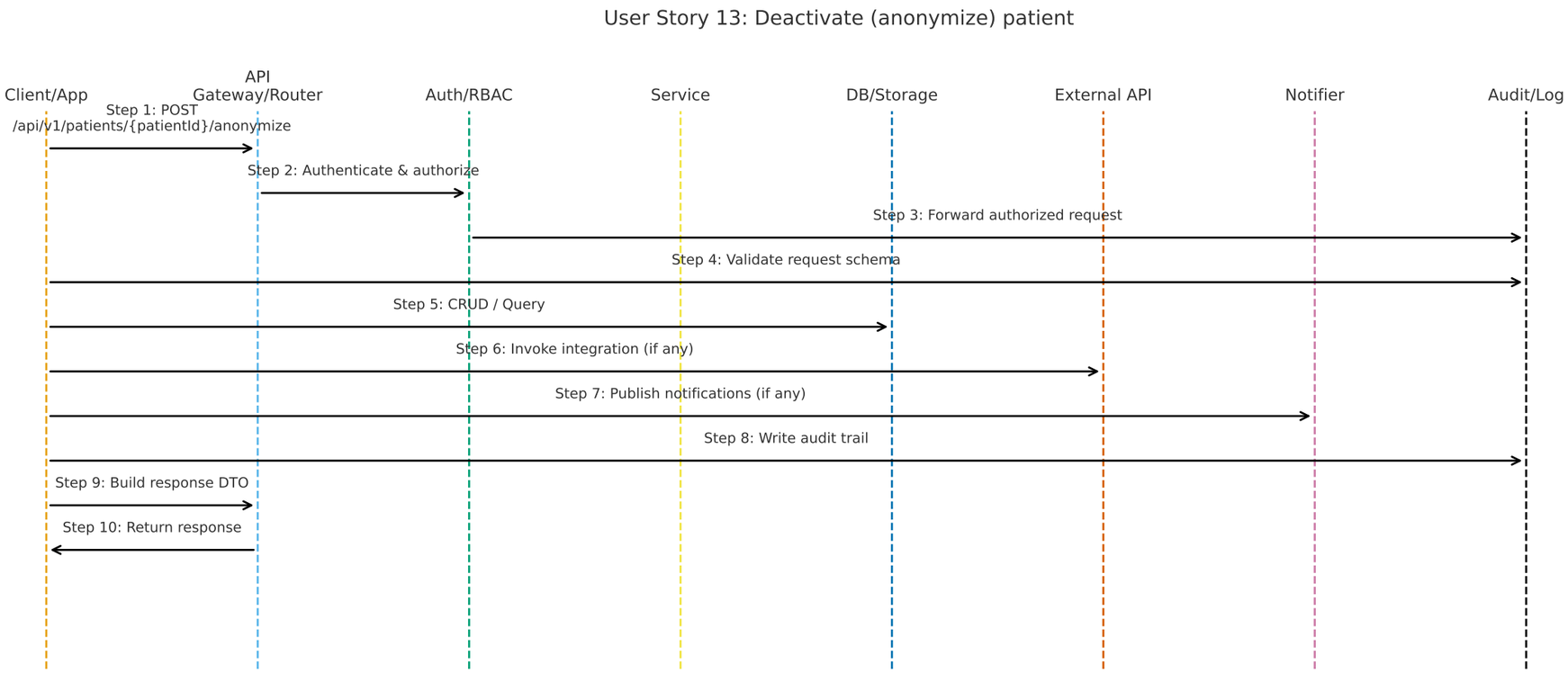

User Story 8: Search patients
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/patients/search?identifier=MRN12345&name=John&_fuzzy=true
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

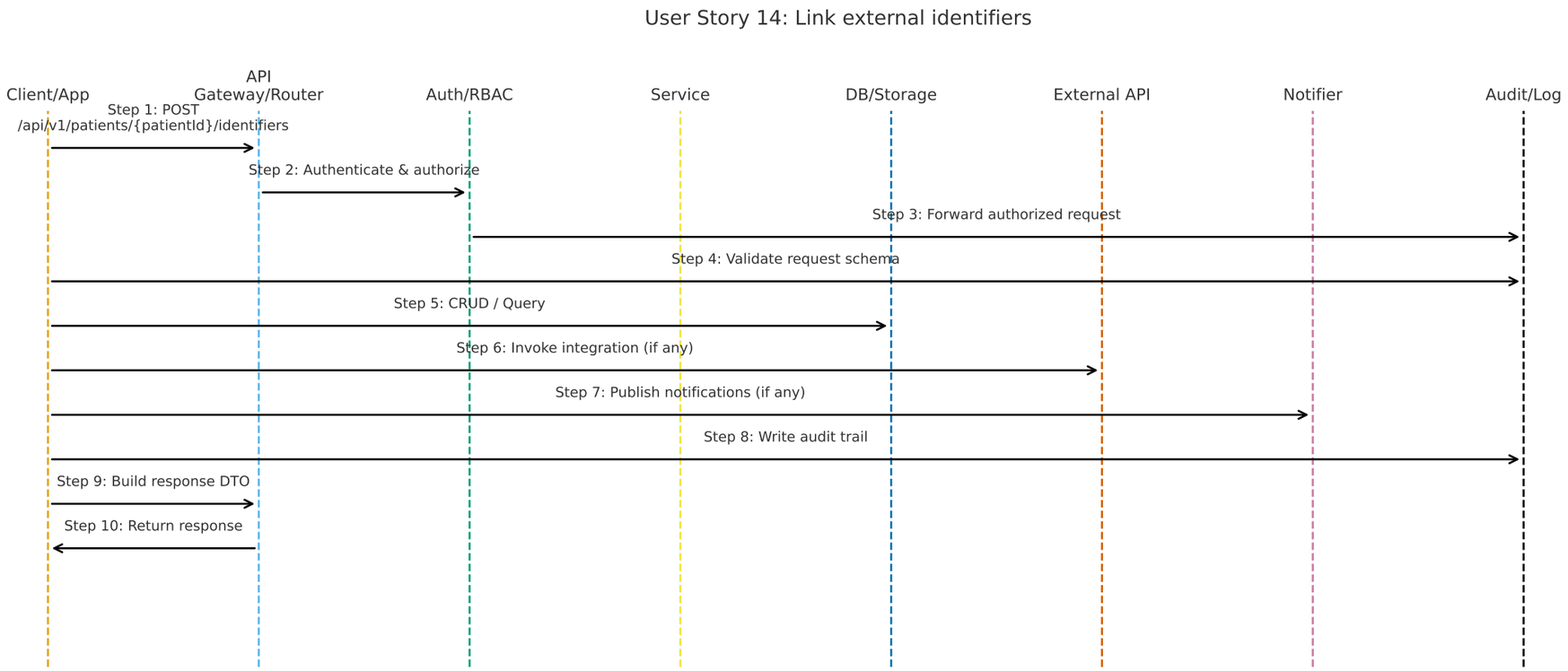

User Story 9: Merge duplicates
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/patients/{sourceId} /merge/{targetId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

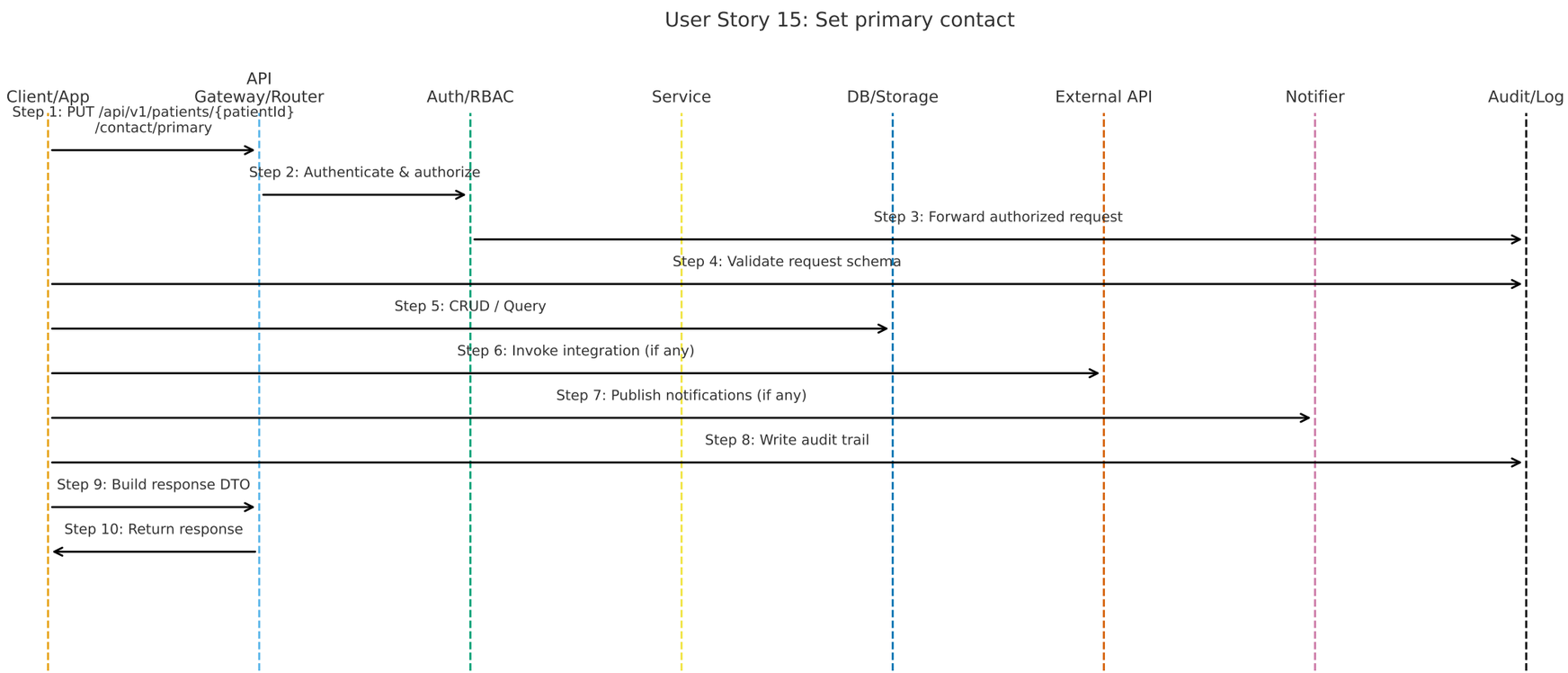

User Story 10: Export record
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/patients/{patientId}/export?format=pdf&includeSections=demographics,vitals
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

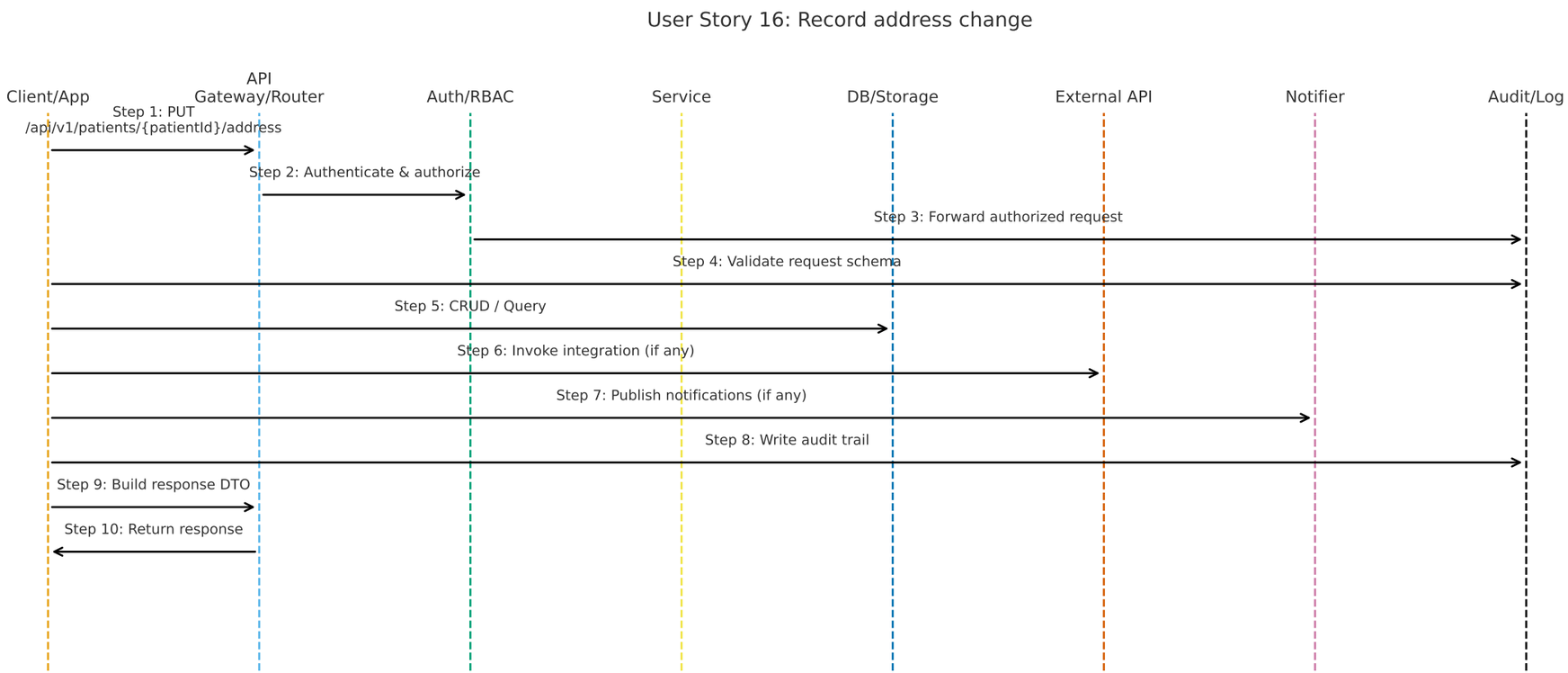

User Story 11: Set communication preferences
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: PUT /api/v1/patients/{patientId} /communication
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

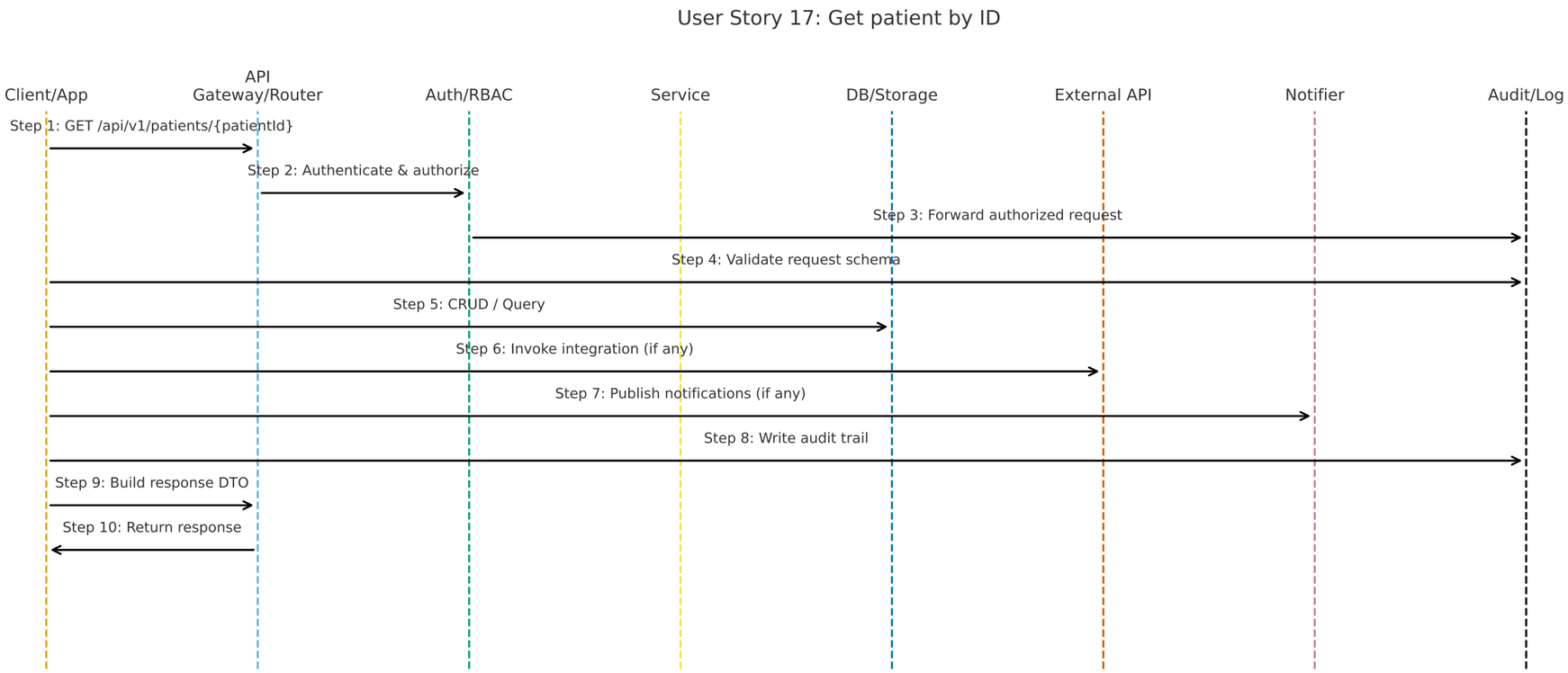

User Story 12: Record consent change
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/patients/{patientId}/consent
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

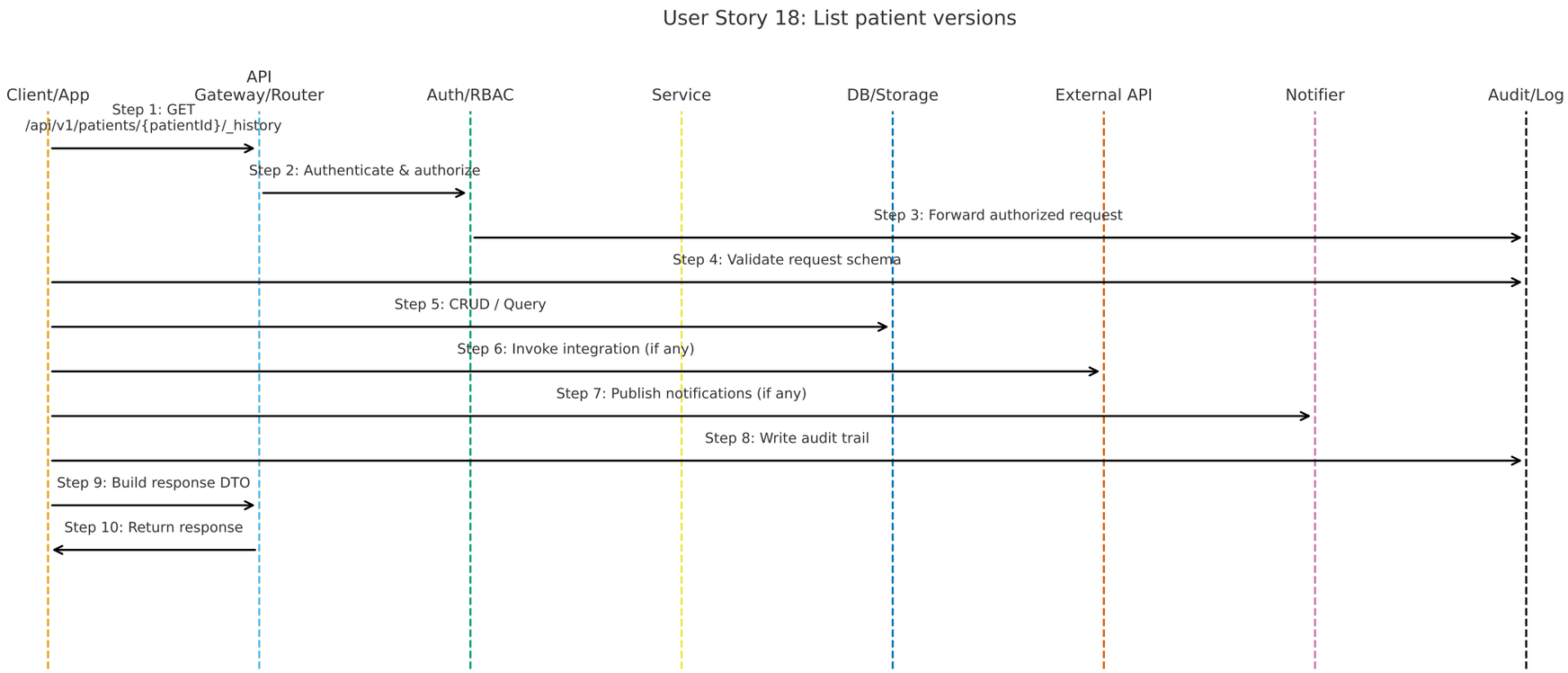

User Story 13: Deactivate (anonymize) patient
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/patients/{patientId}/anonymize
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

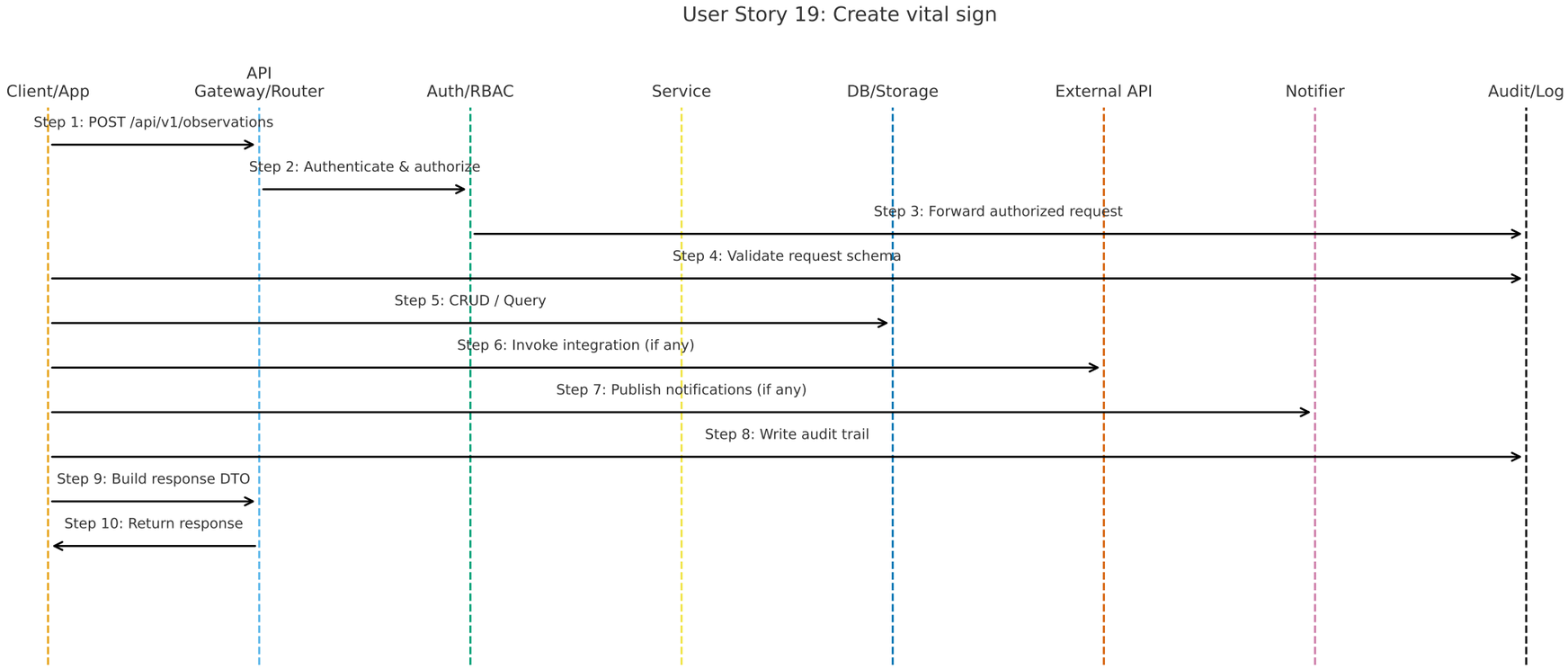

User Story 14: Link external identifiers
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/patients/{patientId}/identifiers
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

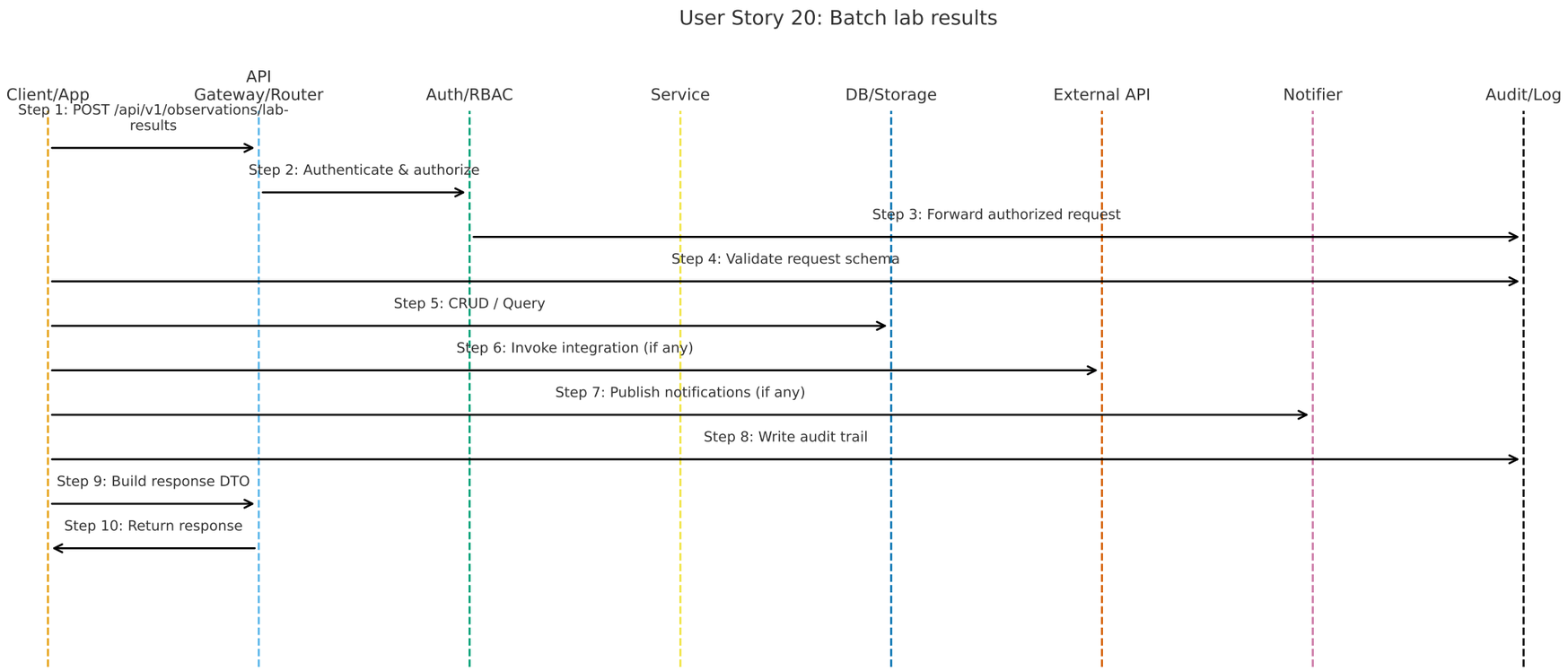

User Story 15: Set primary contact
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: PUT /api/v1/patients/{patientId} /contact/primary
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

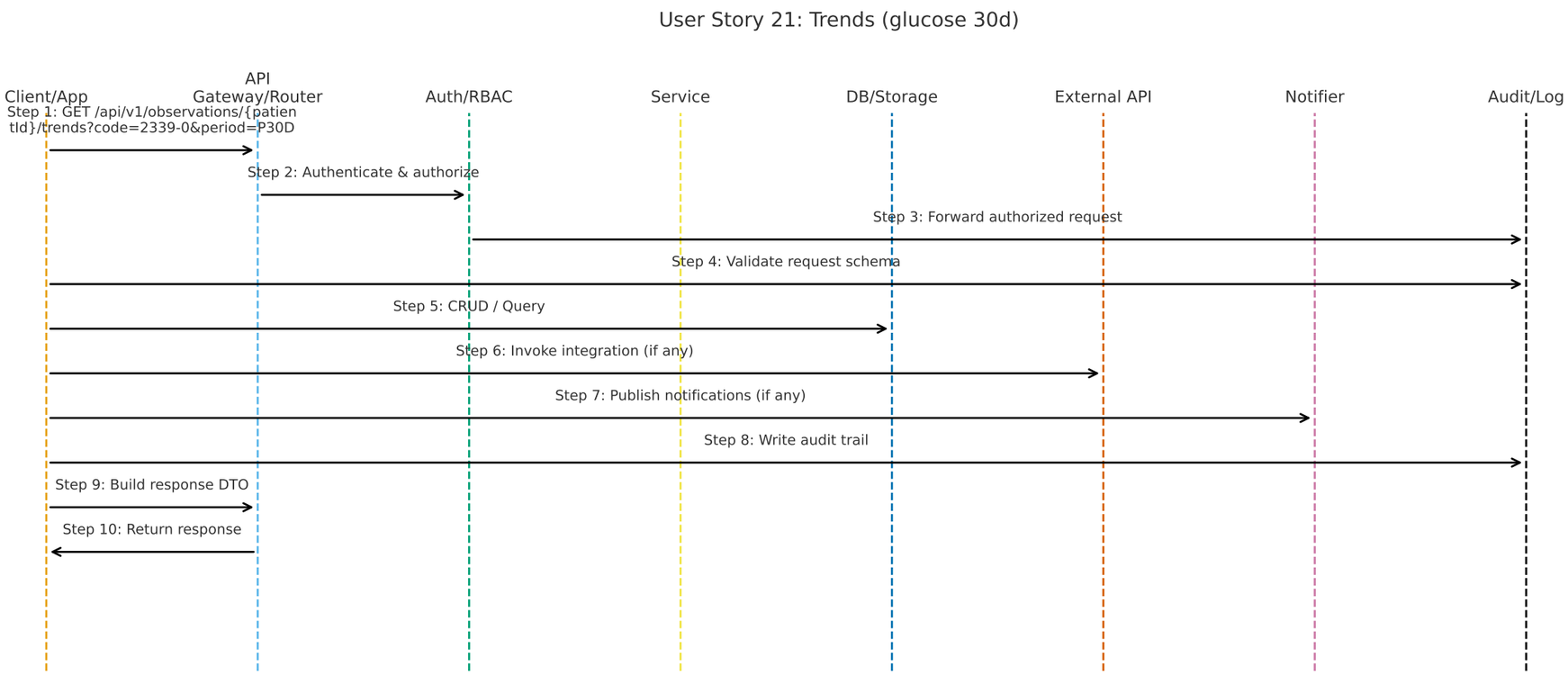

User Story 16: Record address change
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: PUT /api/v1/patients/{patientId}/address
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

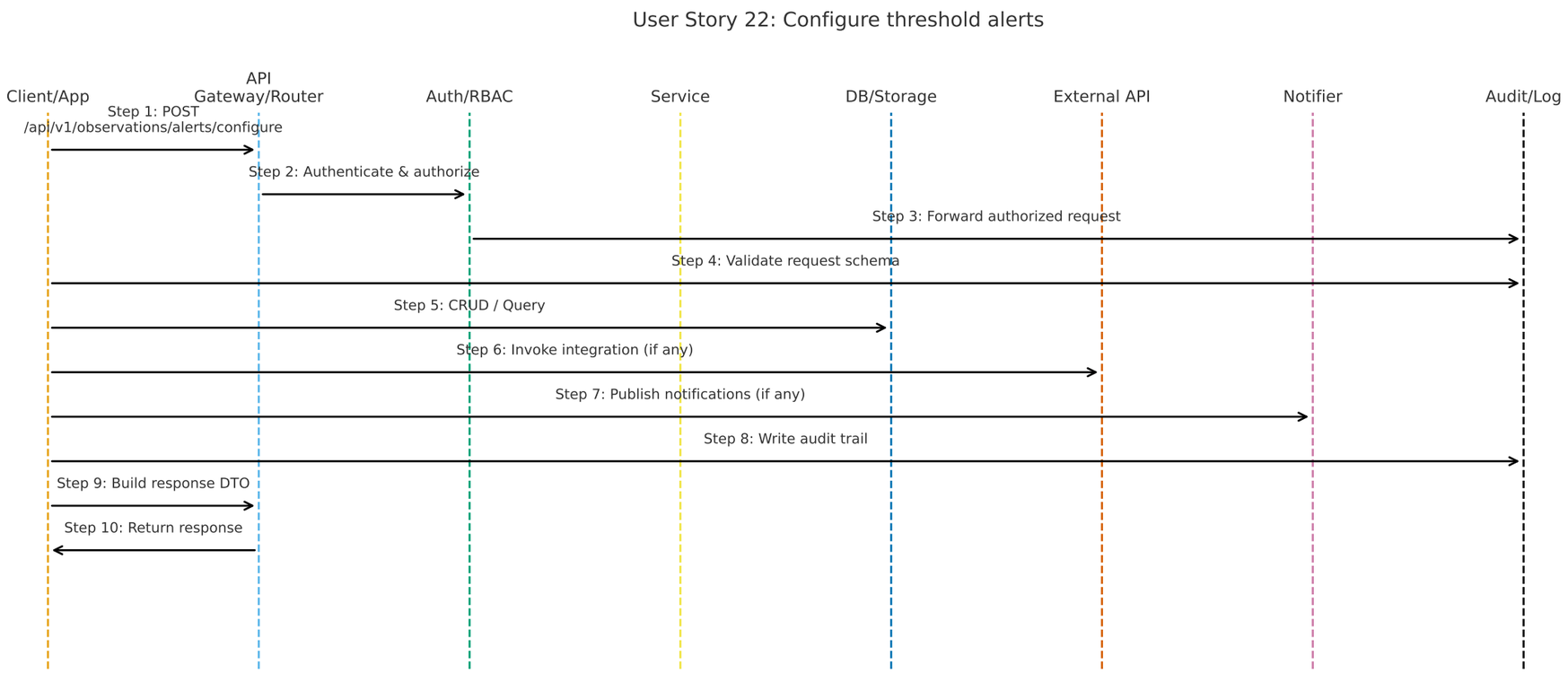

User Story 17: Get patient by ID
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/patients/{patientId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

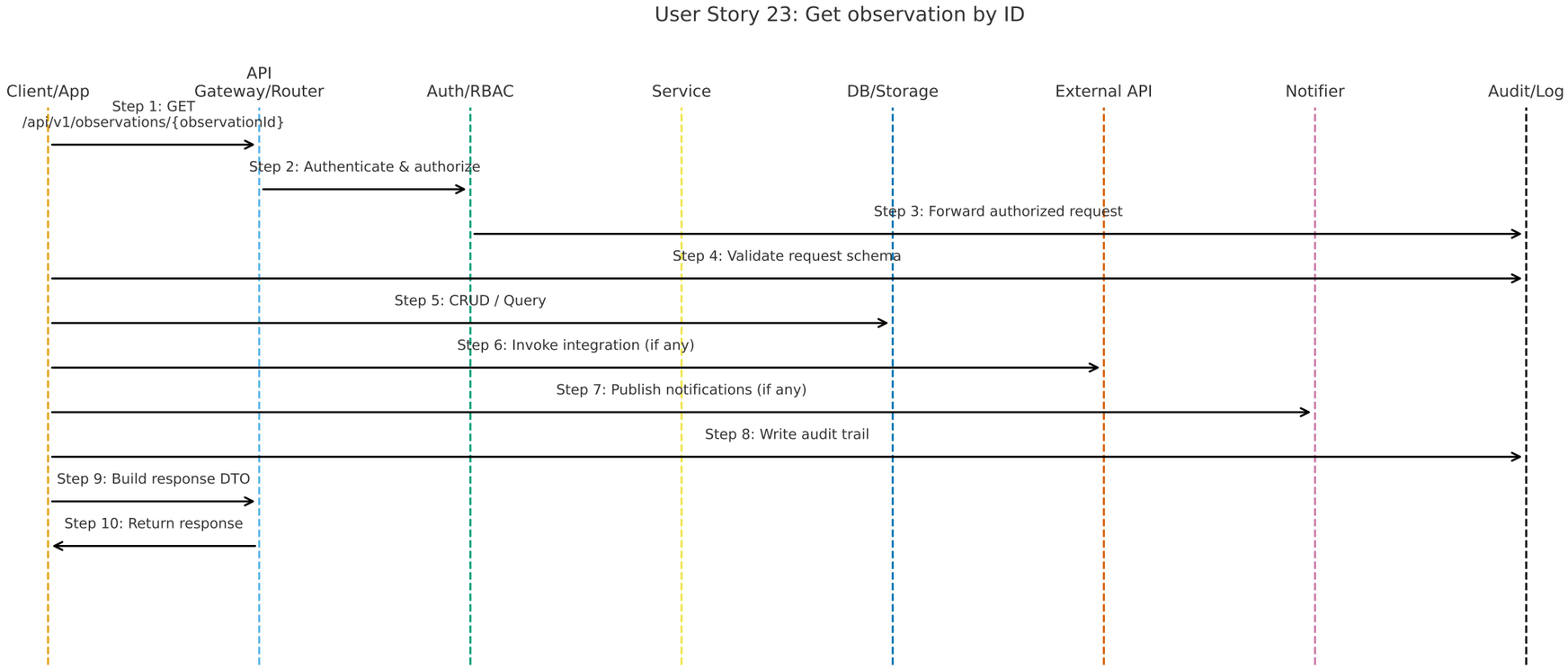

User Story 18: List patient versions
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/patients/{patientId}/_history
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

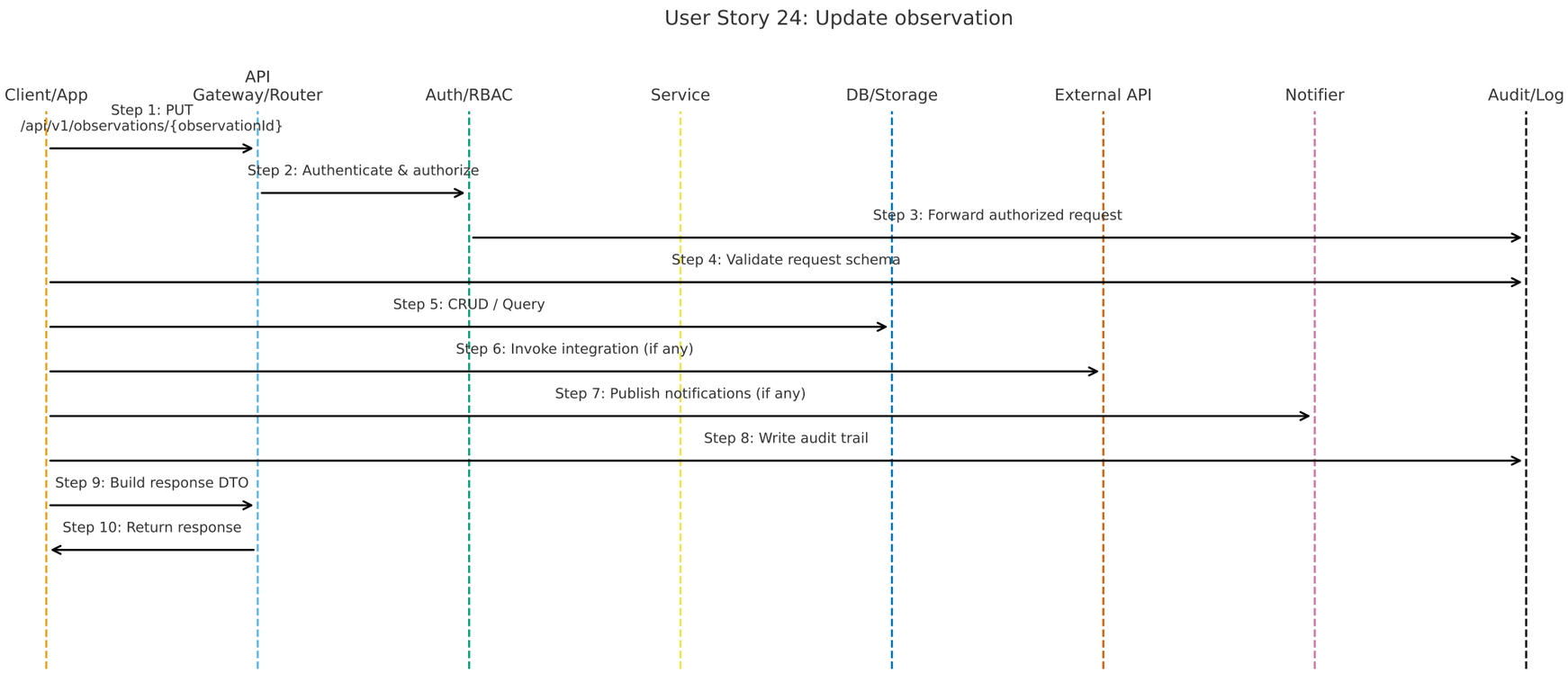

User Story 19: Create vital sign
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/observations
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

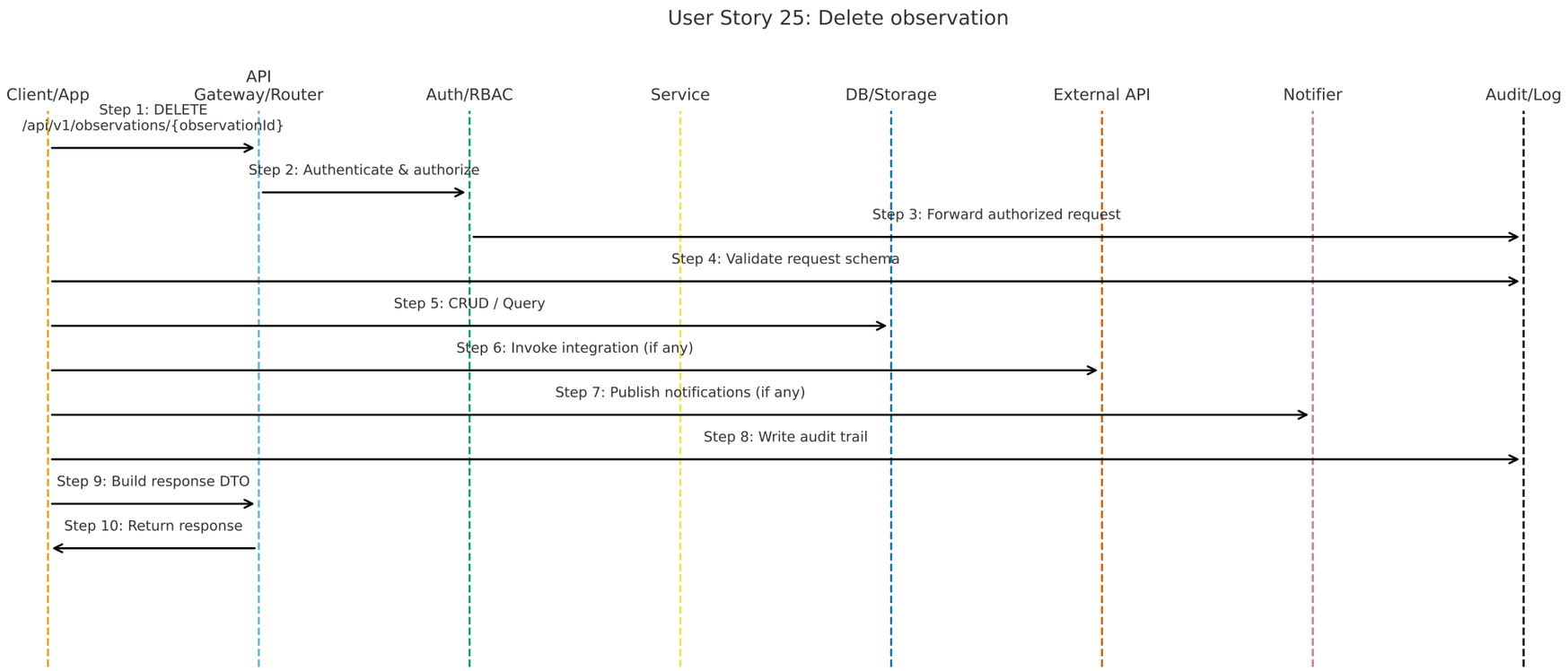

User Story 20: Batch lab results
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/observations/lab-results
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

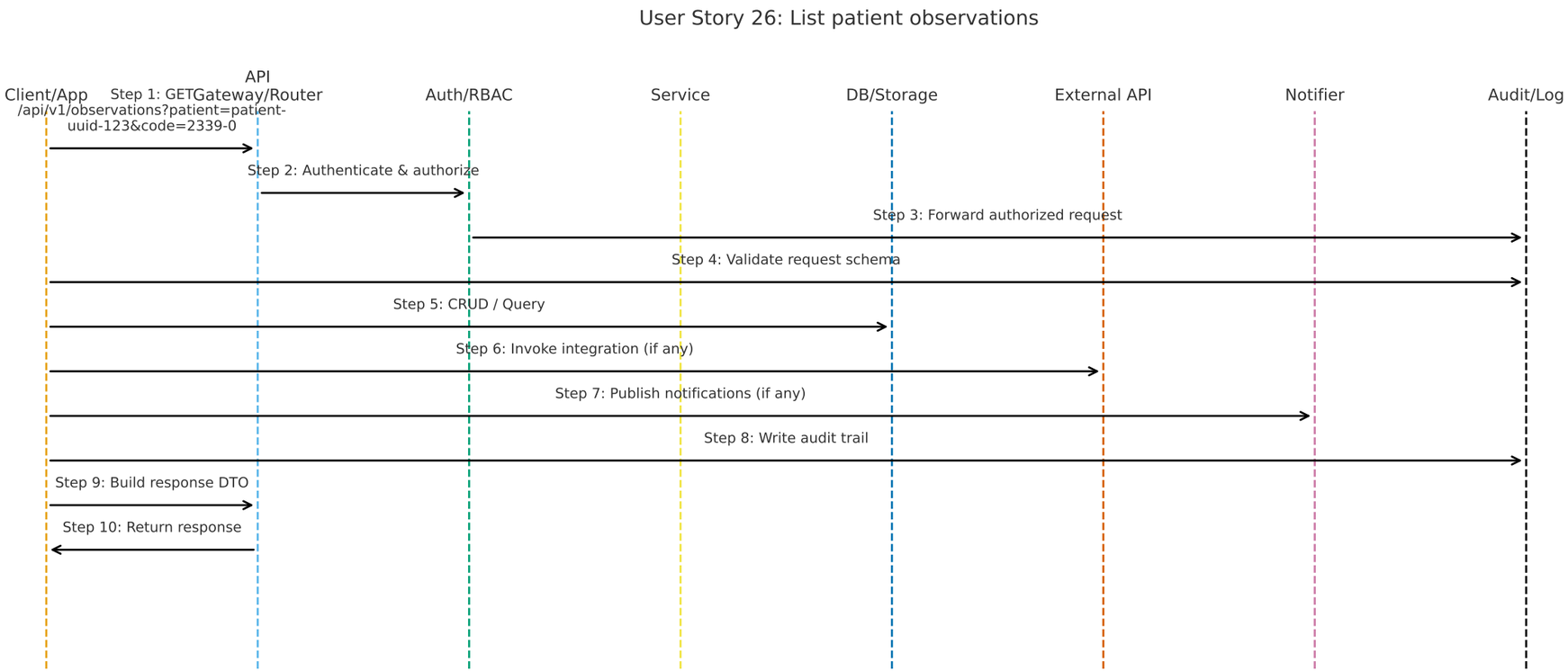

User Story 21: Trends (glucose 30d)
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/observations/{patien tId}/trends?code=2339-0&period=P30D
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response


User Story 22: Configure threshold alerts
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/observations/alerts/configure
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

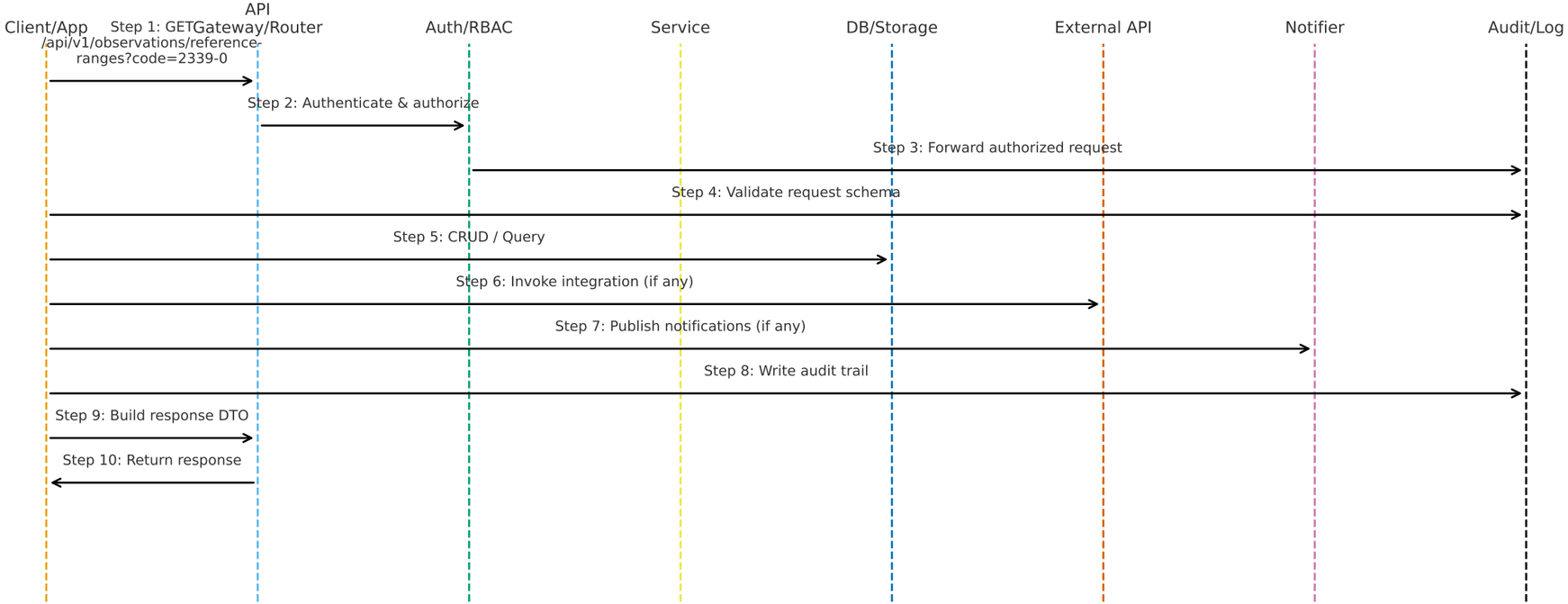

User Story 23: Get observation by ID
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/observations/{observationId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

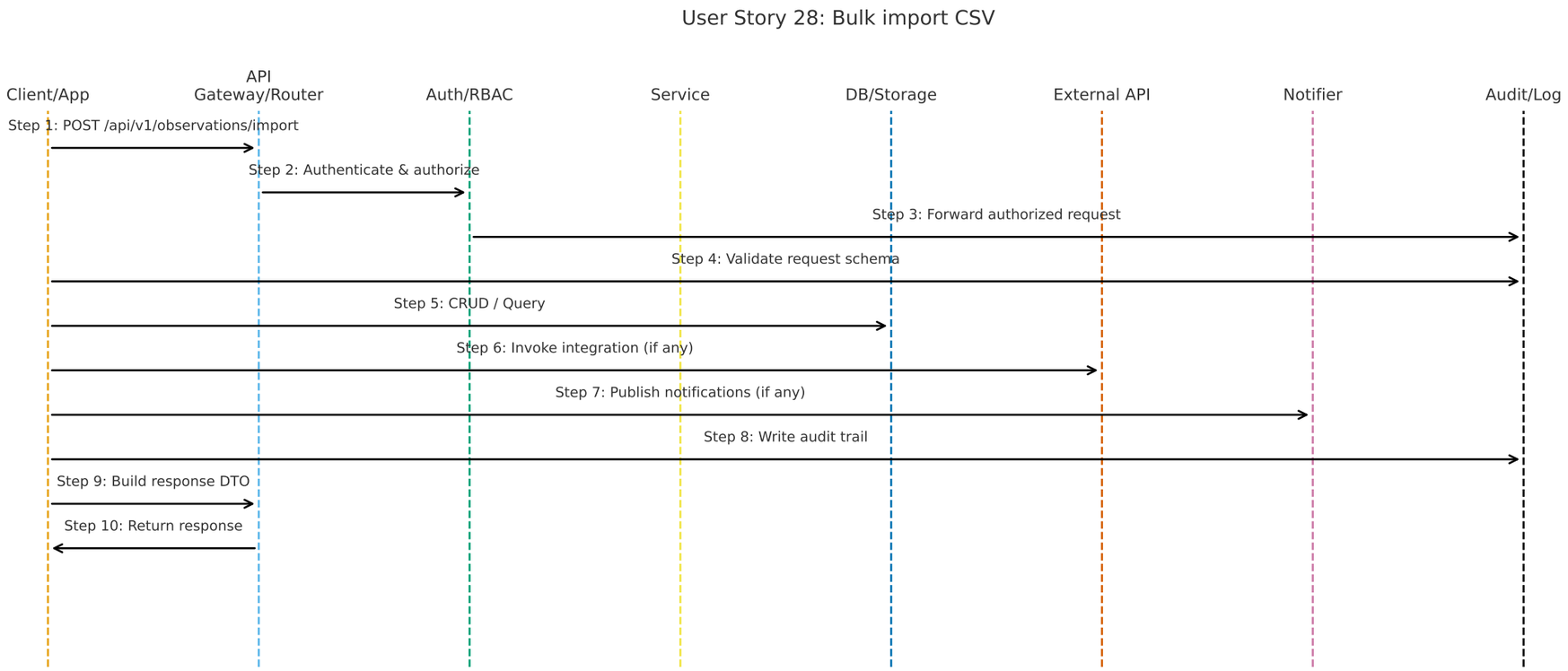

User Story 24: Update observation
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: PUT /api/v1/observations/{observationId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

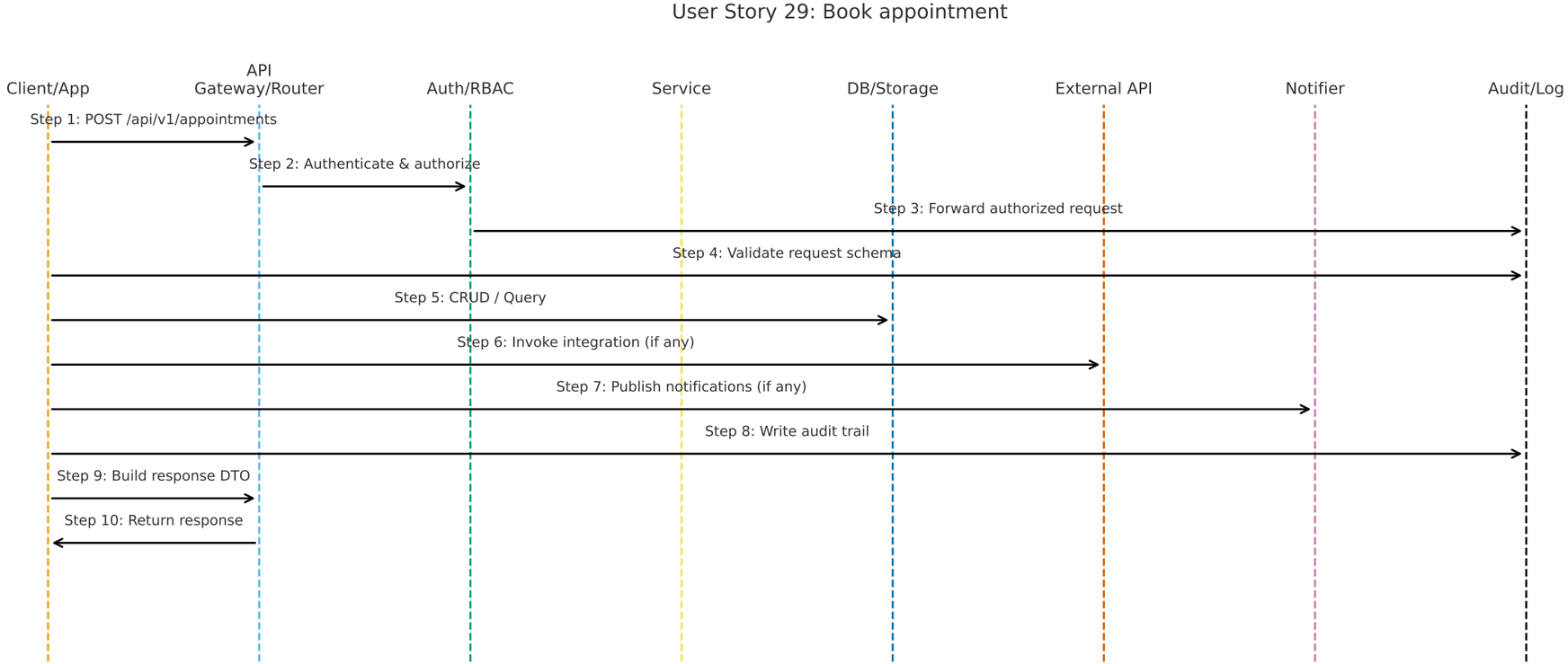

User Story 25: Delete observation
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: DELETE /api/v1/observations/{observationId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

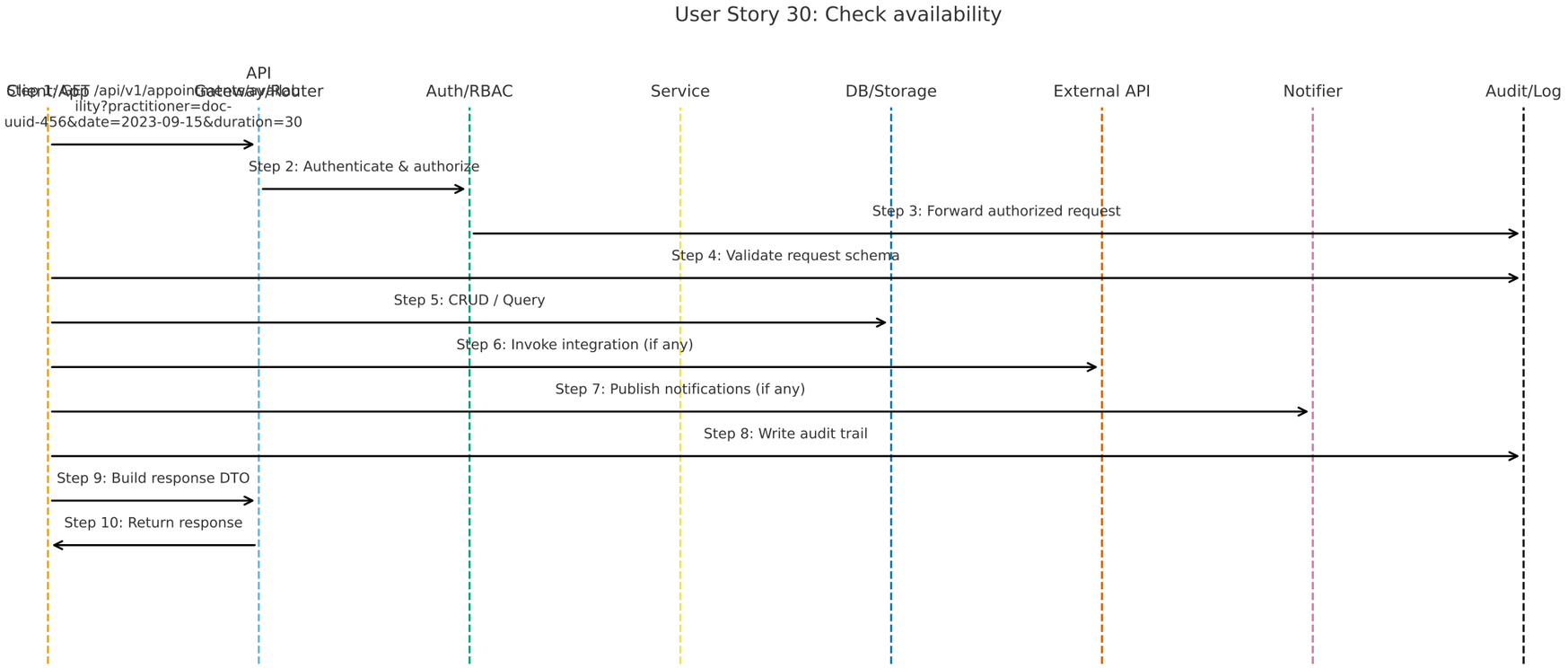

User Story 26: List patient observations
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/observations?patient=patient-uuid-123&code=2339-0
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

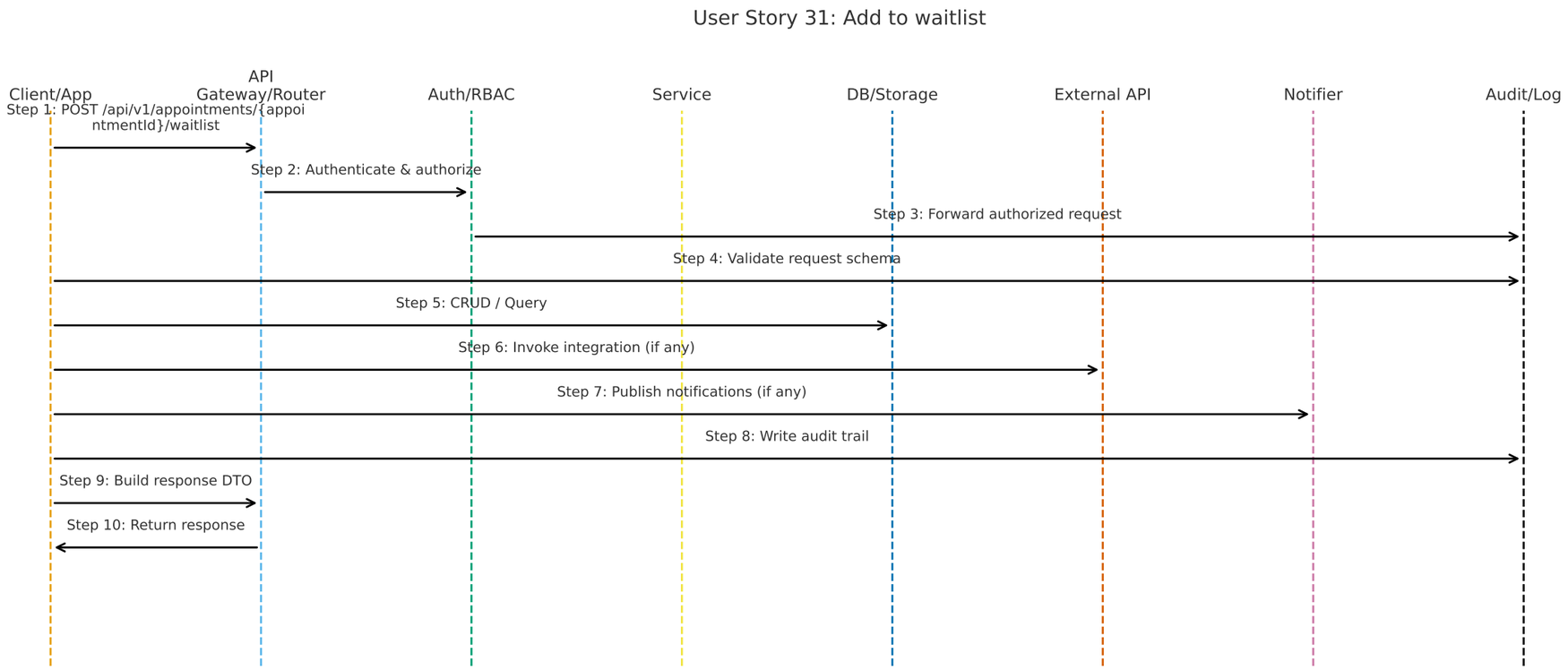
User Story 27: Reference range library

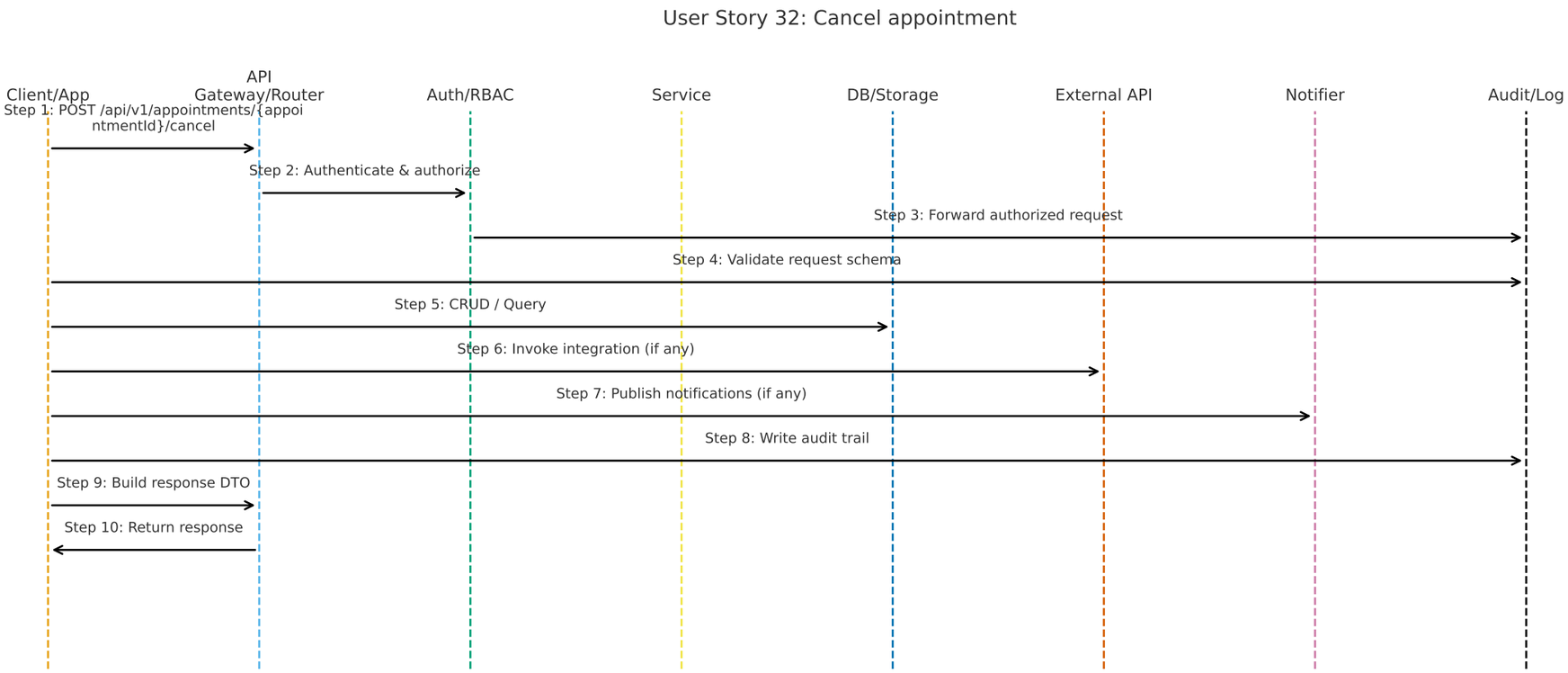


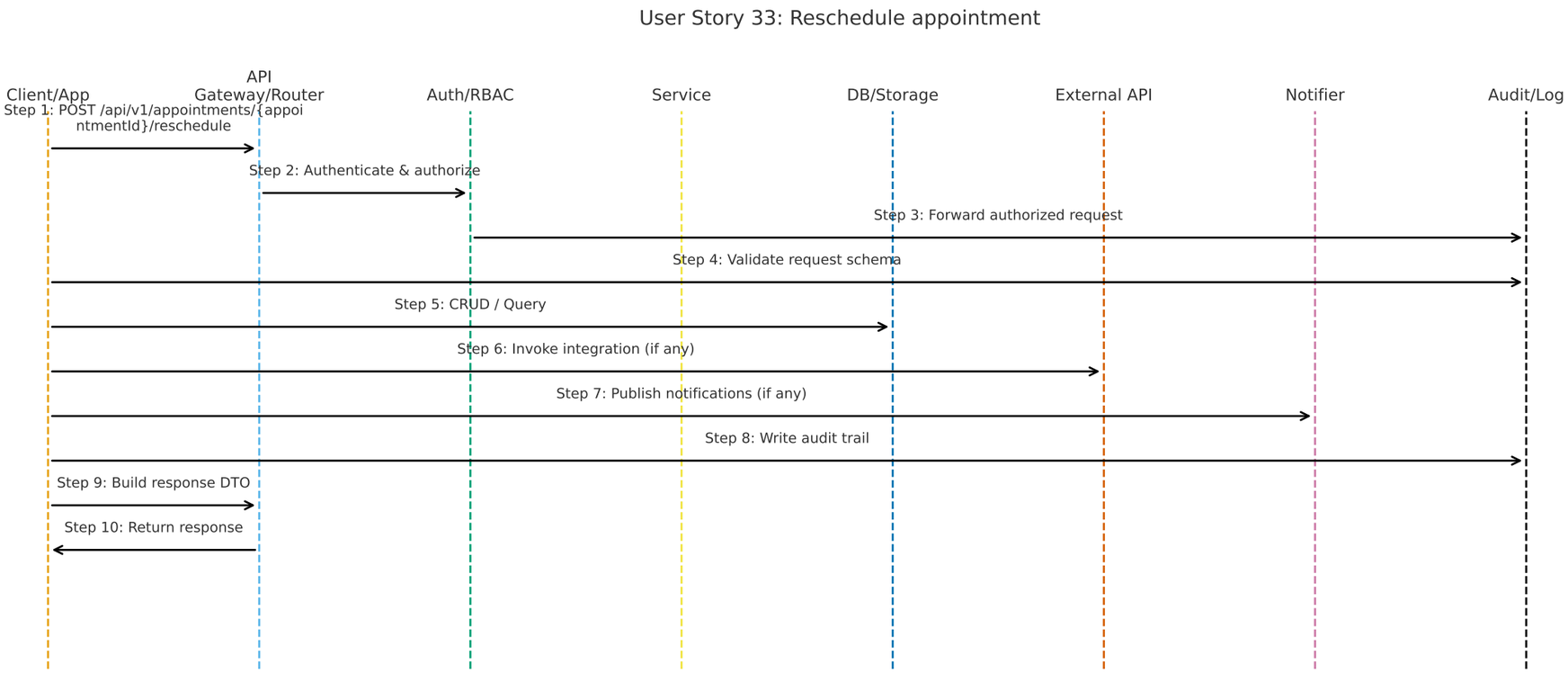

User Story 28: Bulk import CSV
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/observations/import
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

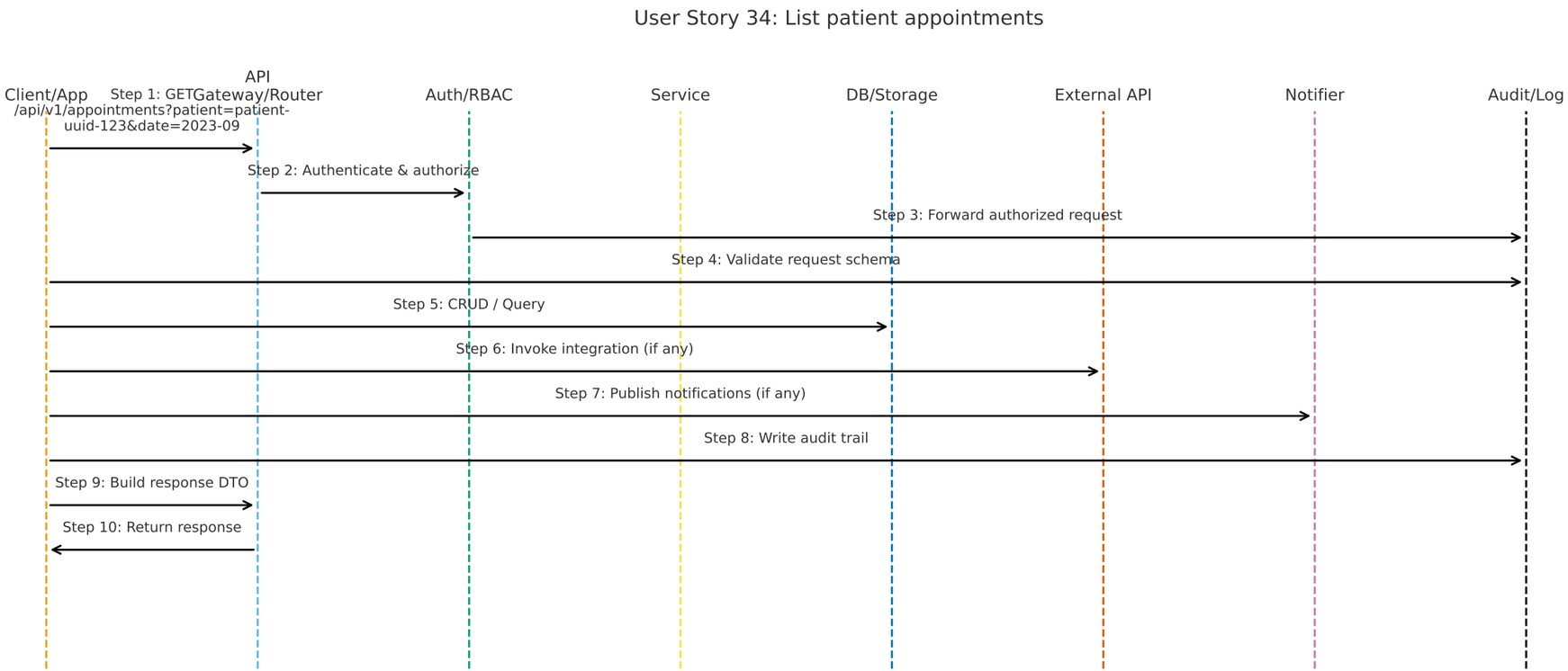

User Story 29: Book appointment
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/appointments
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

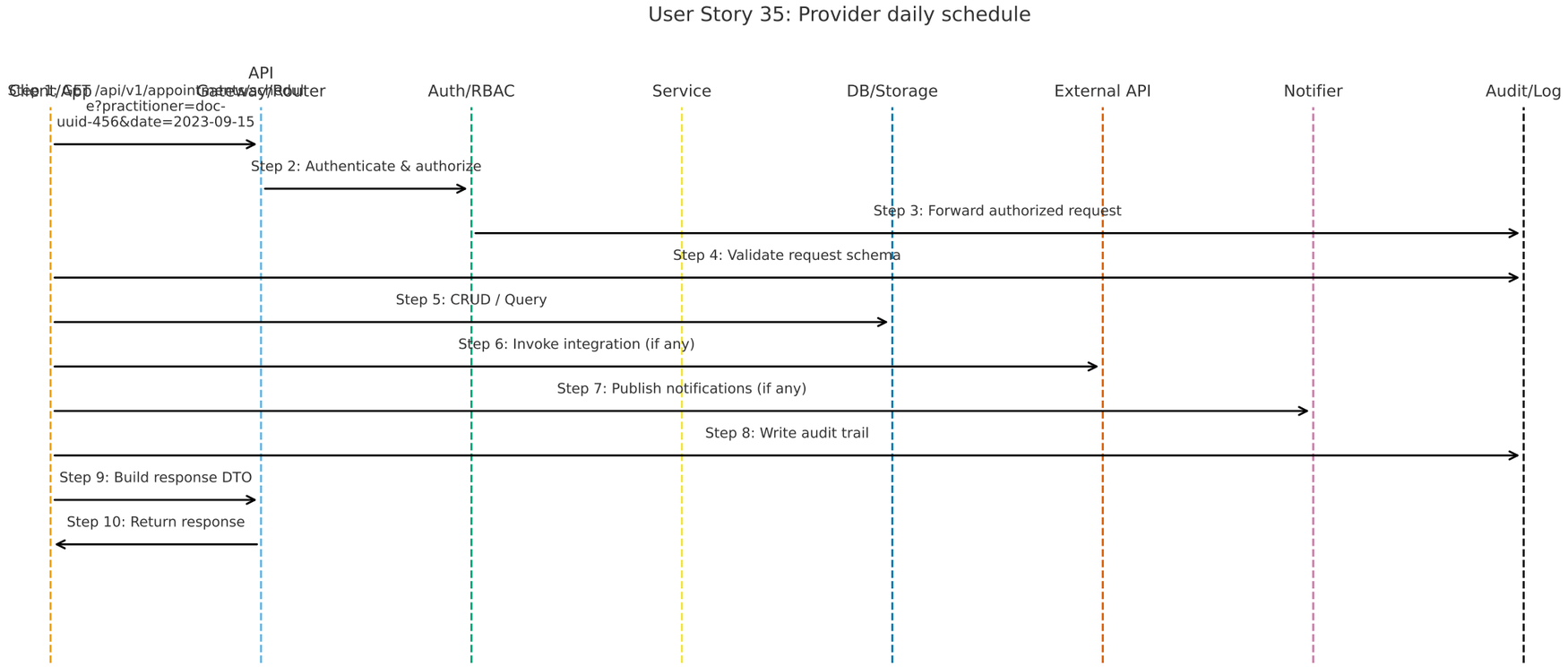

User Story 30: Check availability
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/appointments/availability?practitioner=doc-uuid-456&date=2023-09-15&duration=30
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

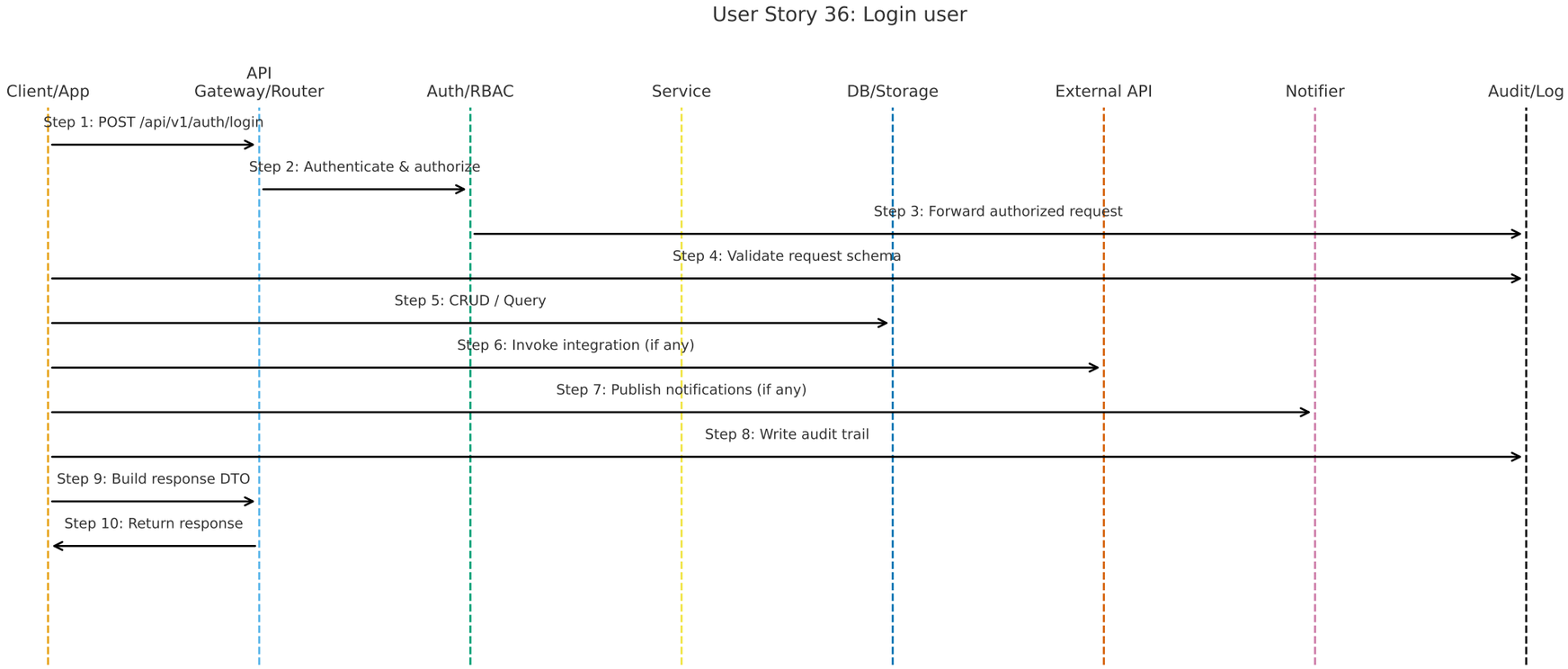

User Story 31: Add to waitlist
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/appointments/{appointmentId}/waitlist
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

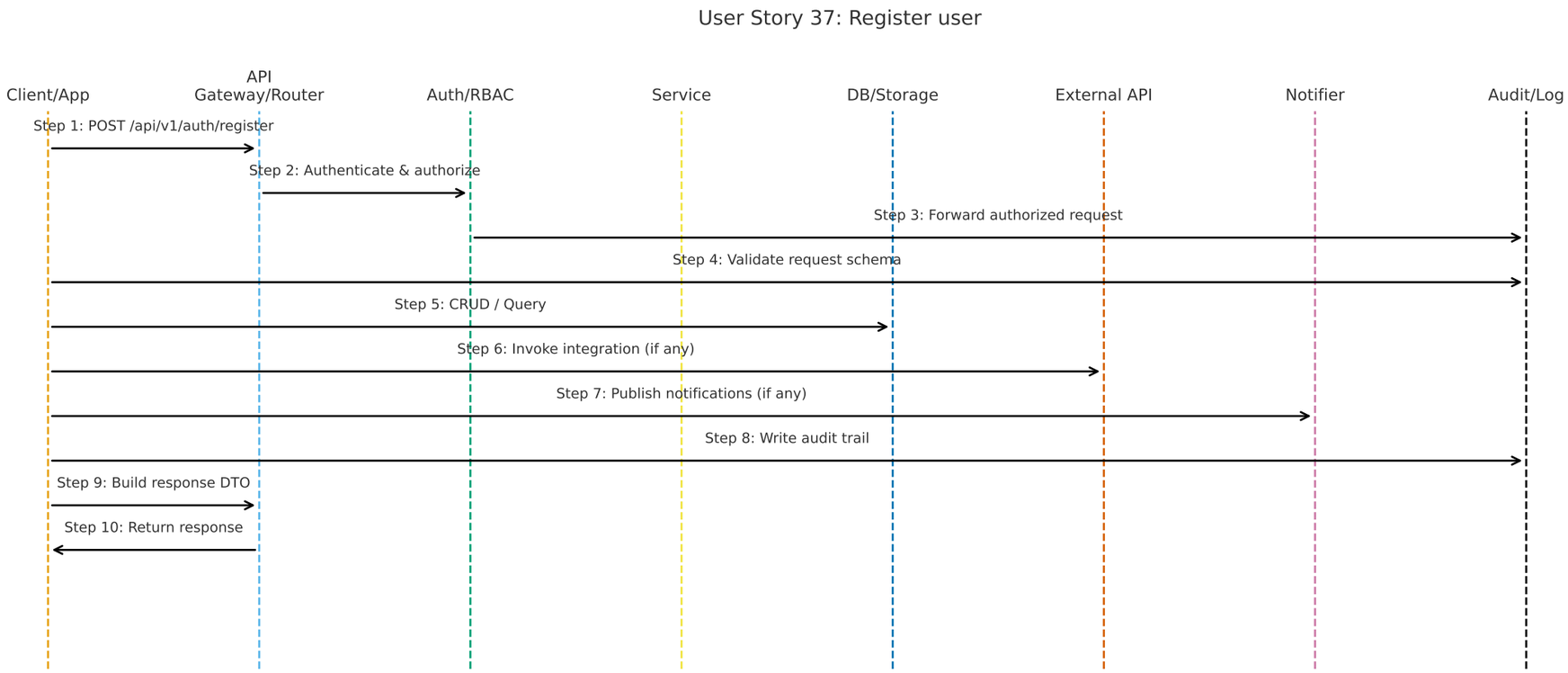

User Story 32: Cancel appointment
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/appointments/{appointmentId}/cancel
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

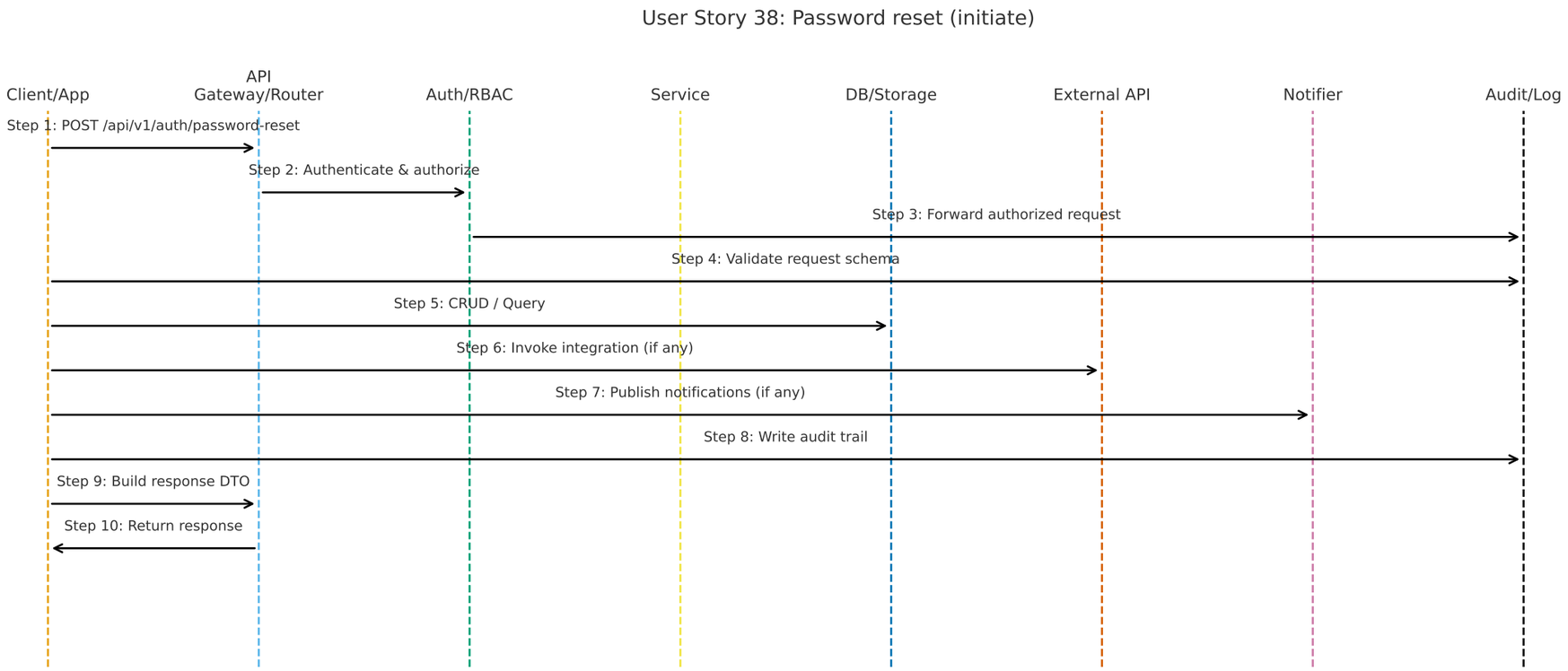

User Story 33: Reschedule appointment
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/appointments/{appointmentId}/reschedule
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

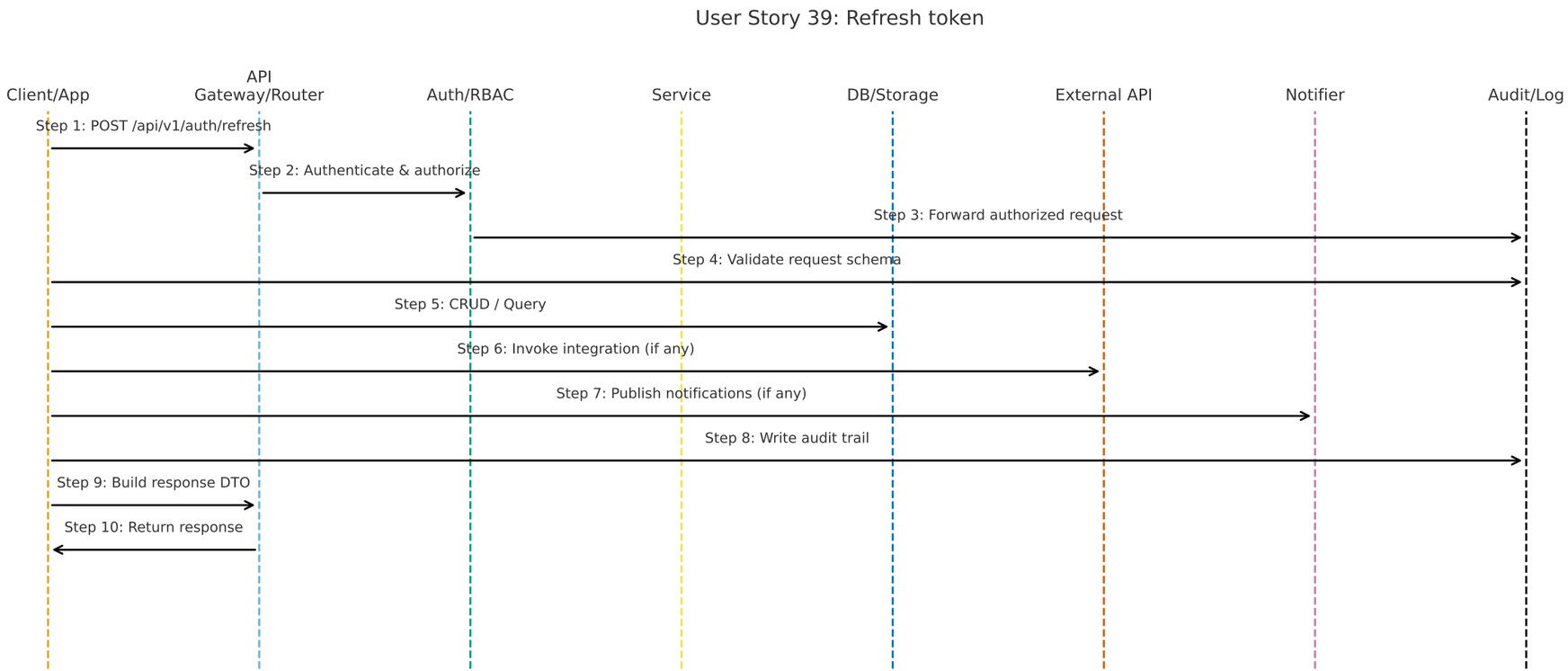

User Story 34: List patient appointments
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/appointments?patient=patient-uuid-123&date=2023-09
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

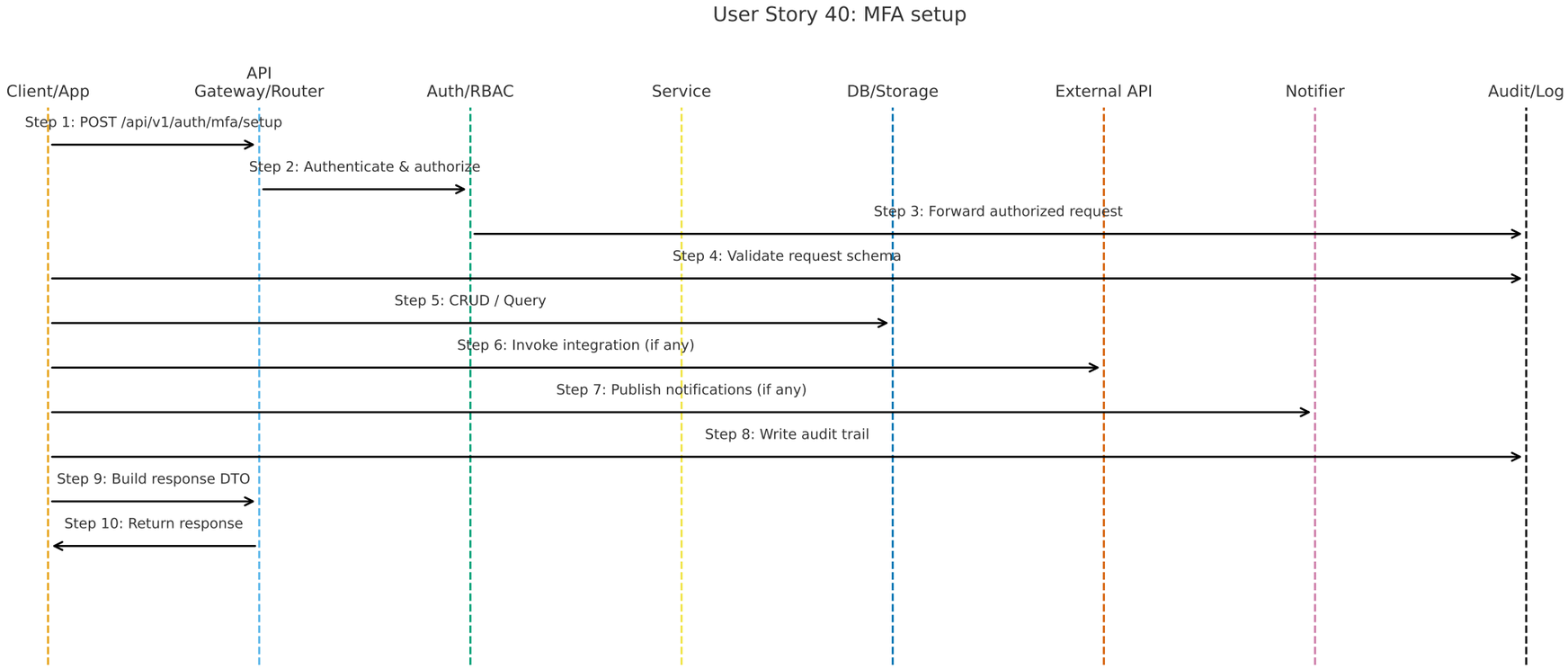

User Story 35: Provider daily schedule
Client/App
API
Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/appointments/schedule?practitioner=doc-uuid-456&date=2023-09-15
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

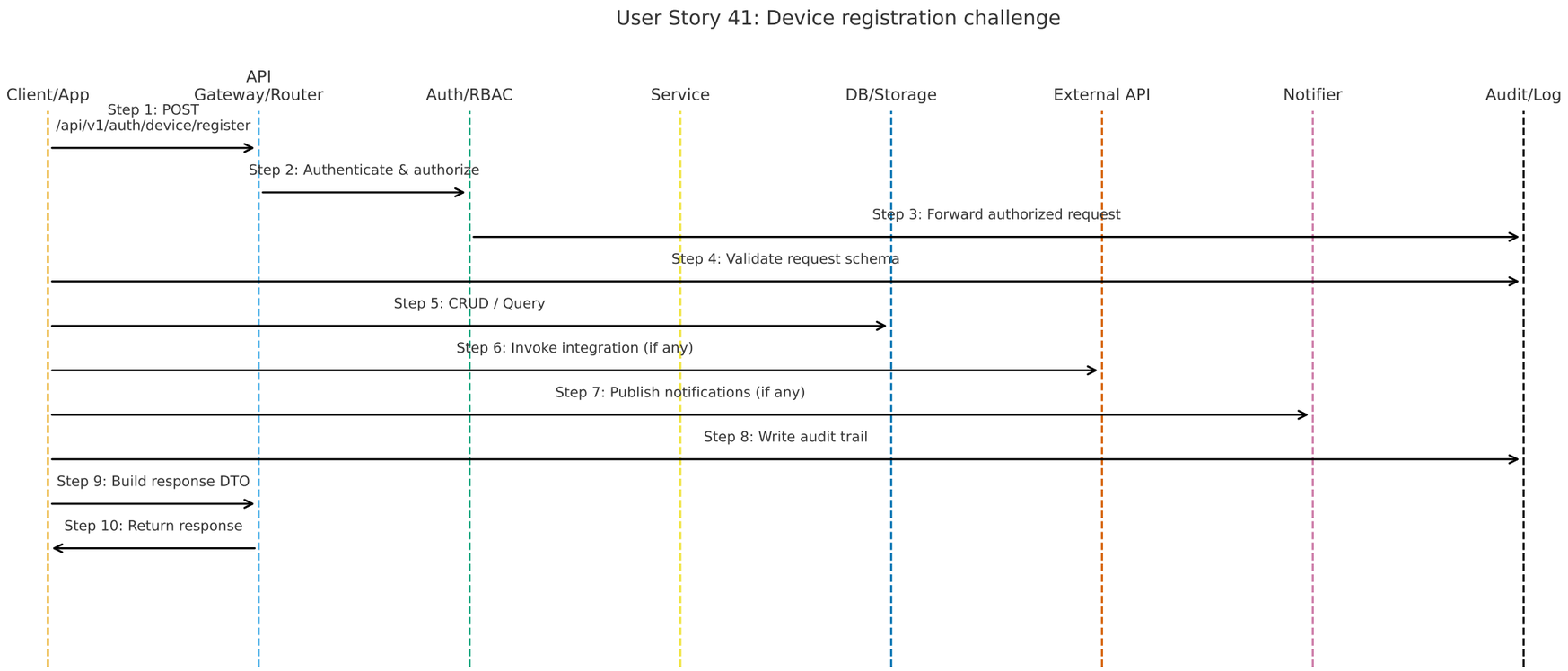

User Story 36: Login user
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/auth/login
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

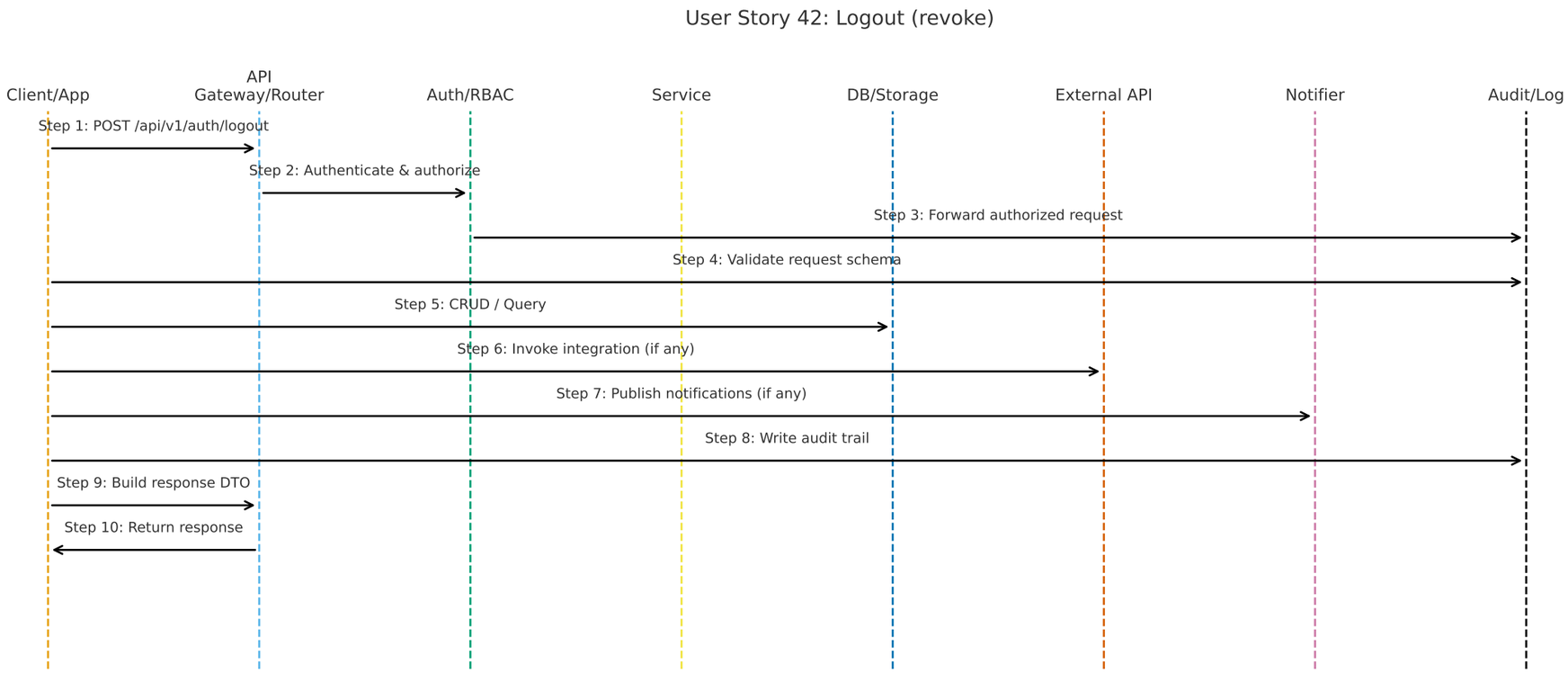

User Story 37: Register user
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/auth/register
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

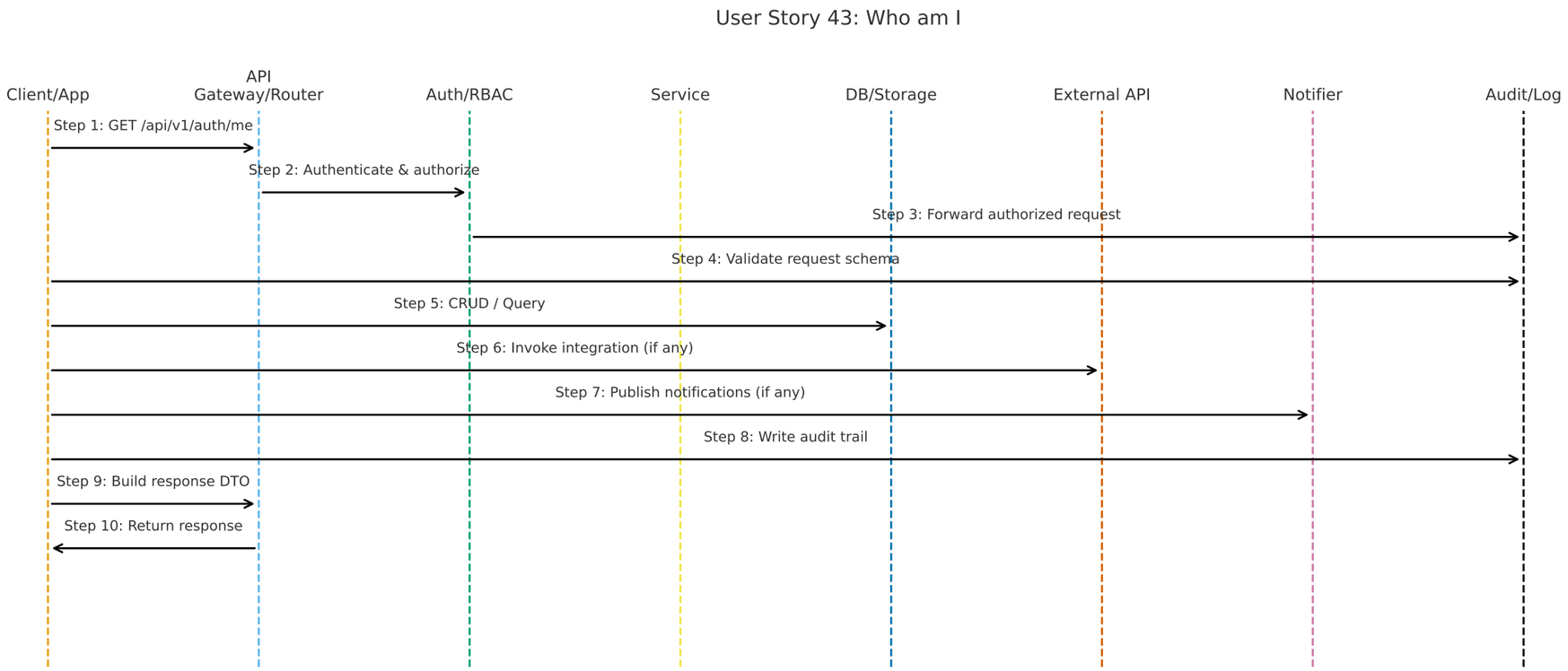

User Story 38: Password reset (initiate)
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/auth/password-reset
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

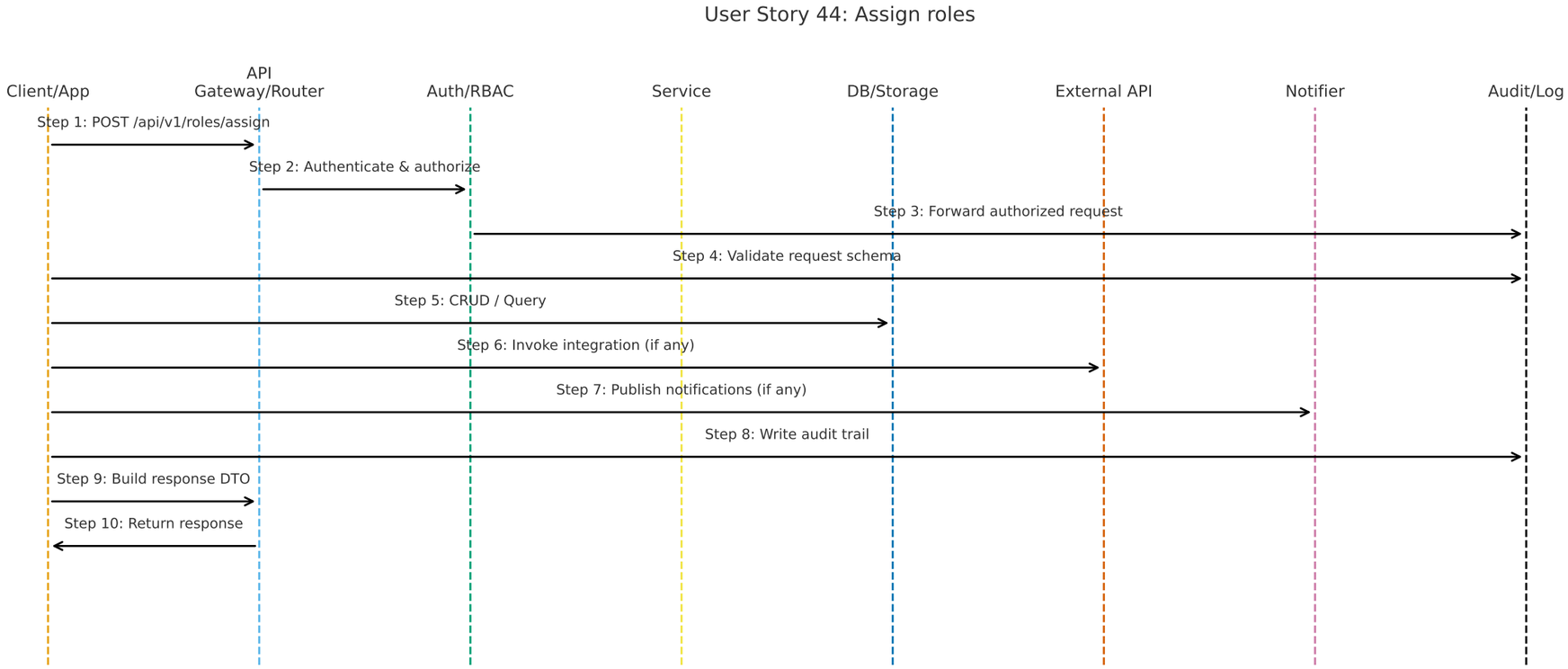

User Story 39: Refresh token
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/auth/refresh
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

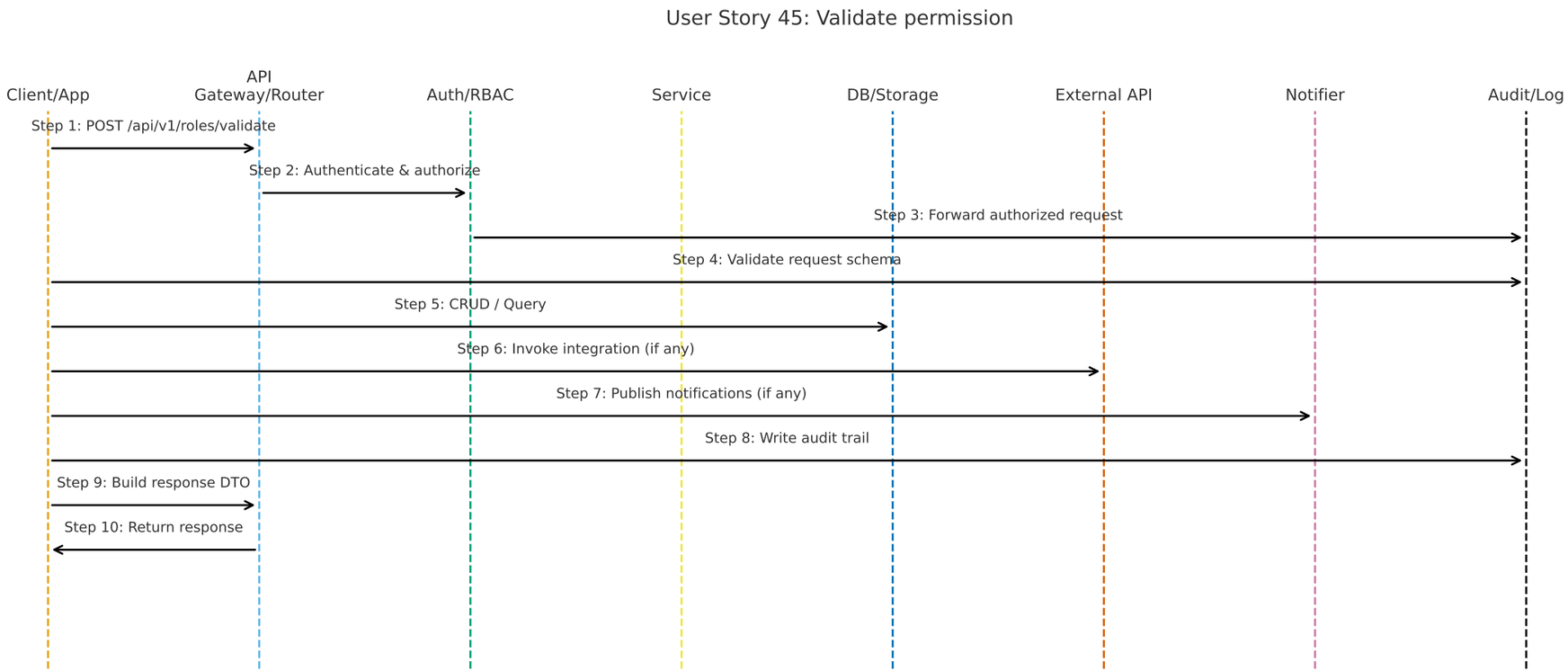

User Story 40: MFA setup
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/auth/mfa/setup
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

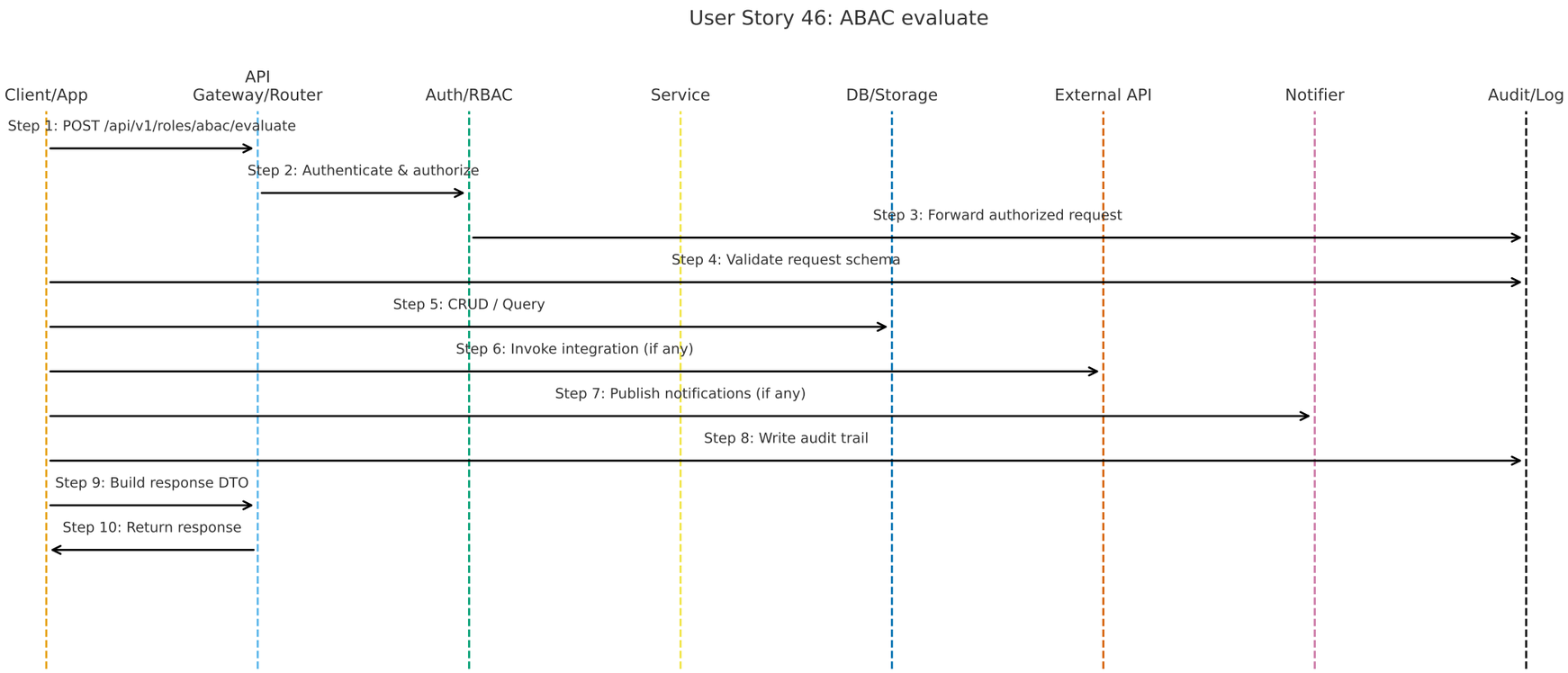

User Story 41: Device registration challenge
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/auth/device/register
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

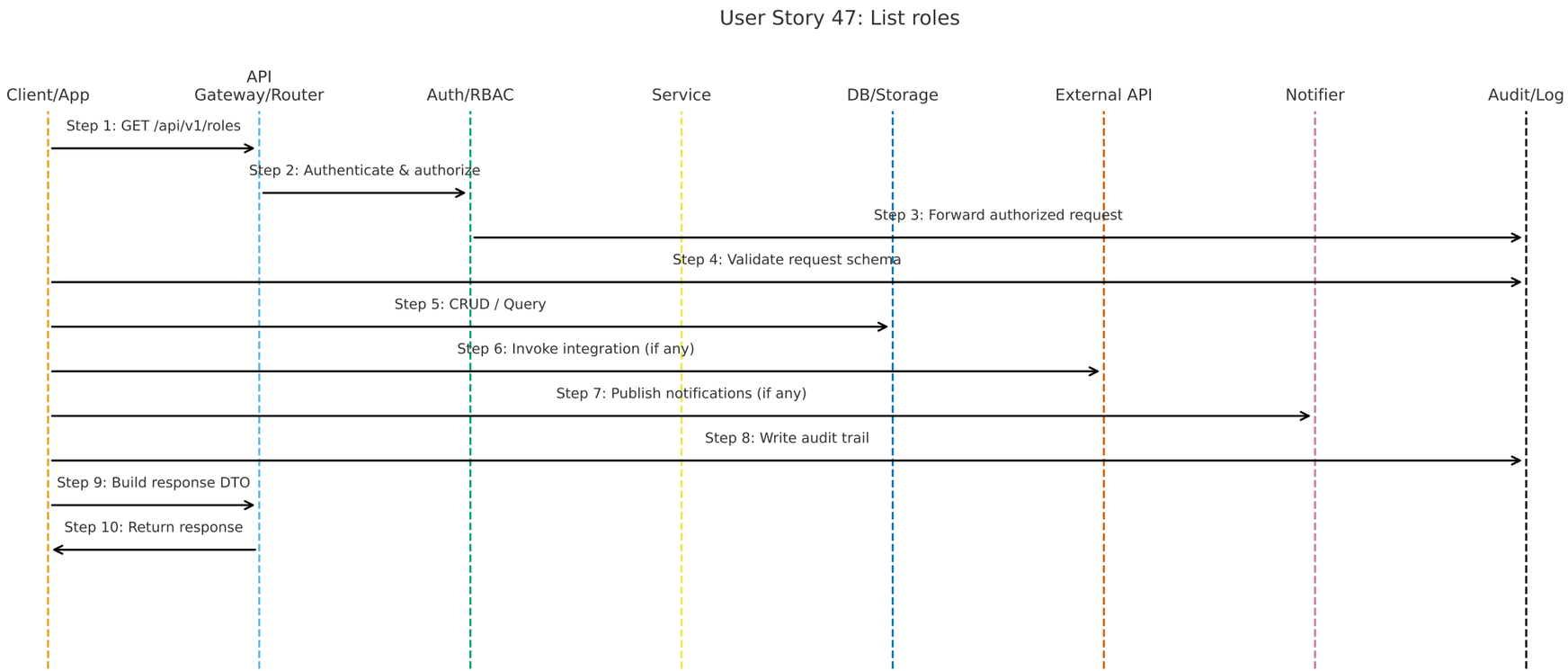

User Story 42: Logout (revoke)
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/auth/logout
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

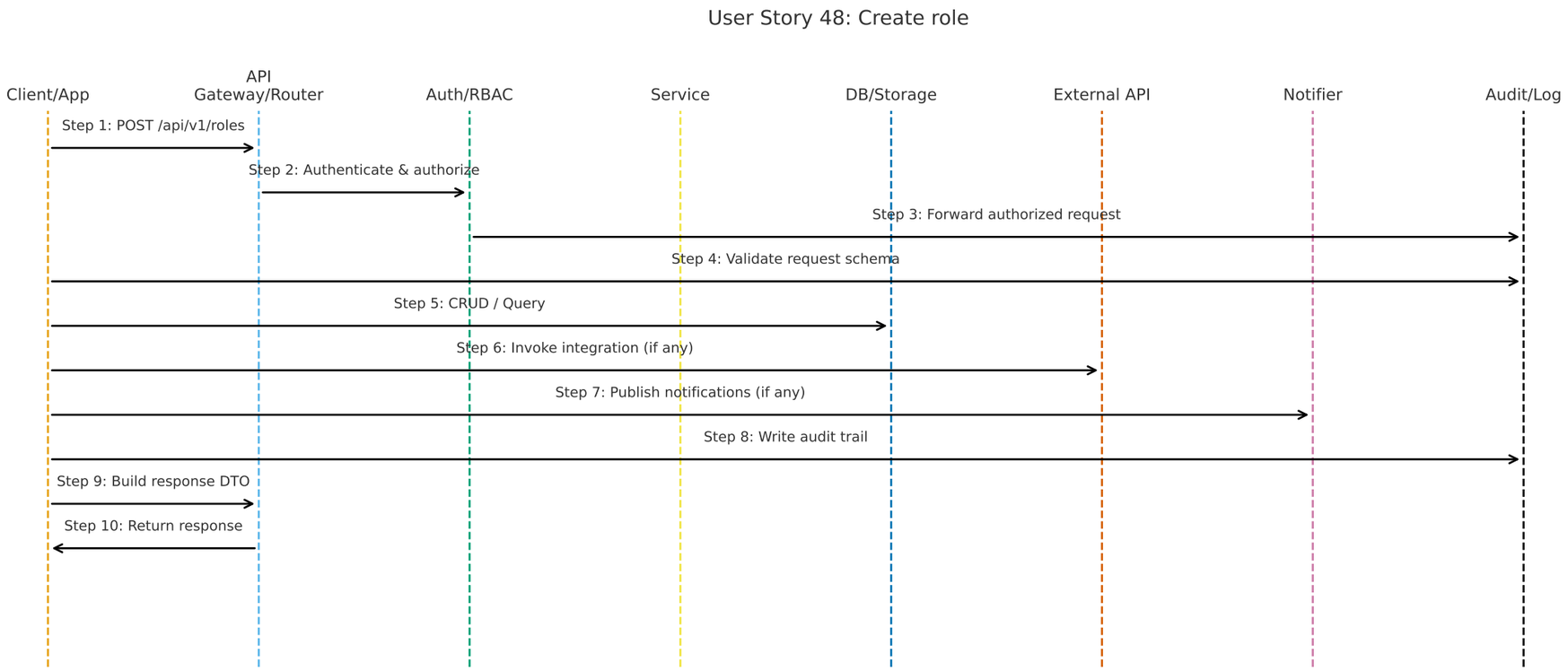

User Story 43: Who am I
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/auth/me
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

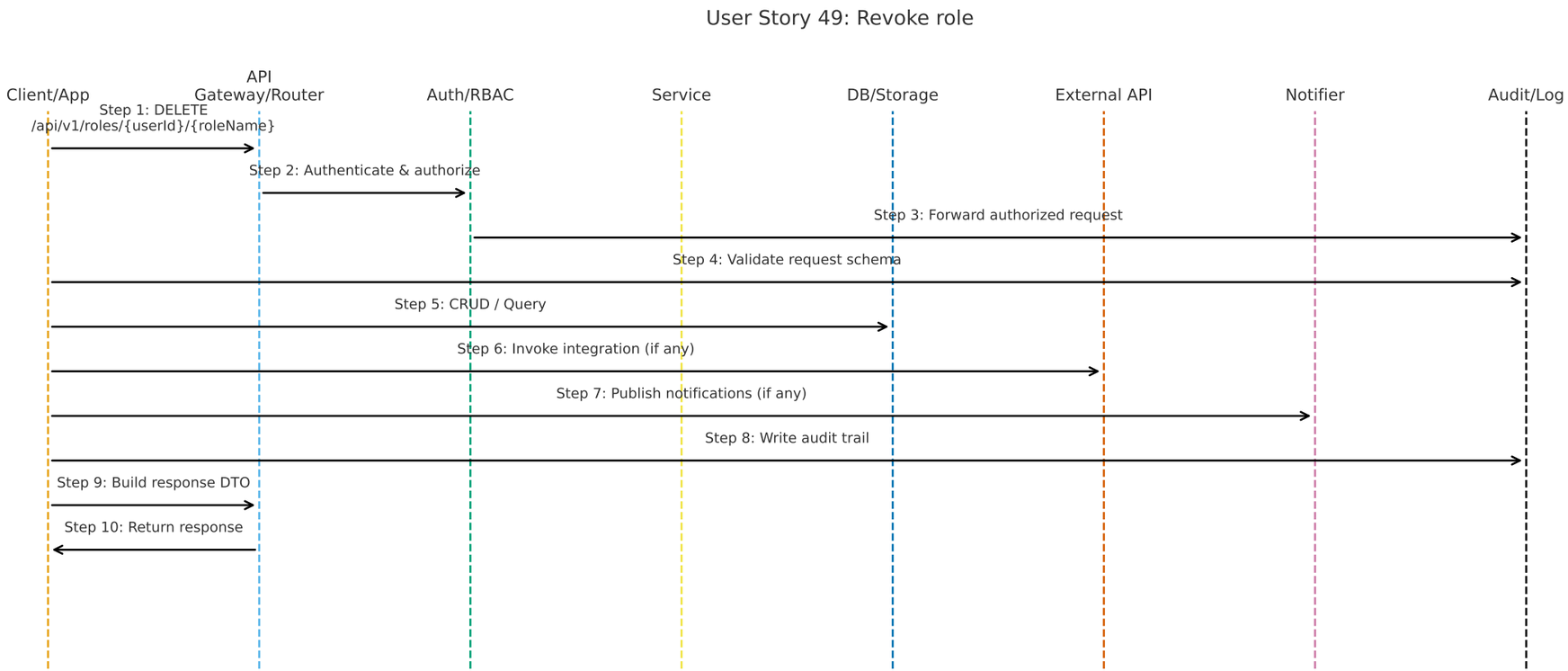

User Story 44: Assign roles
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/roles/assign
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

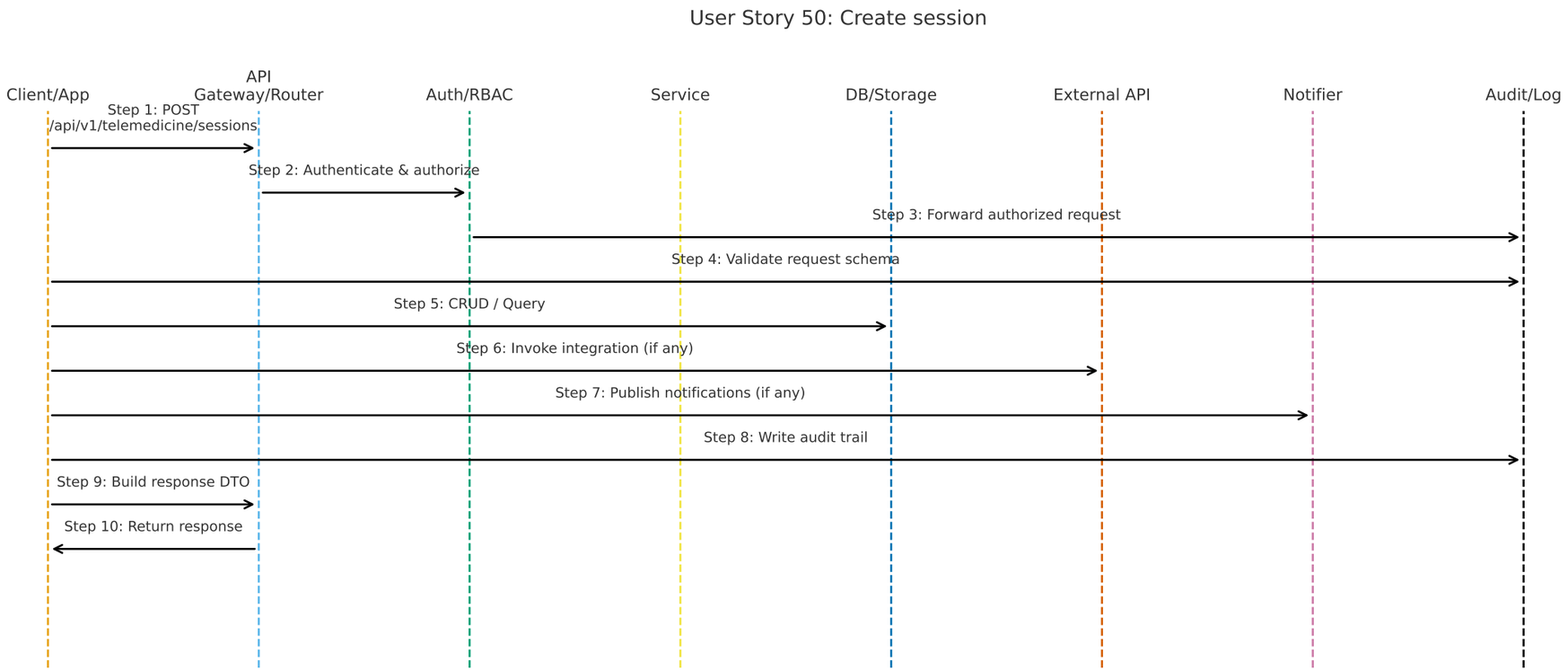

User Story 45: Validate permission
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/roles/validate
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

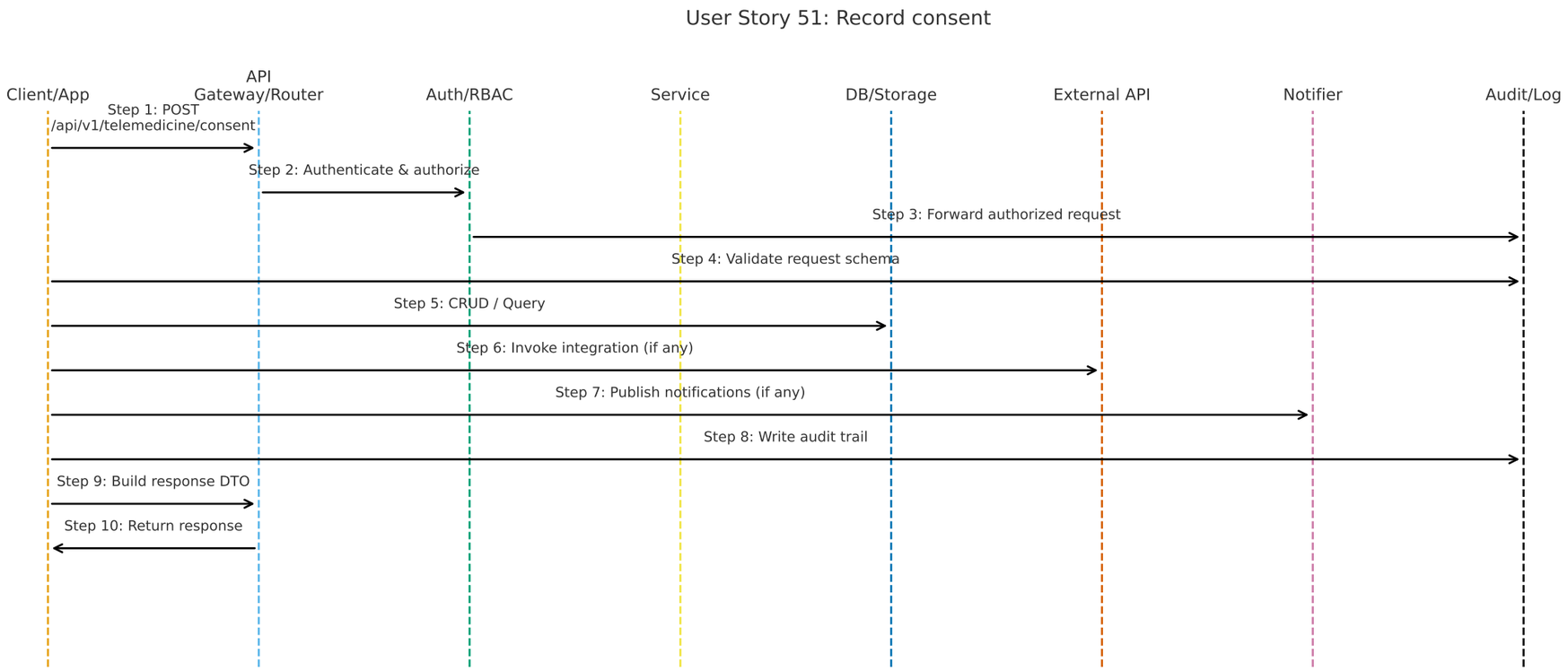

User Story 46: ABAC evaluate
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/roles/abac/evaluate
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

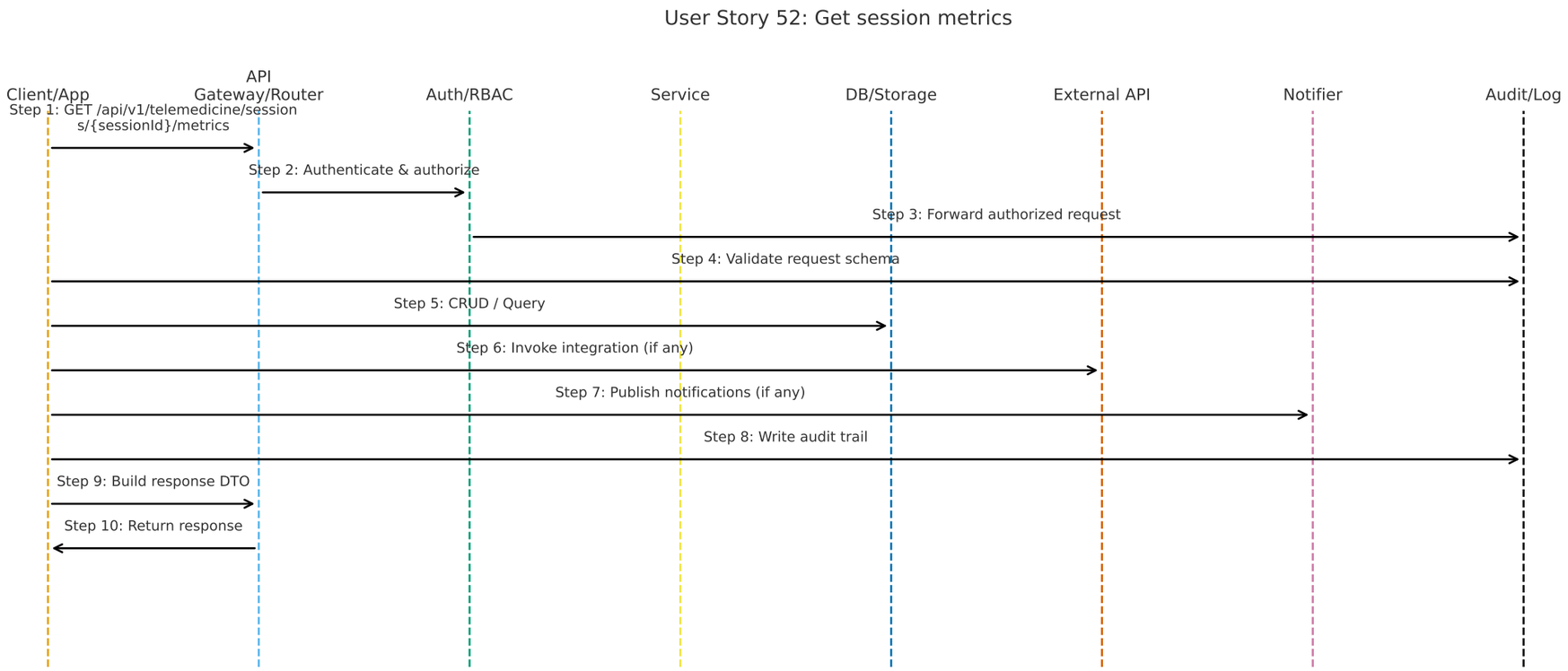

User Story 47: List roles
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/roles
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

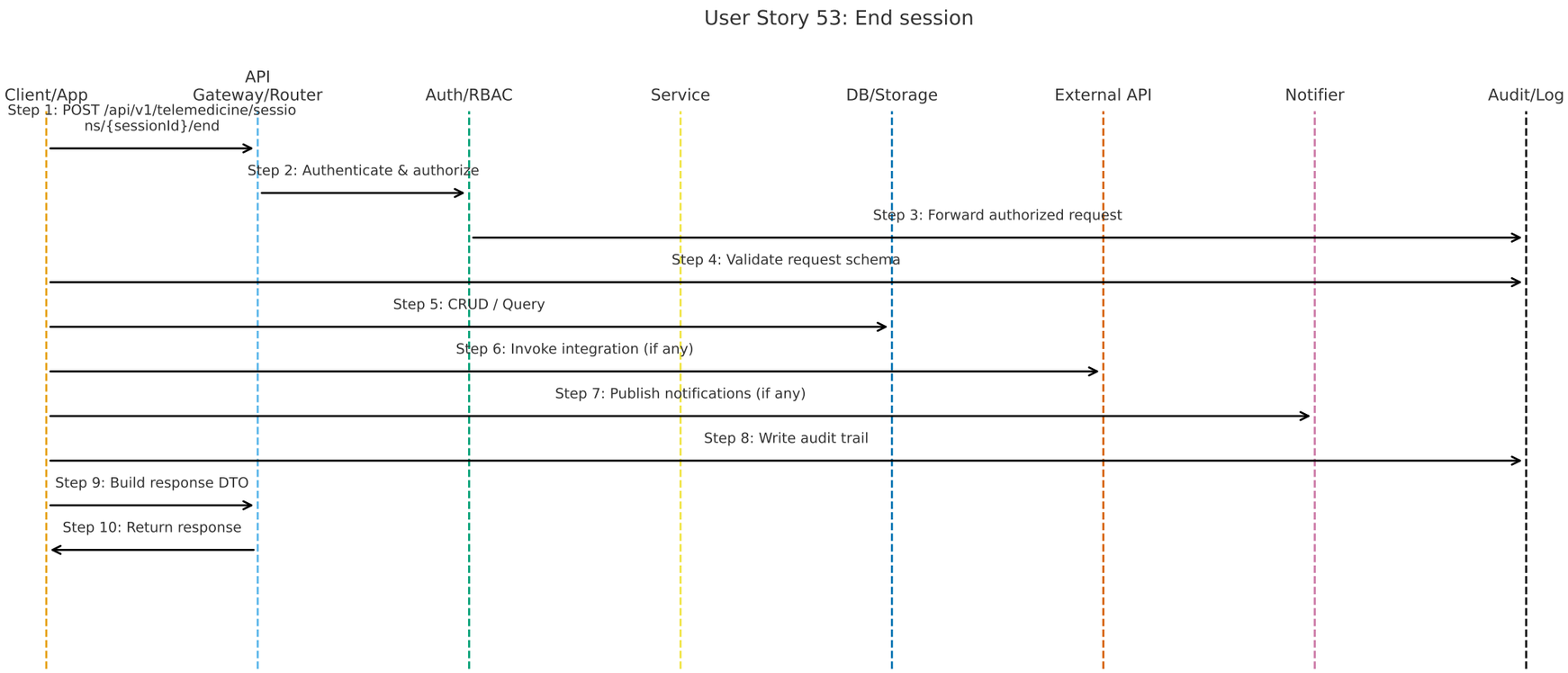

User Story 48: Create role
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/roles
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

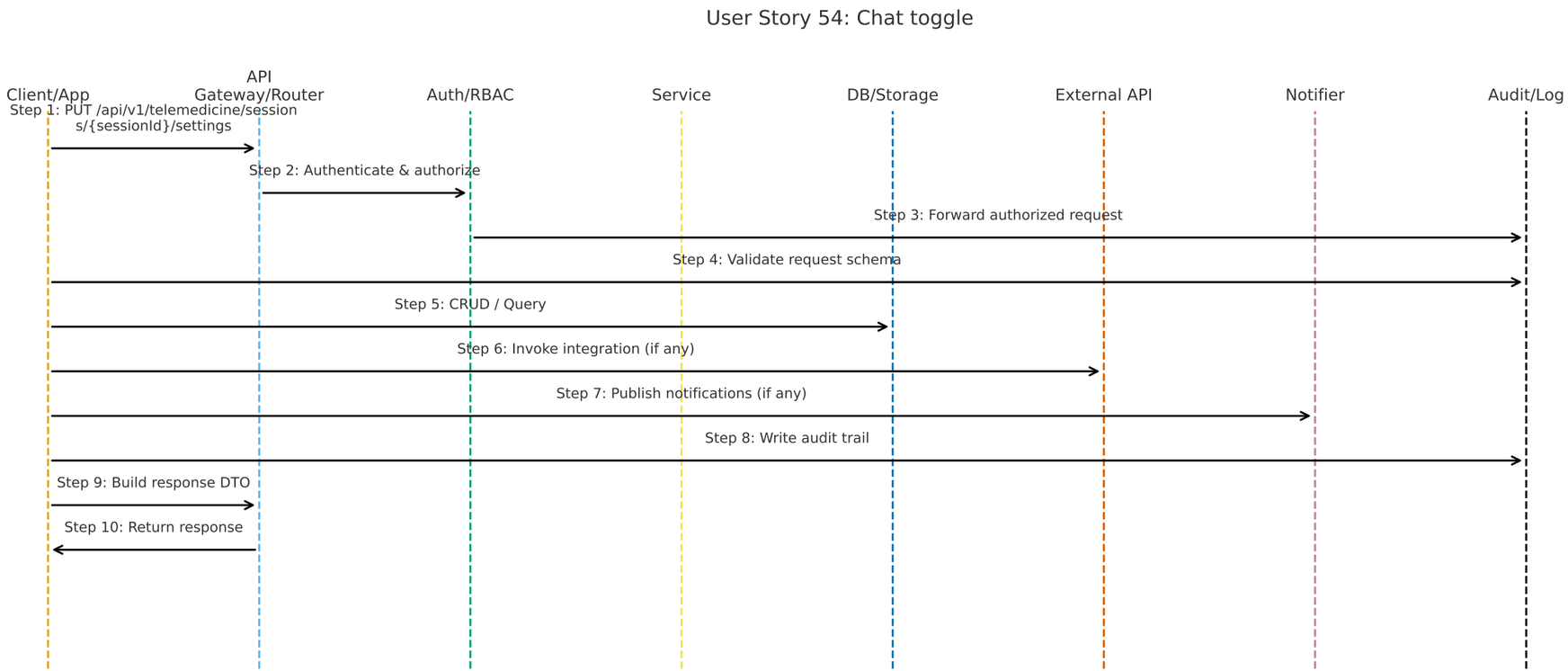

User Story 49: Revoke role
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: DELETE /api/v1/roles/{userId}/{roleName}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

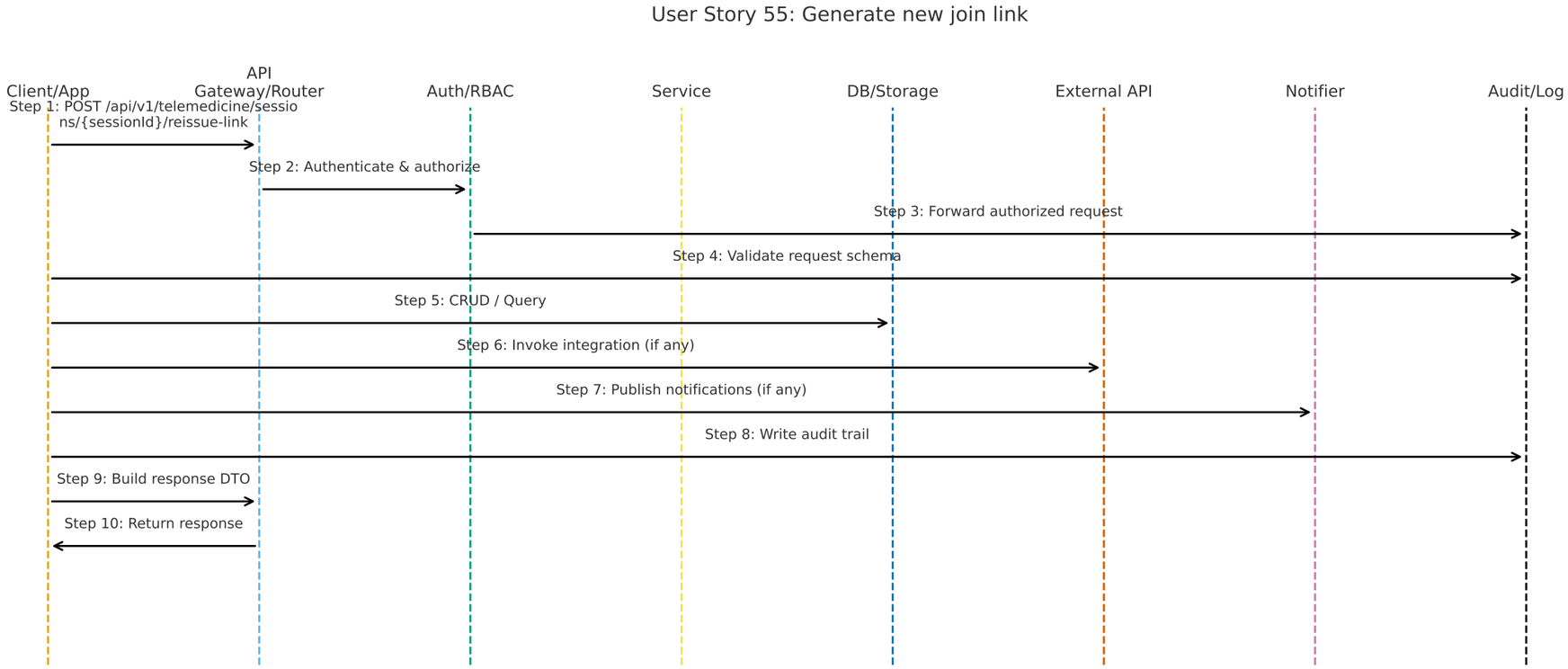

User Story 50: Create session
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/telemedicine/sessions
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

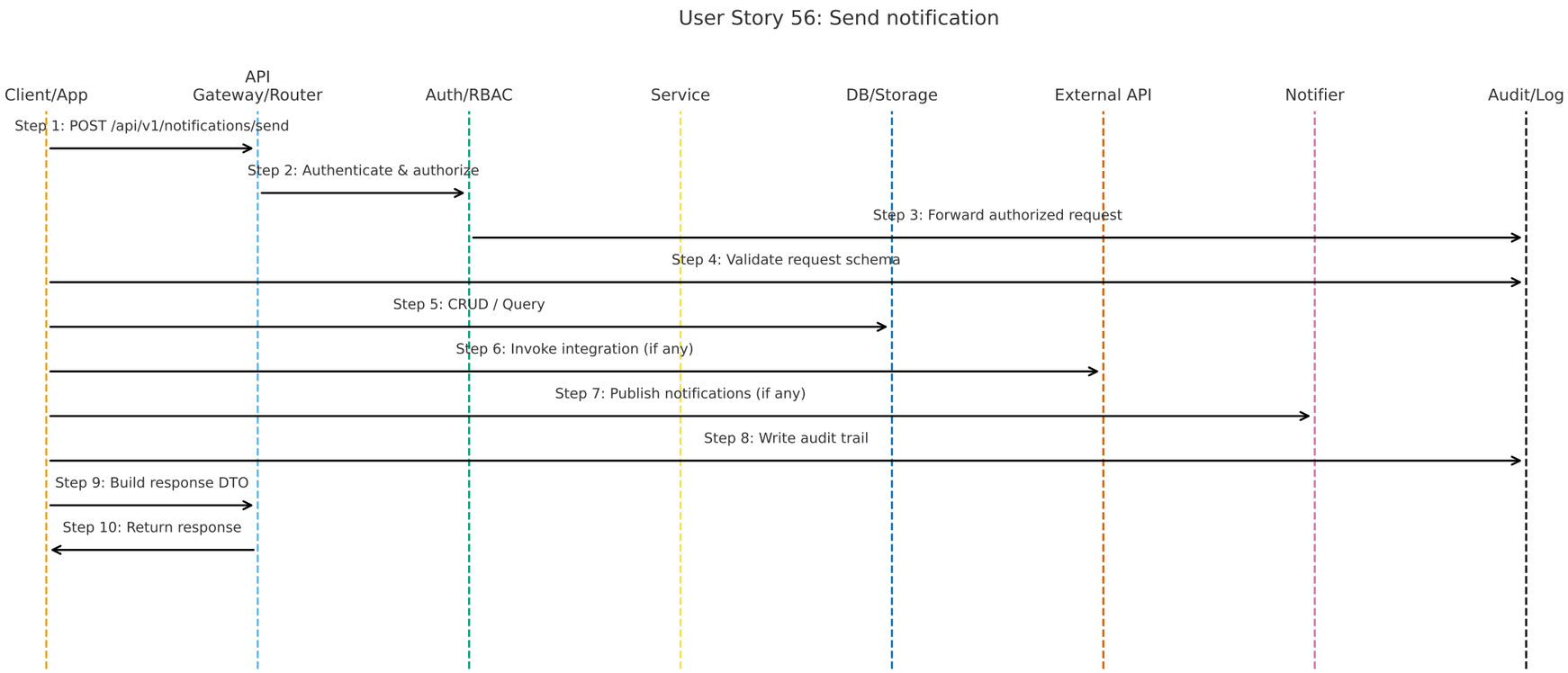

User Story 51: Record consent
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/telemedicine/consent
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

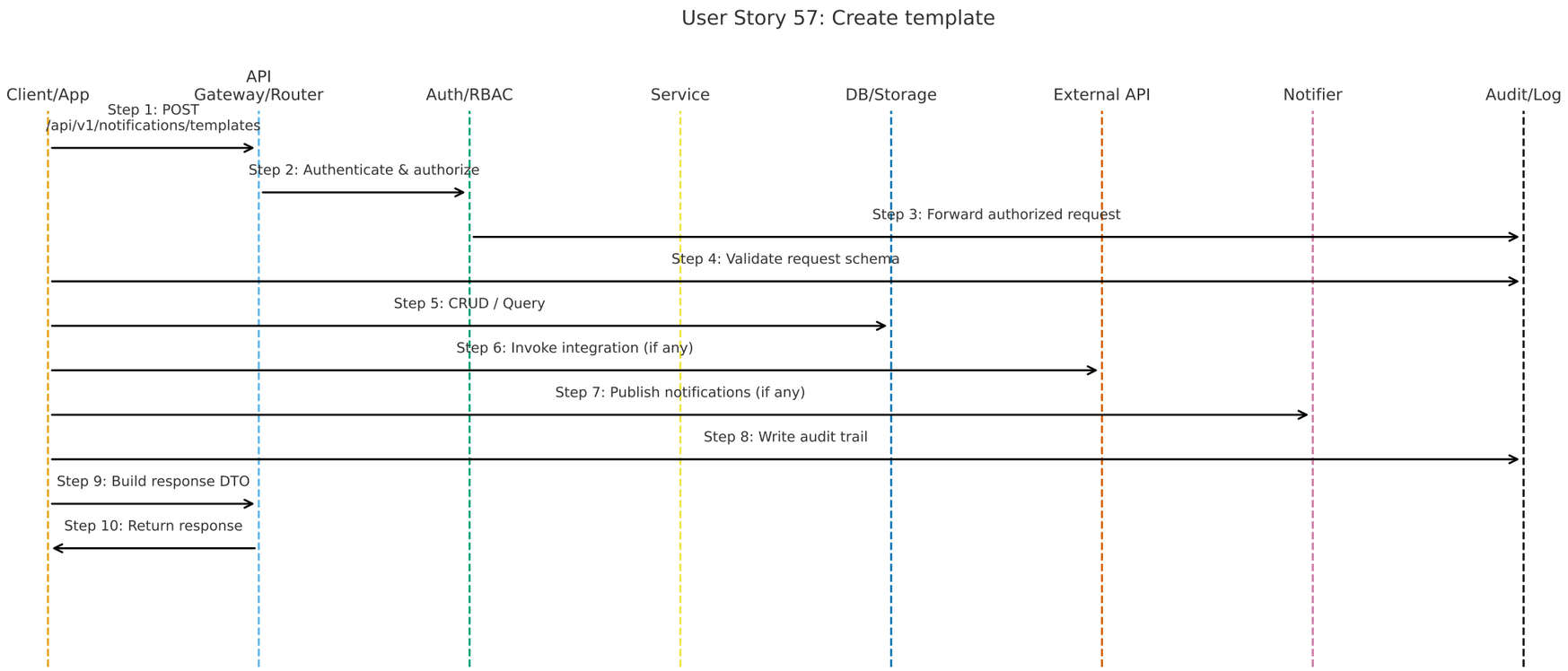

User Story 52: Get session metrics
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/telemedicine/sessions/{sessionId}/metrics
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

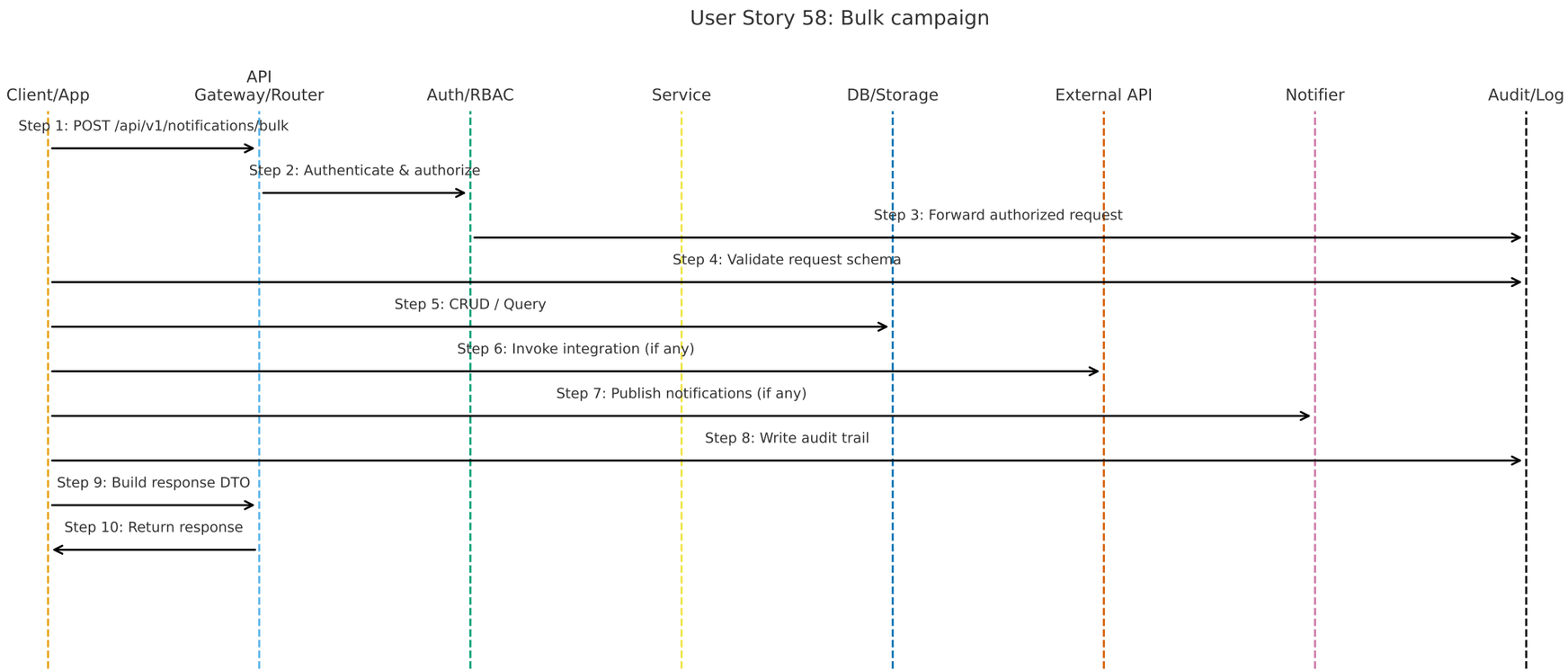

User Story 53: End session
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/telemedicine/sessions/{sessionId}/end
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

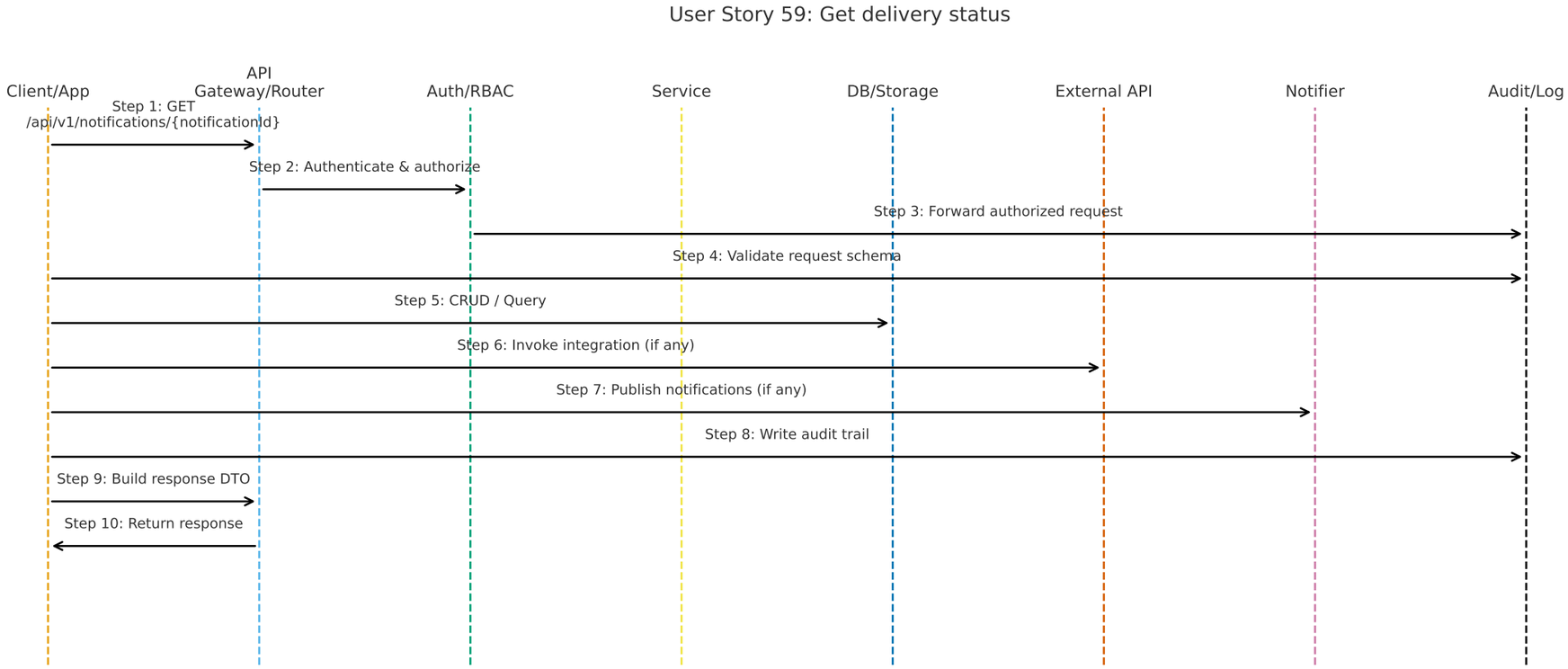

User Story 54: Chat toggle
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: PUT /api/v1/telemedicine/sessions/{sessionId}/settings
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

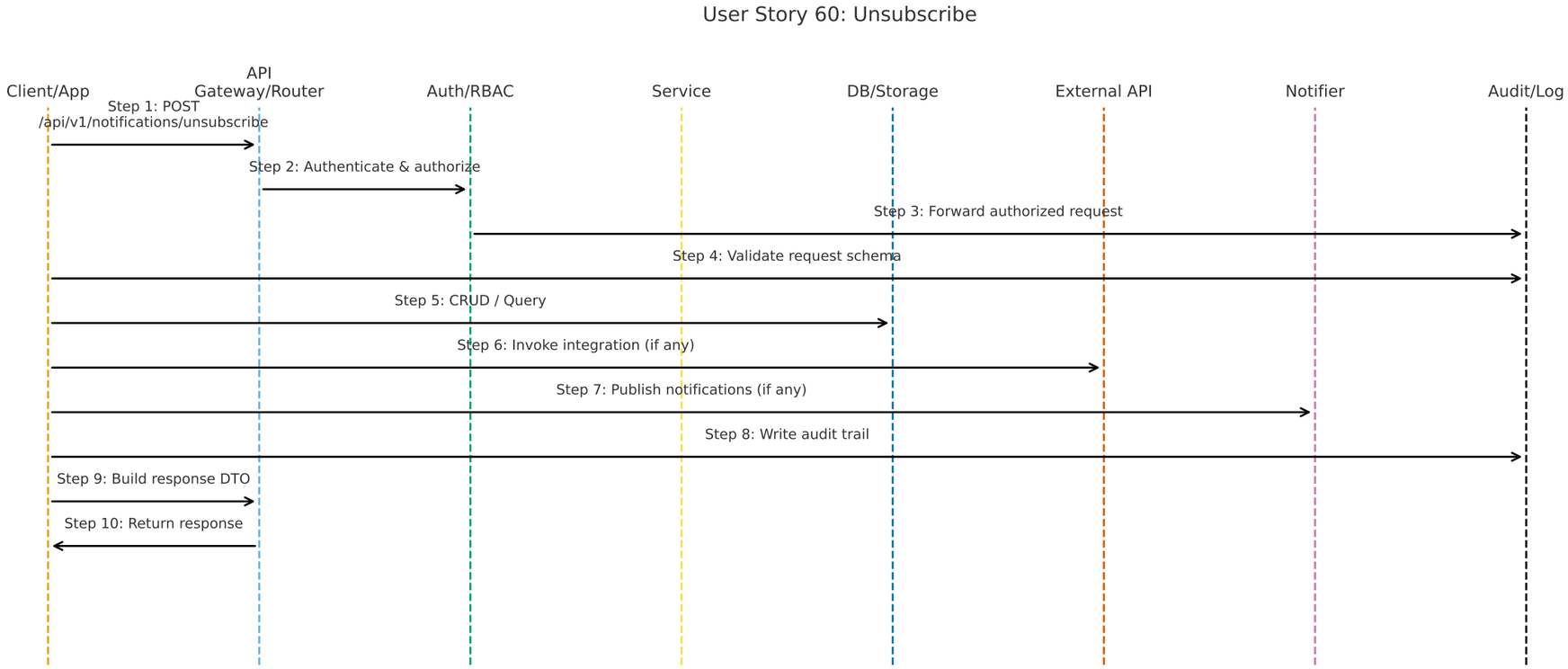

User Story 55: Generate new join link
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/telemedicine/sessions/{sessionId}/reissue-link
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

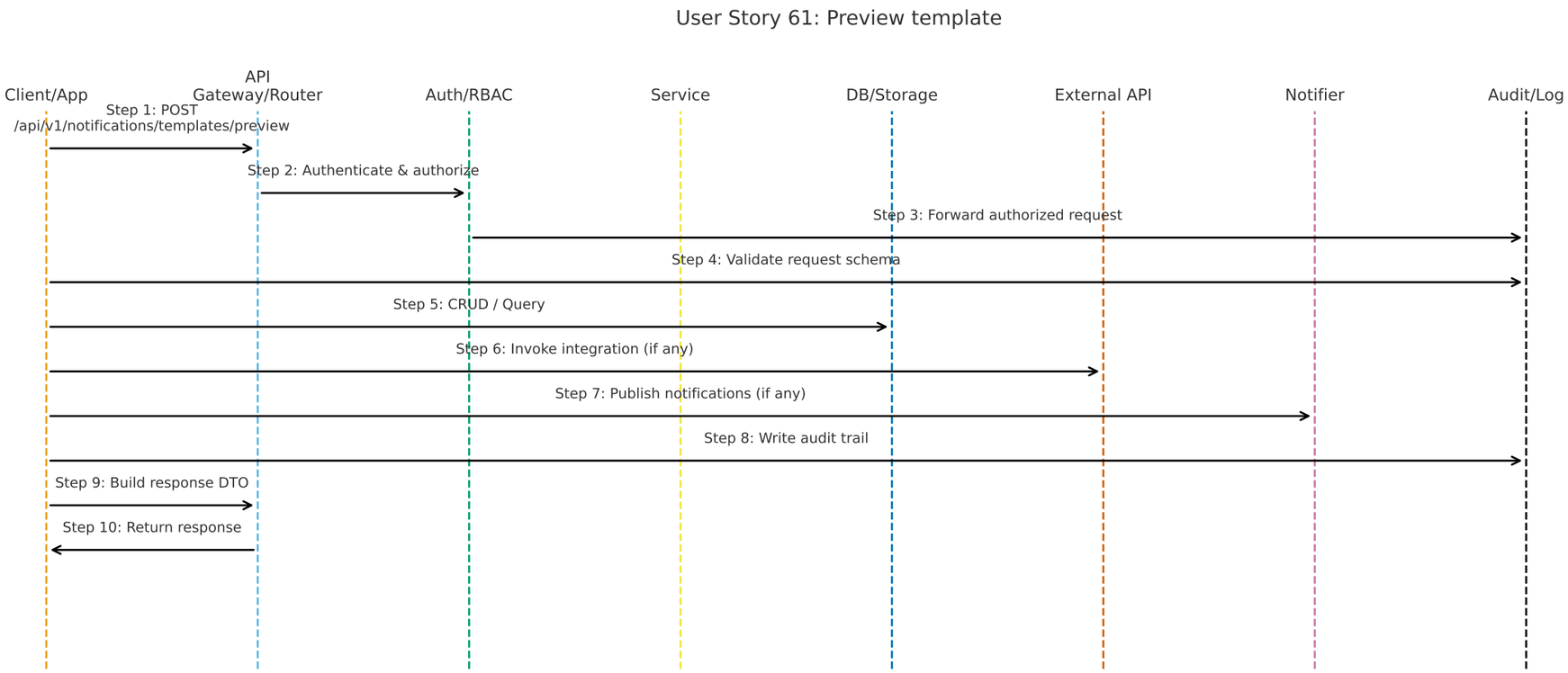

User Story 56: Send notification
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/notifications/send
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

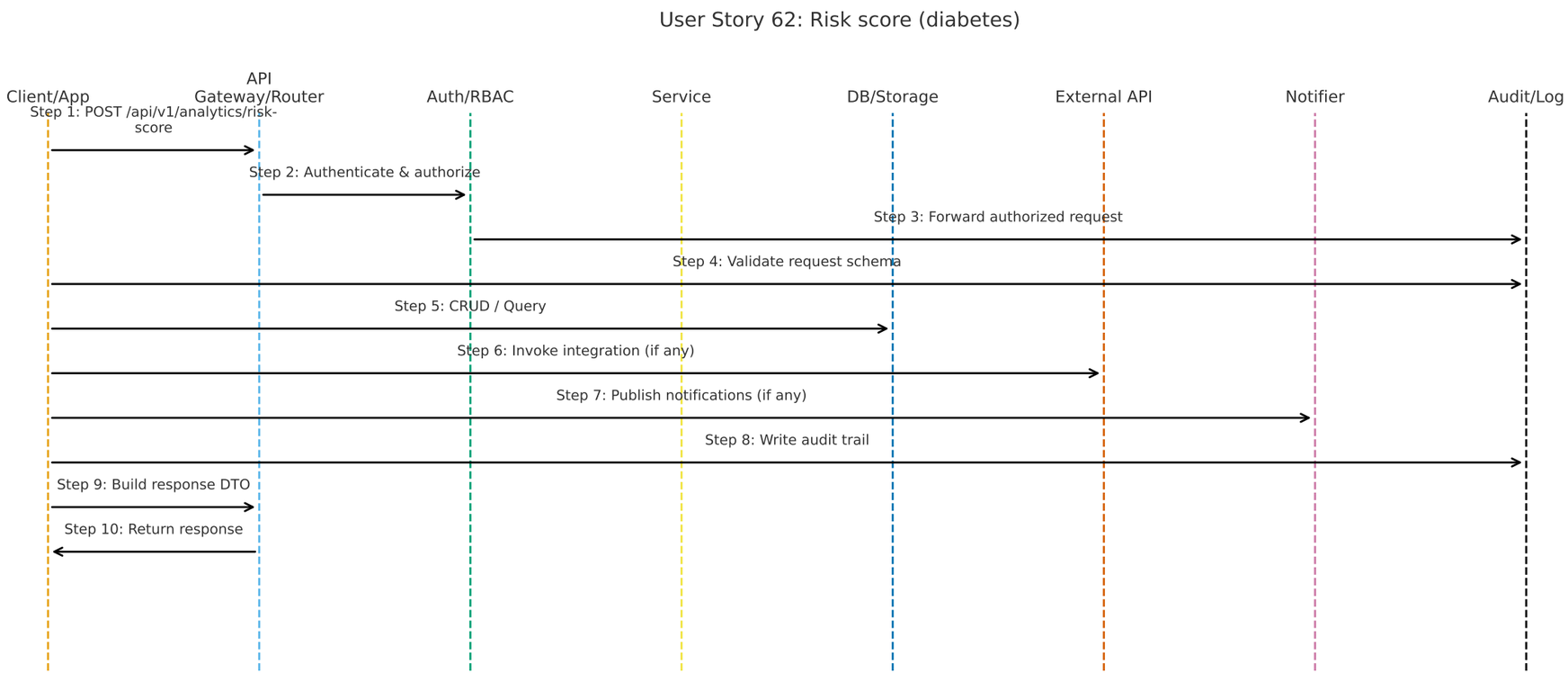

User Story 57: Create template
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/notifications/templates
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

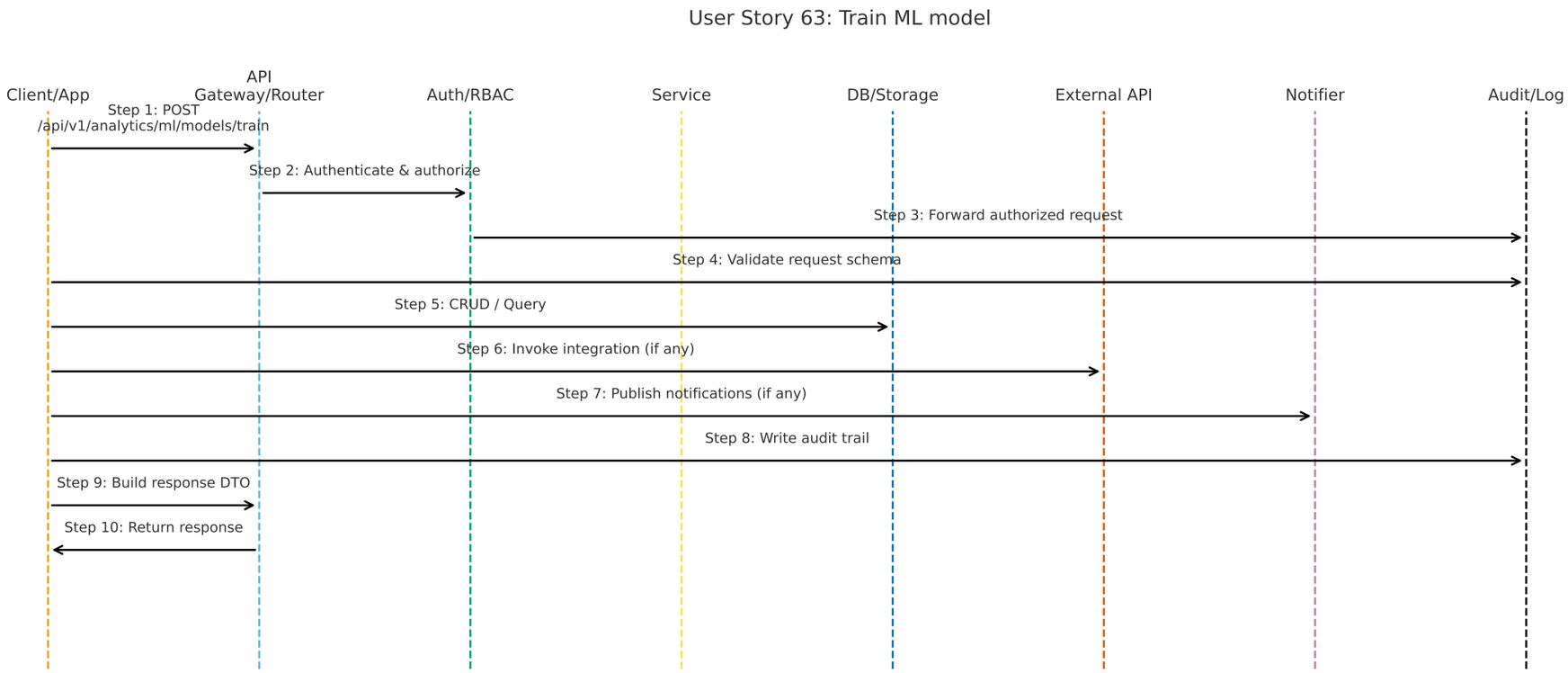

User Story 58: Bulk campaign
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/notifications/bulk
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

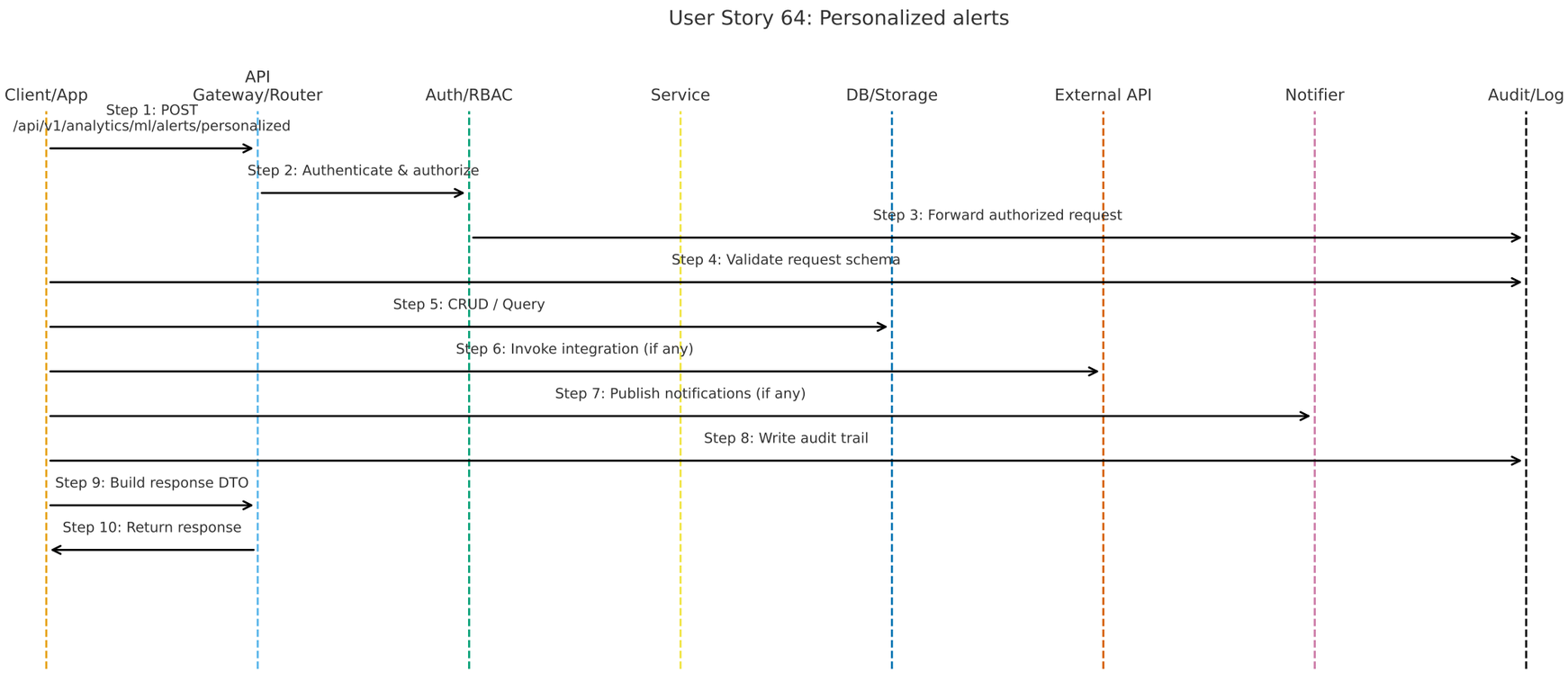

User Story 59: Get delivery status
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/notifications/{notificationId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

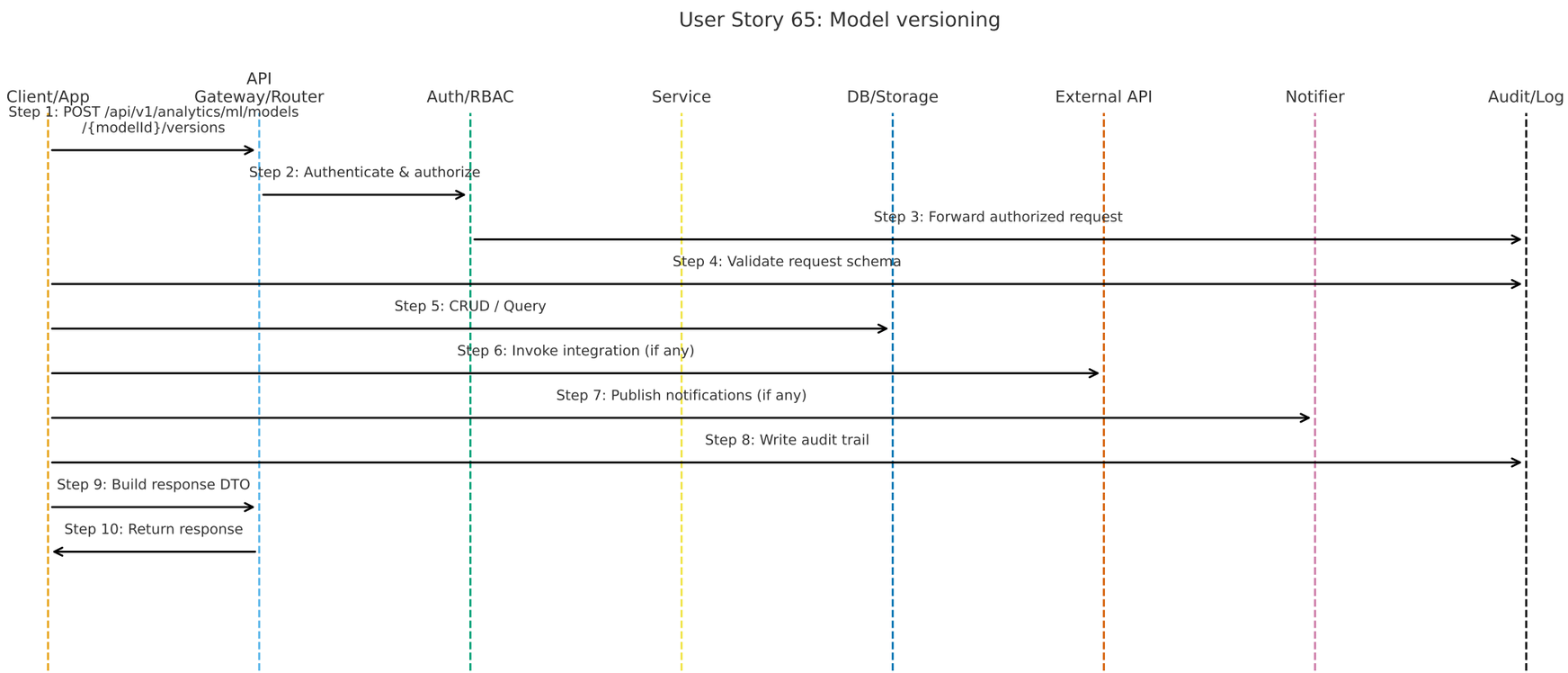

User Story 60: Unsubscribe
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/notifications/unsubscribe
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

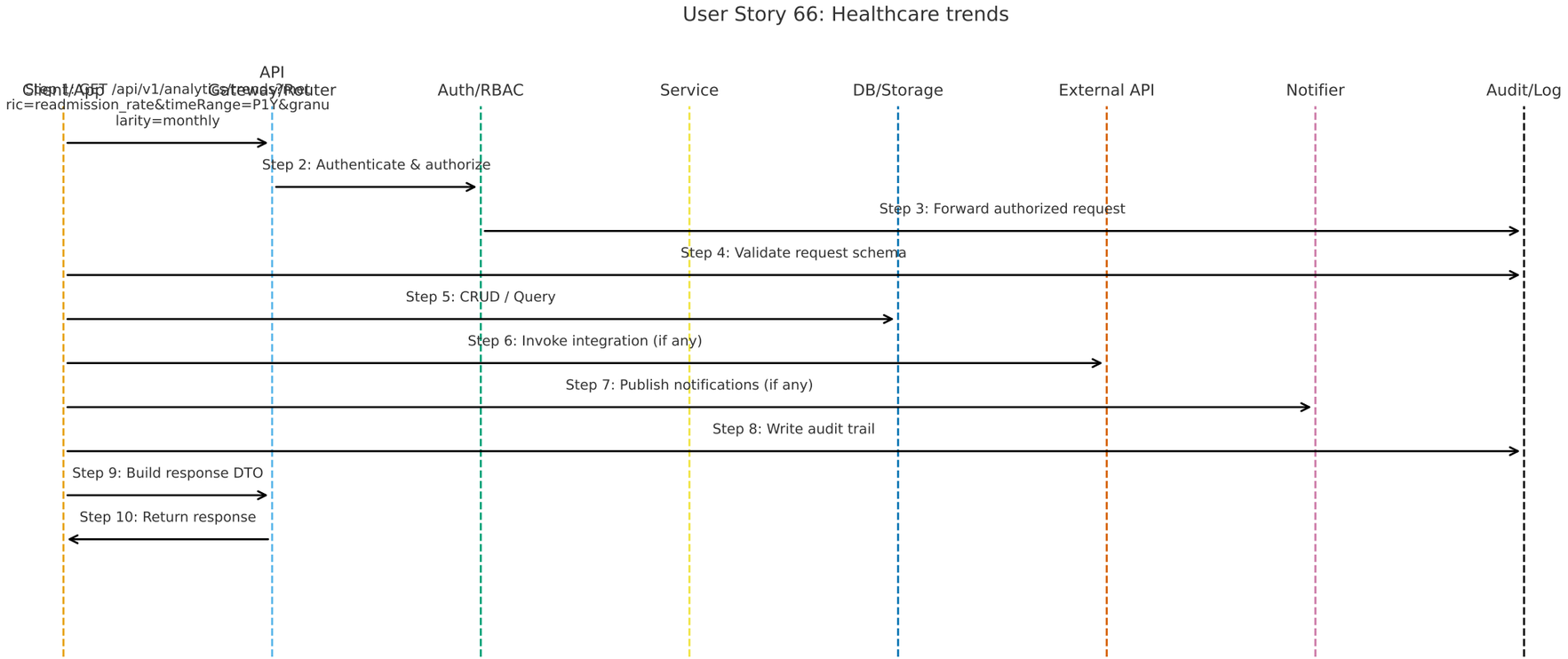

User Story 61: Preview template
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/notifications/templates/preview
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

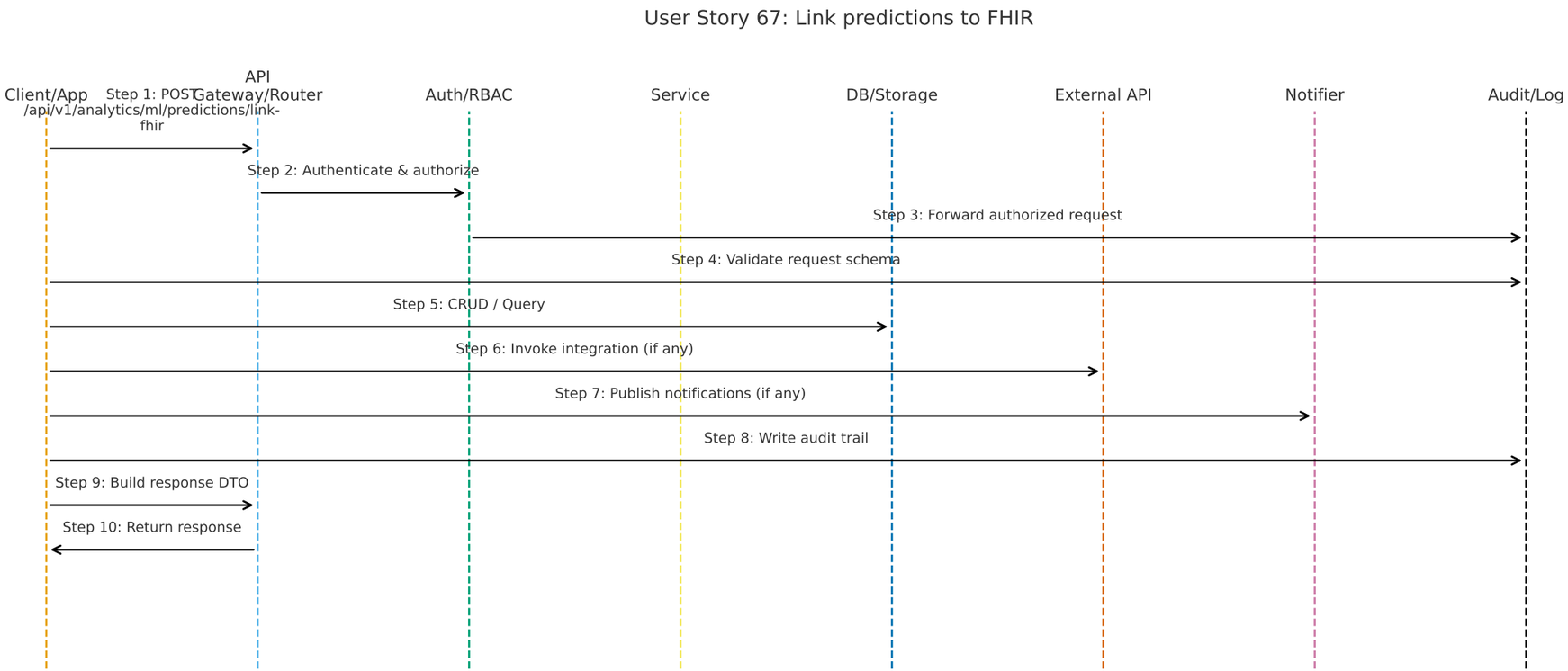

User Story 62: Risk score (diabetes)
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/analytics/risk-score
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

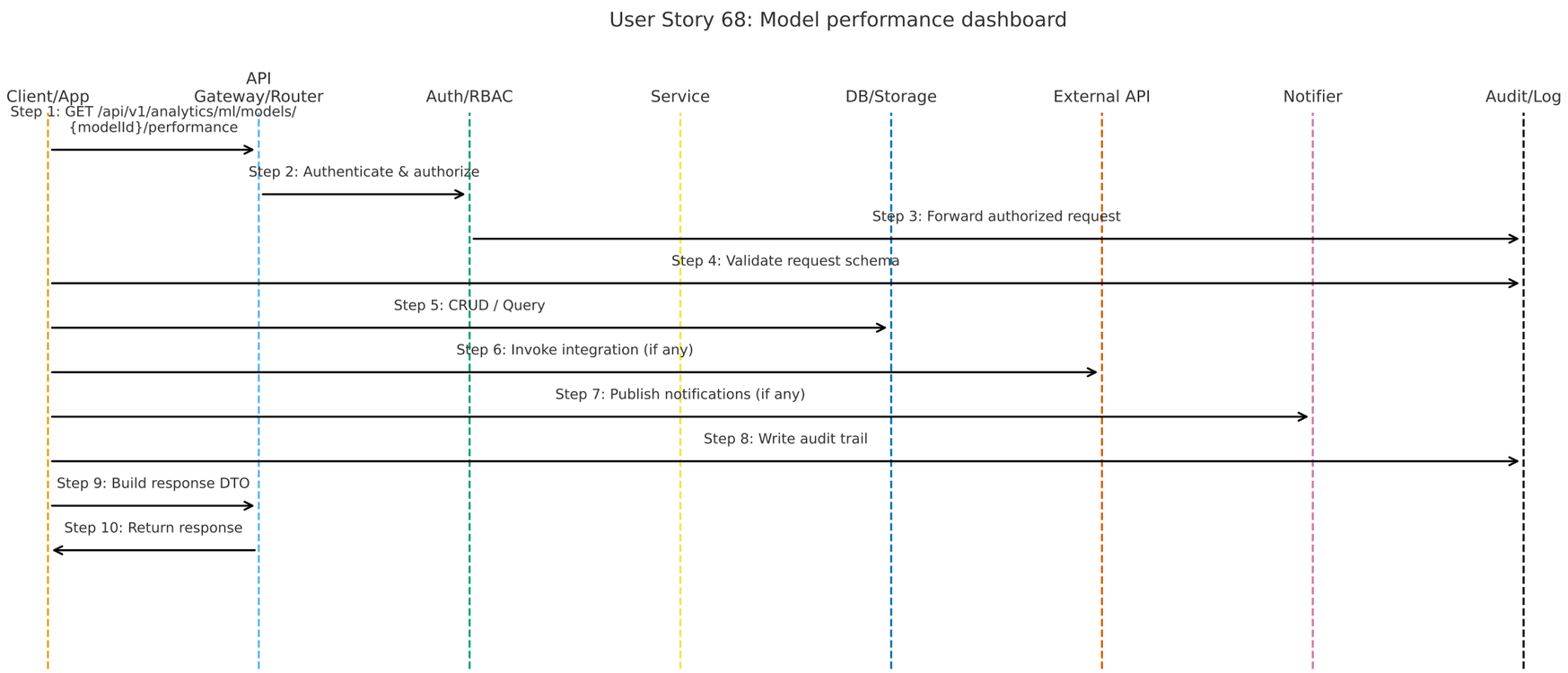

User Story 63: Train ML model
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/analytics/ml/models/train
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

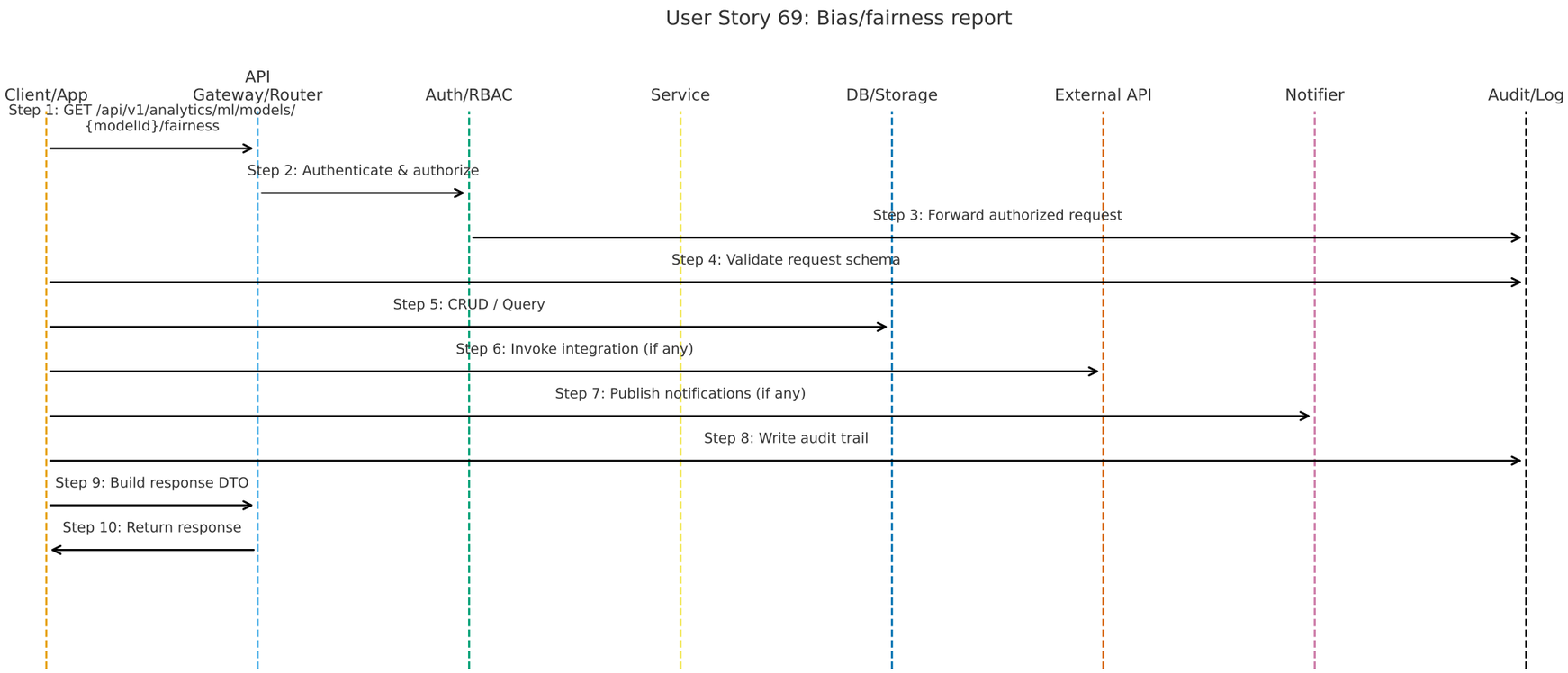

User Story 64: Personalized alerts
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/analytics/ml/alerts/personalized
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

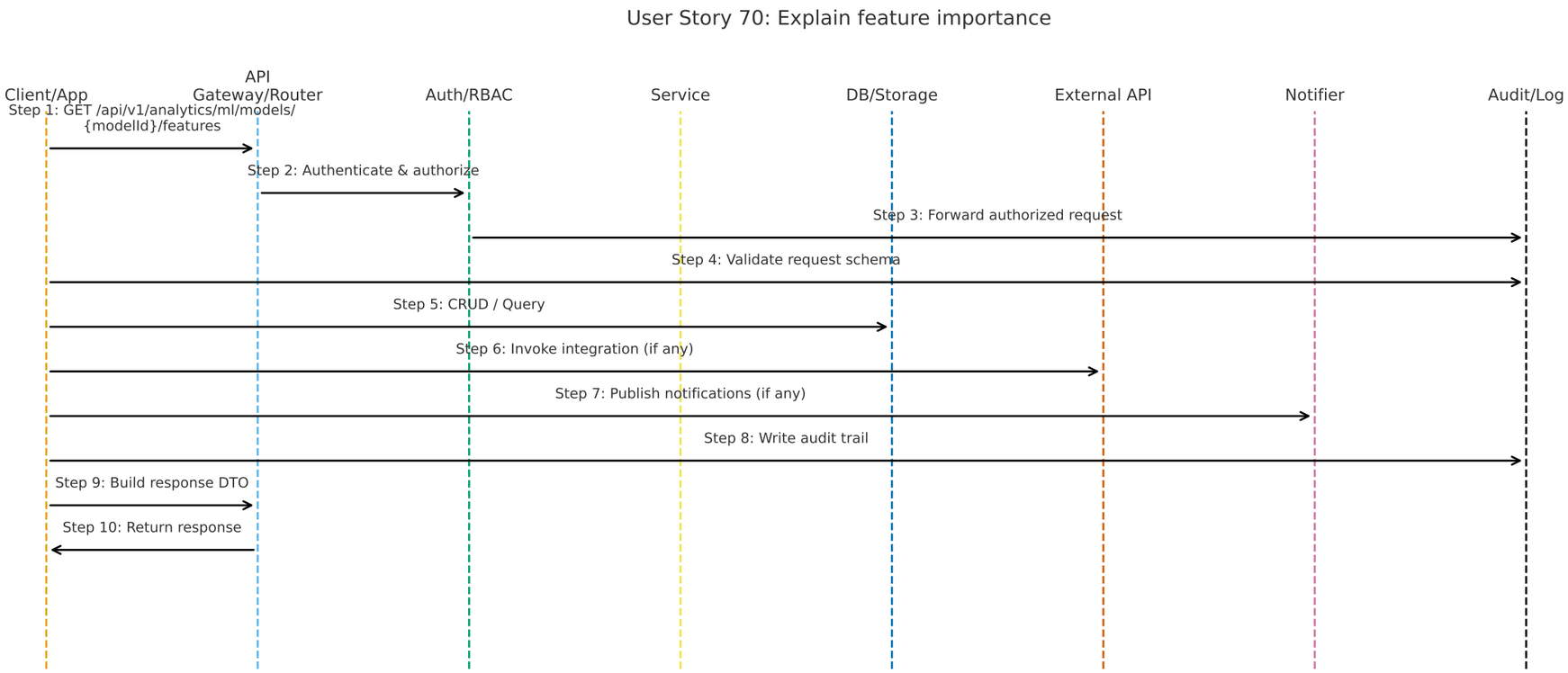

User Story 65: Model versioning
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/analytics/ml/models /{modelId}/versions
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

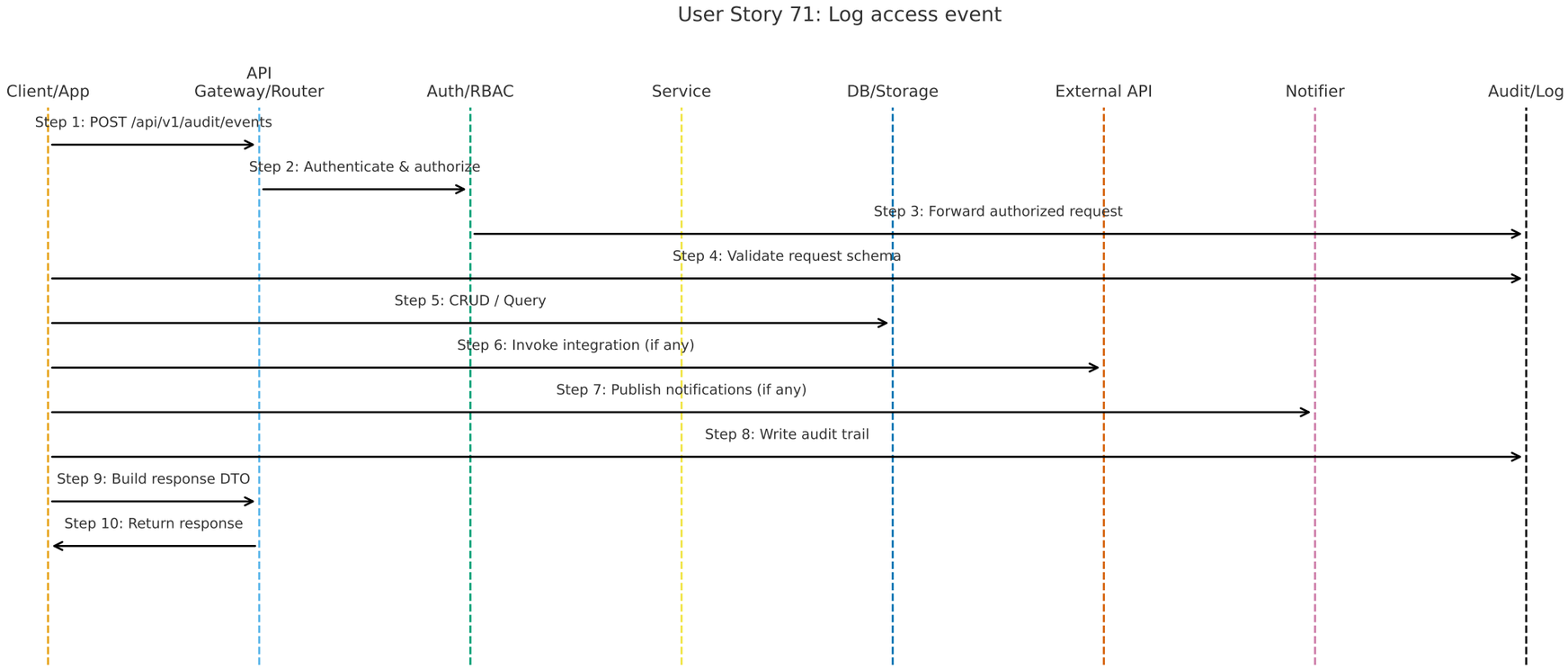

User Story 66: Healthcare trends
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/analytics/trends?metric=readmission_rate&timeRange=P1Y&granularity=monthly
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

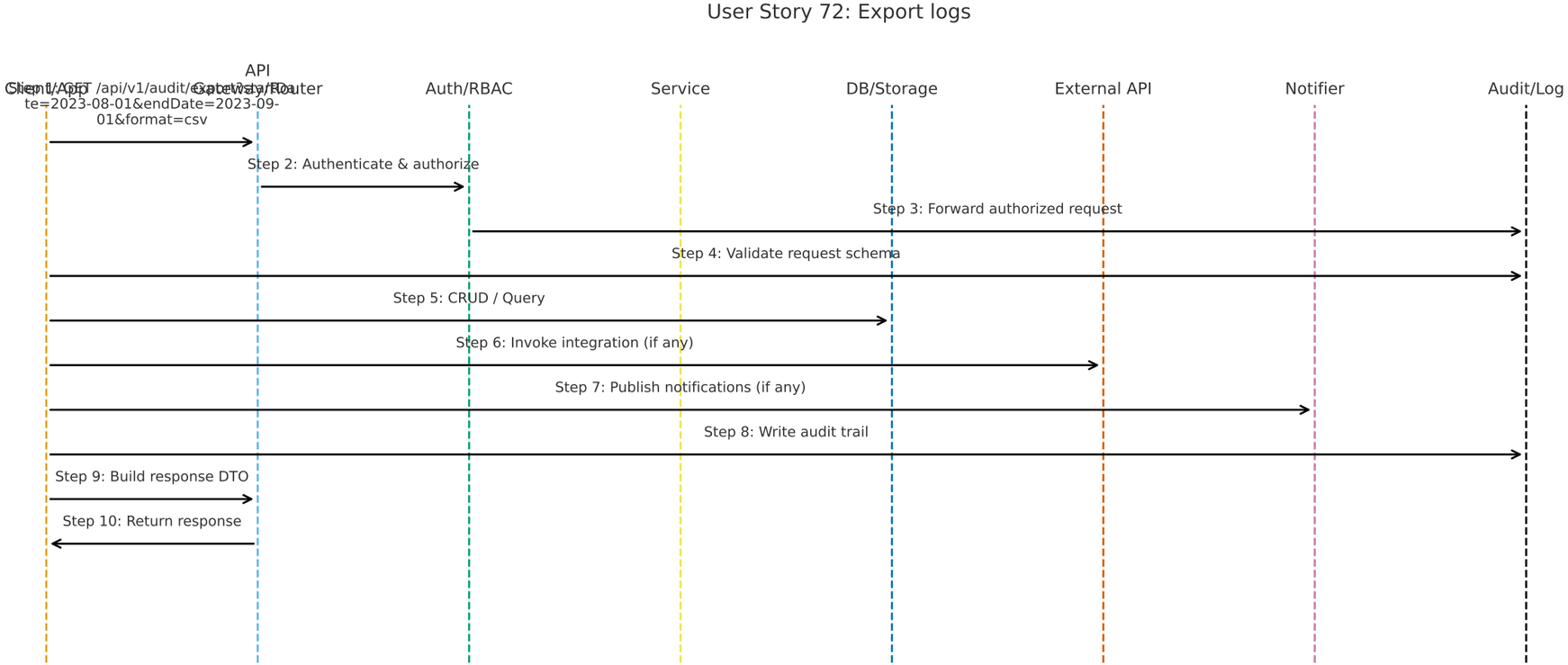

User Story 67: Link predictions to FHIR
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/analytics/ml/predictions/link-fhir
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

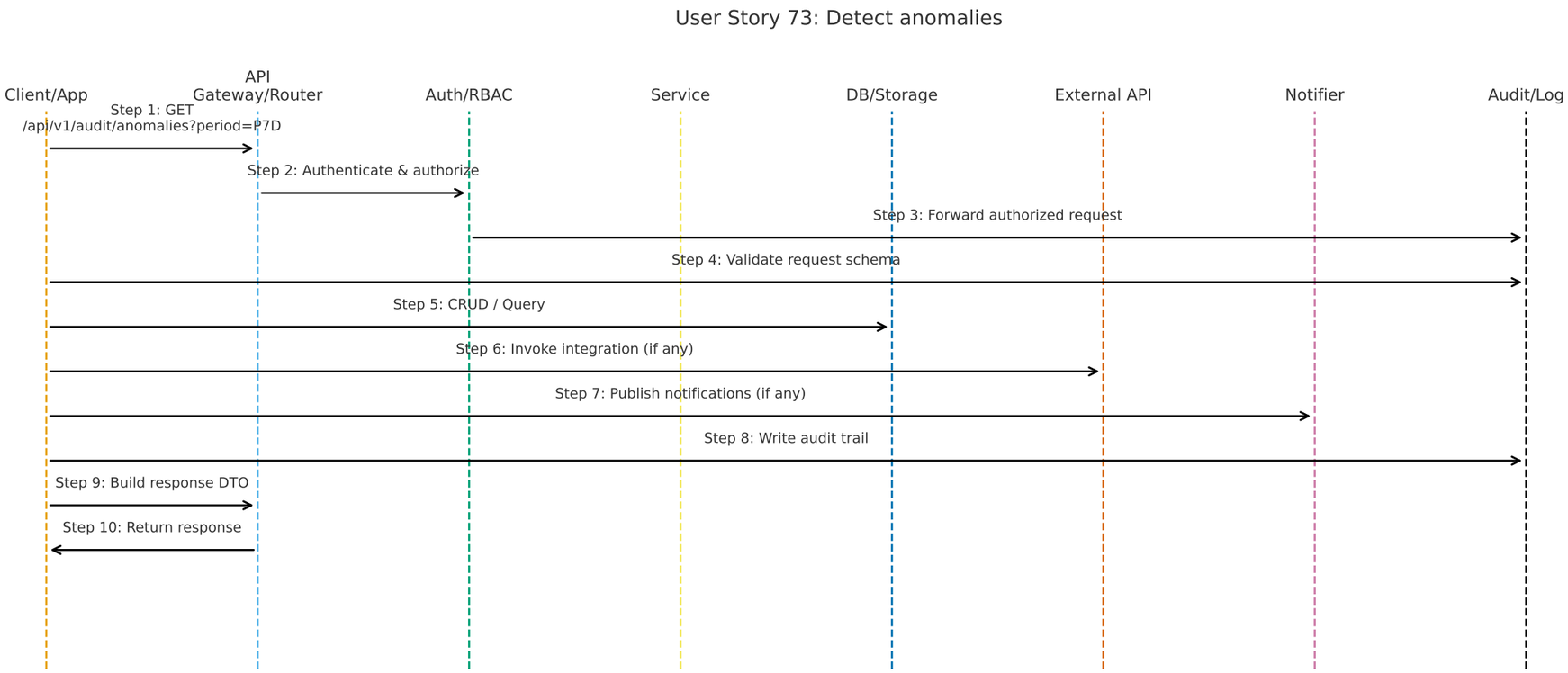

User Story 68: Model performance dashboard
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/analytics/ml/models/{modelId}/performance
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

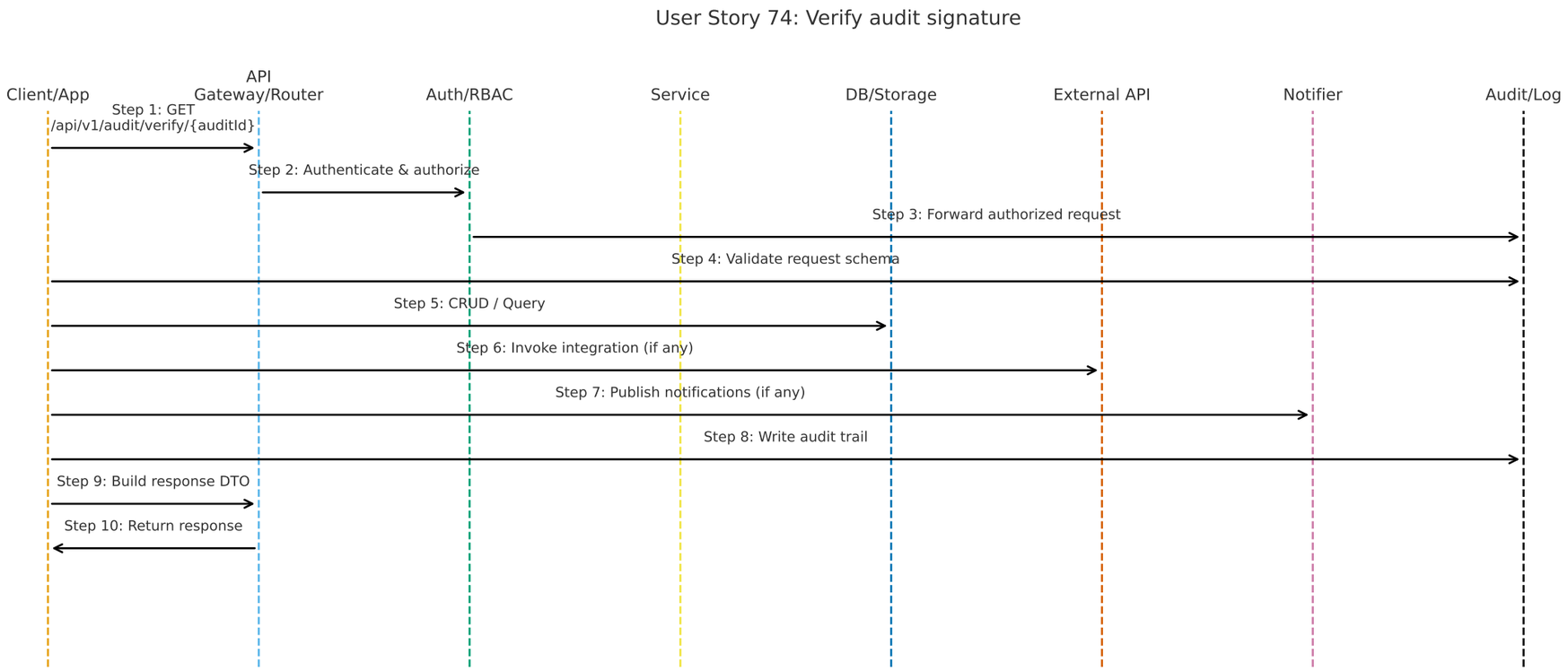

User Story 69: Bias/fairness report
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/analytics/ml/models/ {modelId}/fairness
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

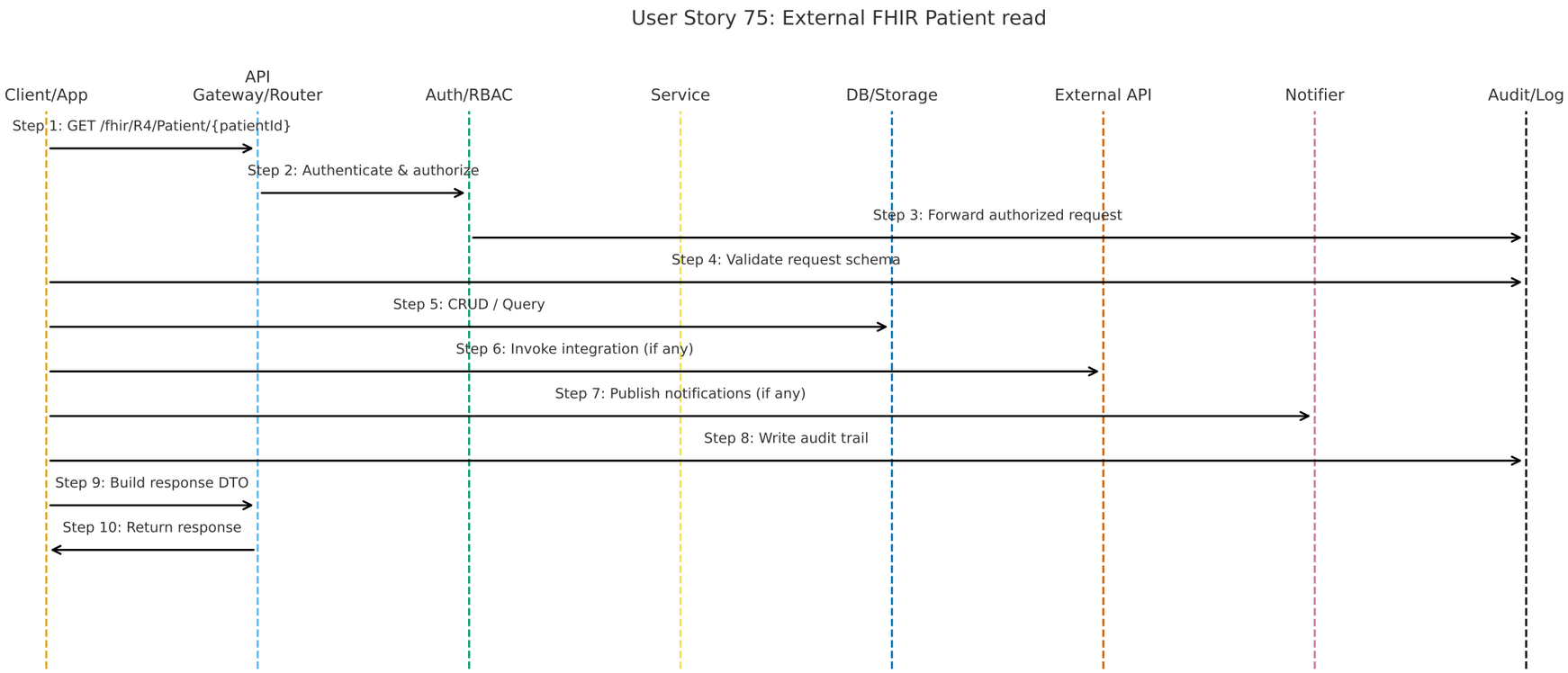

User Story 70: Explain feature importance
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/analytics/ml/models/ {modelId}/features
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

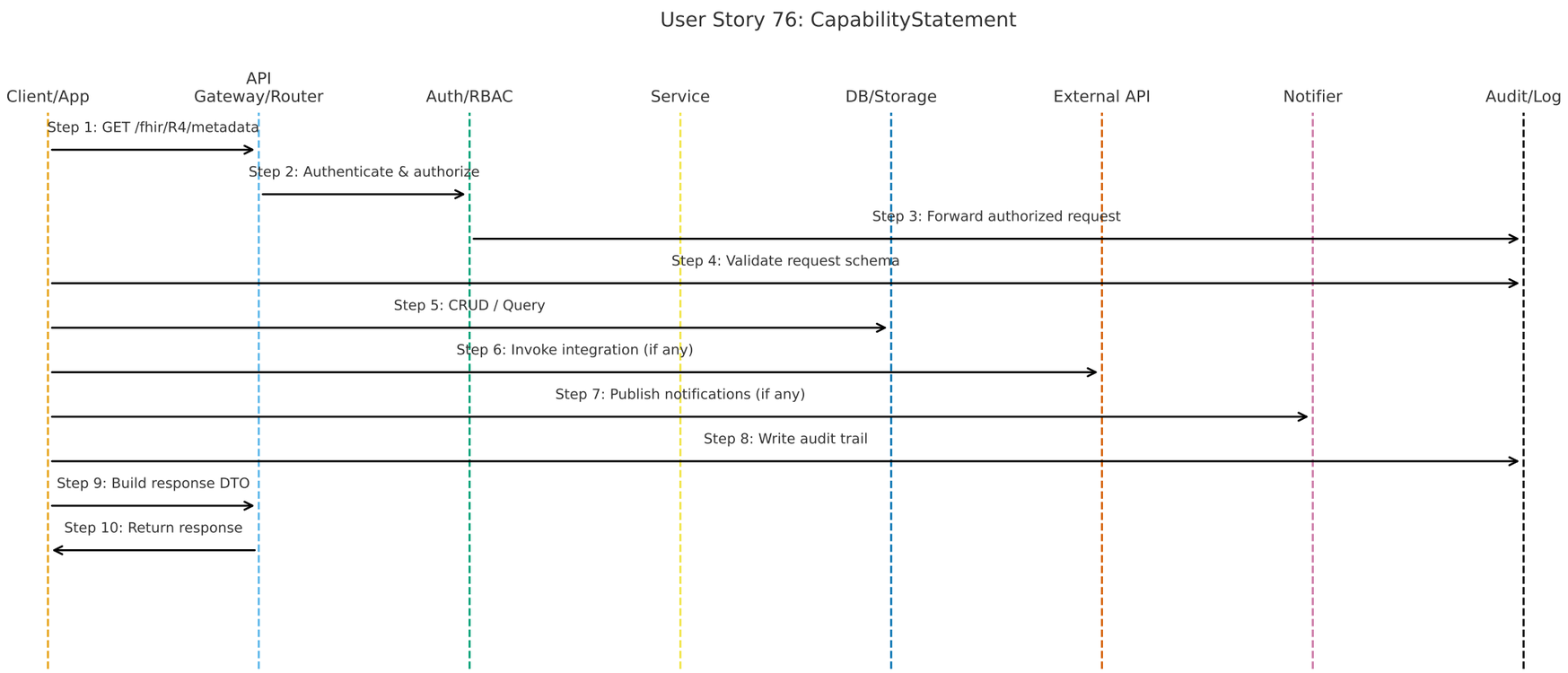

User Story 71: Log access event
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /api/v1/audit/events
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

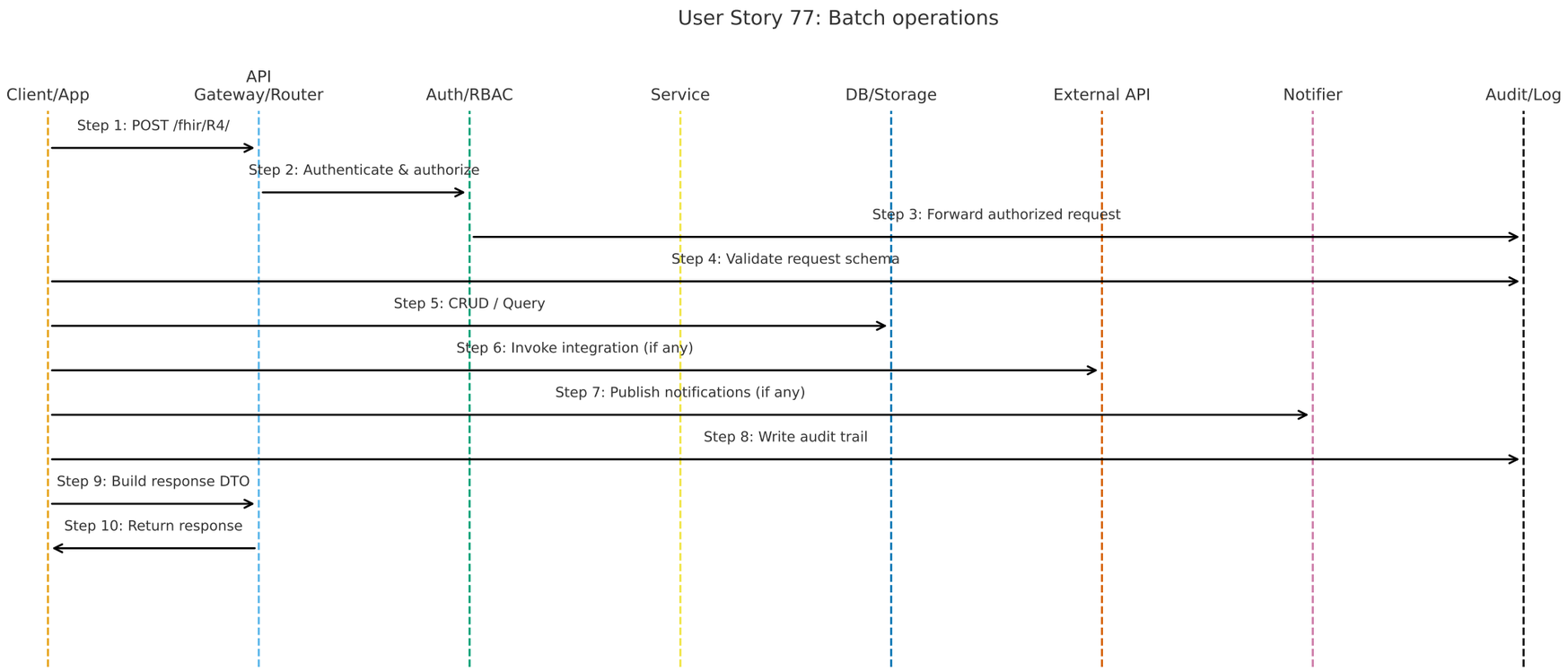

User Story 72: Export logs
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/audit/export?startDate=2023-08-01&endDate=2023-09-01&format=csv
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

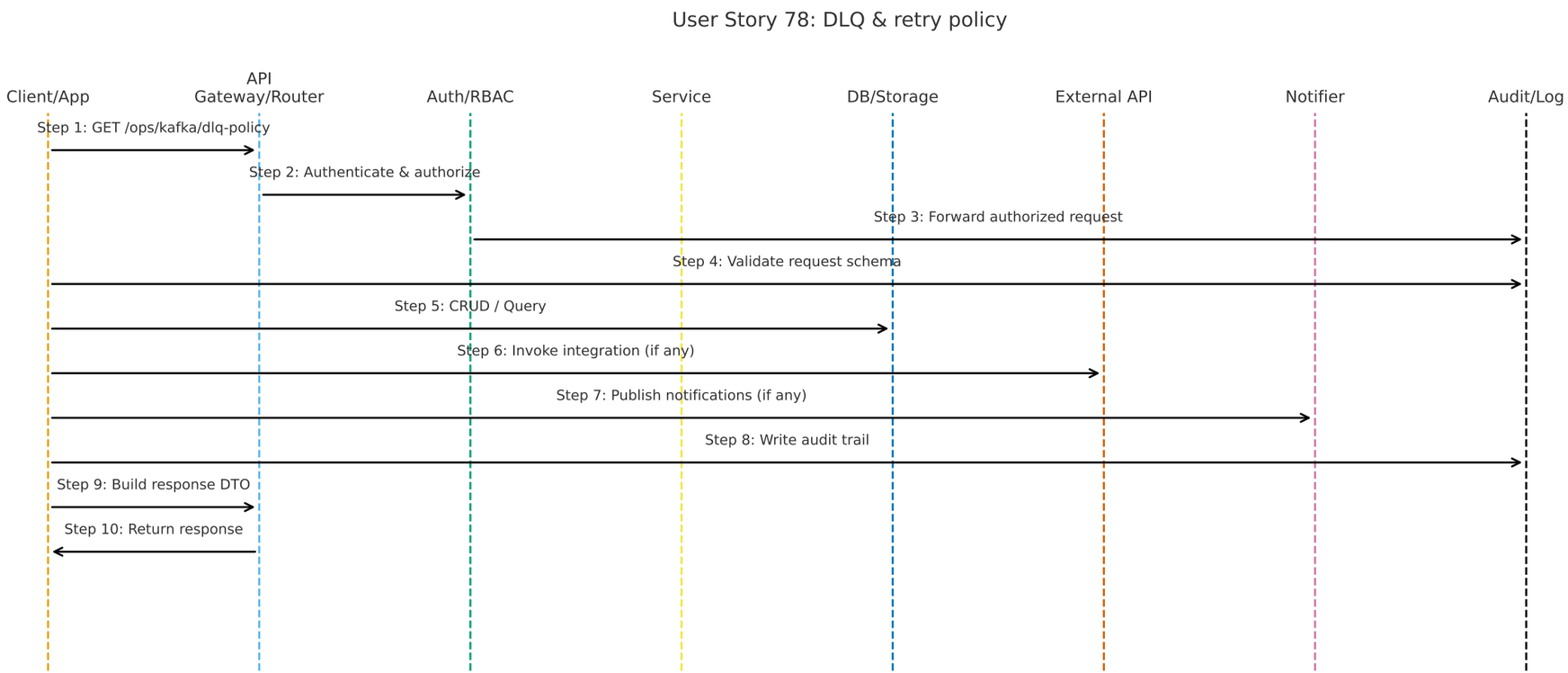

User Story 73: Detect anomalies
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/audit/anomalies?period=P7D
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response

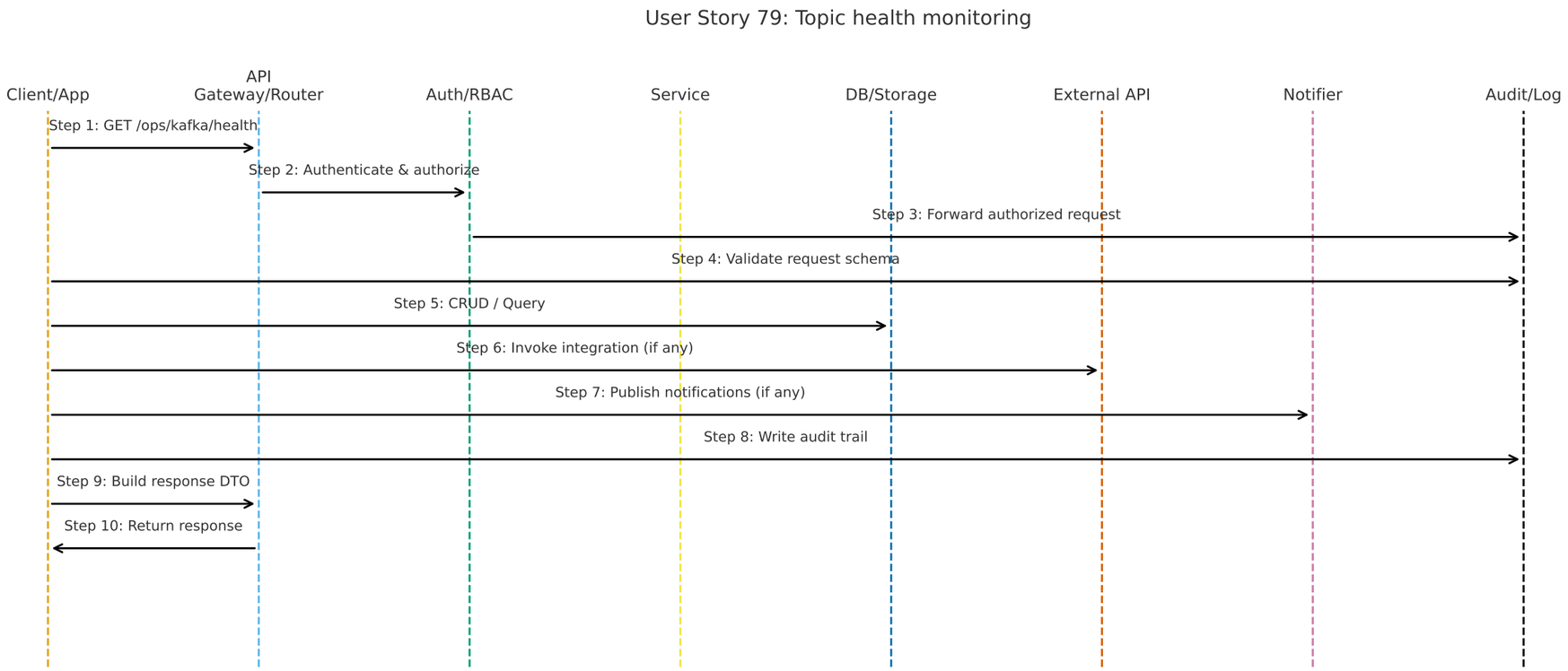

User Story 74: Verify audit signature
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /api/v1/audit/verify/{auditId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response


User Story 75: External FHIR Patient read
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /fhir/R4/Patient/{patientId}
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response


User Story 76: CapabilityStatement
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /fhir/R4/metadata
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response


User Story 77: Batch operations
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: POST /fhir/R4/
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response


User Story 78: DLQ & retry policy
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /ops/kafka/dlq-policy
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response


User Story 79: Topic health monitoring
Client/App
API Gateway/Router
Auth/RBAC
Service
DB/Storage
External API
Notifier
Audit/Log
Step 1: GET /ops/kafka/health
Step 2: Authenticate & authorize
Step 3: Forward authorized request
Step 4: Validate request schema
Step 5: CRUD / Query
Step 6: Invoke integration (if any)
Step 7: Publish notifications (if any)
Step 8: Write audit trail
Step 9: Build response DTO
Step 10: Return response