

GOVERNED TEMPLATE RENDERING REFERENCE: API CONTRACTS DEFAULT V2 (DRAFT)

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API CONTRACTS · PROJECT ARTIFACT

SPECIRA

API Contracts: Dispatch Modernization

Meridian Field Services: instructional example, not project evidence

DRAFT · WATERMARK POLICY: DRAFT_ONLY

template api_contracts v2 · pack: specira_default_delivery

spec-first · the OpenAPI file owns schema; this artifact owns the promise

§1 API Overview & Conventions

mandatory

1 decision

1 evidence rule

validators: style_versioning_pagination_each_one_logged_decision ·
conventions_stated_once_and_referenced · no_uri_path_versioning

The style is a decision, the conventions are stated once, and the spec is the source of truth; everything below references this section instead of re-deciding.

Style decision: REST

What: resource-oriented HTTP, a graph query layer, binary RPC. **Why considered:** consumers are the board (browser), the technician mobile app, and one inbound vendor webhook; no cross-resource aggregation need exists (the board's read model is server-composed) and vendor tooling expects plain HTTP. **Who & how:** E. Sandoval with A. Reyes, walked against the four screens and the integration register, July 16. **Findings:** GraphQL rejected (no aggregation consumer; cache and authorization complexity unjustified); gRPC rejected (browser and vendor compatibility cost) ([API-style decision^{\[1\]}](#)).

Spec-first: the OpenAPI file lives at `api/openapi.yaml`, pinned per release; reference docs and client types generate from it; this artifact carries the invariants, the registry, and the matrix.

Convention (stated once)	Rule
Naming	snake_case fields · plural collections (/jobs, /assignments) · nesting
Pagination	page_size (max 200) + page_token → next_page_token
Filtering / ordering	filter= · order_by= per the list convention
Versioning	v1; breaking = rename or removal, new required field, changed status or error semantic day deprecation window with Deprecation + Sunset headers; no URI versioning (decision^[1])

Resources: jobs, technicians, assignments, positions, suggestions (five roots, under the ceiling of eight); each maps to its data-model entity ([entities^{\[2\]}](#)).

§2 Endpoint Specifications

mandatory

1 decision

1 evidence rule

validators: every_endpoint_has_worked_example · every_endpoint_has_error_catalog_reference · rate_limits_and_slos_are_numbers · slo_classes_cite_architecture_quality_scenarios

Every row carries its example, its errors, its auth citation, and its SLO class. Limits are numbers because they protect the SLO, and say so.

Class	p95 budget	Source
read	300 ms	quality scenarios^[3] (cited, not invented)
write	500 ms	
computed	800 ms (inside the sub-second suggestion budget)	

Rate limits: staff sessions 600 req/min (burst 900); vendor webhook ingress 900/min (burst 1500, from the feed contract); mobile 120/min.

Endpoint	Purpose	Auth (cites policy)	Errors
GET /jobs	List jobs; filters status, hub; pagination convention §1	dispatcher , ops manager^[4]	validation_failed · r
POST /assignments	Create assignment;	dispatcher · hub scope^[4]	authority_denied · st

Endpoint	Purpose	Auth (cites policy)	Errors
	Idempotency- Key required: 24-h retention; reuse with different parameters returns conflict_key_reuse (US-1 ^[5])		
POST /overrides	Record override; reason_code required (FR-013 ^[6])	<u>dispatcher^[4]</u>	validation_failed · a
GET /jobs/{id}/suggestions	Ranked candidates; degradation contract §4	<u>dispatcher^[4]</u>	suggestions_unavailat
GET /positions	Vehicle positions; band-masked off dispatch surfaces per the handling matrix (labels ^[7])	<u>dispatcher,</u> <u>fleet</u> <u>manager^[4]</u>	rate_limited
POST /webhooks/positions	Vendor feed ingress: contract in §5	<u>machine ·</u> <u>vendor</u> <u>signature^[4]</u>	signature_invalid · r

Every example is a tested request/response pair in the example set (example set^[8]); payload fields cite data-model ids, never re-describe them.

§3 Authentication & Authorization

mandatory

1 decision

1 evidence rule

validators: every_endpoint_cites_auth_role_not_inline_defined · matrix_cells_resolve_to_policy_roles_or_machine_identities

The policy owns the roles; this artifact owns which endpoint group needs which. Nothing is redefined here.

Endpoint group	Policy role (cited)	Note
jobs read	dispatcher · ops manager ^[4]	ops manager read-only; fleet manager denied
assignments create	dispatcher ^[4]	within hub scope, server-enforced
overrides create	dispatcher ^[4]	reason required
positions read	dispatcher · fleet manager ^[4]	masking per classification
feed configuration	fleet manager ^[4]	none
role administration	platform admin ^[4]	no wildcard; the policy's matrix law

Enforcement: server-side denial, not hidden buttons ([SR-004](#)^[9]). **Machine access:** the positions webhook authenticates by vendor signature with quarterly rotation ([machine identity](#)^[4], [SR-021](#)^[9]); the notification worker and adapter use platform service accounts with short-lived tokens.

§4 Error Registry

mandatory

1 decision

1 evidence rule

validators: every_error_type_exists_in_closed_registry · registry_rows_state_when_raised_and_driver · degradation_contracts_present_where_architecture_commits_fallback

One envelope: RFC 9457 problem details. One closed registry: a new type is a review with the API owner, never an author's invention. Type URLs under `api.meridianfield.example/errors/`.

Type	Status	When raised	Driver
validation_failed	422	Malformed or out-of-contract input	SR-006 ^[9]
authority_denied	403	Role or scope check failed server-side	SR-004 ^[9] · TM-03 ^[10]
not_found	404	Resource id does not resolve within the caller's scope	none
stale_version	409	Optimistic-lock version mismatch	concurrency ^[2]
conflict_key_reuse	409	Idempotency-Key reused with different parameters	§2 rule

Type	Status	When raised	Driver
rate_limited	429	The tier's numeric limit; Retry-After carried	§2 limits
signature_invalid	401	Webhook signature or replay-window failure	SR-021^[9]
suggestions_unavailable	503	Degradation contract: the ranked-suggestion path degraded; the board proceeds with the full list	degradation posture^[3]

The degradation row exists because the architecture commits the fallback; clients build against it instead of discovering it in production.

§5 Webhooks & Eventing

conditional · inbound feed exists, ENGAGED

1 decision

1 evidence rule

validators: every_webhook_documents_signature_and_retry_semantics · webhook_ordering_rule_stated

Verify before you parse; reconcile on state, never on arrival order.

Rule	Vendor positions webhook (inbound)
Signature	HMAC-SHA256 over the raw body + timestamp header; replay window 300 s; verified before parsing or any side effect (SR-021^[9] , TM-01^[10])
Delivery	At-least-once; vendor exponential backoff over 6 h; receiver deduplicates on the vendor event id
Ordering	Arrival order untrusted: the adapter reconciles on observed_at, never arrival sequence (INT-1^[3])
Receiver	2xx accepted · 401 signature_invalid = poison (no retry) · 429 / 5xx = no responses

Outbound: none at pilot; assignment notifications flow through the notification gateway ([INT-2^{\[3\]}](#)), not webhooks; *stated so the absence is a claim.*

§6 Open Questions

mandatory

1 decision

Question	Owner	Answer by	Blocks
Does the vendor's certificate-rotation drill need a partner sandbox before the quarterly rotation (machine identity^[4])?	E. Sandoval	Sep 5, 2026	The rotation runbook only, not the contract

Refs

References & Package Contents

In this export package

package [8] Example set: tested request/response pairs EX-1...EX-7 ./api/examples/

In the Specira workspace

specira [1] Decision log: API-style and versioning decisions [app.specira.ai/projects/dispatch-modernization/artifacts/decision-log](#)

specira [2] Data model: entities, concurrency rule [app.specira.ai/projects/dispatch-modernization/artifacts/data-model](#)

specira [3] Architecture: quality scenarios, INT-1/INT-2, degradation posture [app.specira.ai/projects/dispatch-modernization/artifacts/architecture](#)

specira [4] Auth & authz policy: permission matrix, machine identity [app.specira.ai/projects/dispatch-modernization/artifacts/auth-authz-policy](#)

specira [5] User stories: US-1 [app.specira.ai/projects/dispatch-modernization/artifacts/user-stories#us-1](#)

specira [6] FRD: FR-013 override reason [app.specira.ai/projects/dispatch-modernization/artifacts/frd#fr-013](#)

specira [7] Data classification: handling matrix (position masking) [app.specira.ai/projects/dispatch-modernization/artifacts/data-classification#labels](#)

specira [9] Security requirements: SR-004, SR-006, SR-021 [app.specira.ai/projects/dispatch-modernization/artifacts/security-requirements](#)

specira [10] Threat model: TM-01, TM-03 [app.specira.ai/projects/dispatch-modernization/artifacts/threat-model](#)