Quantum Reference Guide

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- Project setup: Project setup

Chapter 2. Modeling and Tenancy

- Ontologies in Quantum (deep dive): Modeling relationships with ontologies
- Concrete e-commerce example: Orders, Shipments, Fulfillment, Returns
- Integration with Morphia/permissions: Integrating ontology with rules and repos
- Domain modeling: Domain modeling fundamentals
- Tenant models and realms: Multi-tenant model and realm separation
- Domain rule context: Domain rule context

Chapter 3. APIs and Queries

- REST CRUD: Building RESTful CRUD APIs

- Query language: Query language and filtering

- AI Agent integration: AI Agent Integration (tools discovery, schema, execute, session/trace)

- MCP Server and Client: MCP Server and Client (Claude/Cursor integration, ontology tools, end-to-end example)

Chapter 4. Security

- Authentication: Authentication, permissions, and annotations

- JWT tokens for API access: Generating JWT Tokens (login, service tokens, key pair generation)

- Service tokens for integrations: Service Tokens (MCP servers, cron jobs, CI/CD, partner APIs)

- Multiple auth providers and OIDC: Multiple Authentication Providers (issuer resolution, per-tenant key pairs)

- Key pair management: Key Pair Management (default keys module, configurable paths, production setup)

- Permissions: Permissions

- Security annotations: Security annotations

- Permission Resource Check APIs: Permission Resource: Check APIs and Client Usage

- Label resolution and script helpers: Labels (SPI) and hasLabel()

- Secrets and vault (global vs tenant-level): Secrets and Vault Configuration

Chapter 5. Data Seeding

- Seed packs (tutorial): Seed packs: Declarative tenant seeding

- Seed packs (deep dive document): Seed packs and declarative tenant seeding

Chapter 6. Operations

- Migrations: Migrations

- Testing: Testing

- Usage metering and token allocation: Usage Metering and Token Allocation (API/LLM usage, token pools per tenant, scoped to APIs and Tools/LLM configs)

Chapter 7. Samples

- Supply Chain tutorial: Supply Chain

Chapter 8. Appendix

For configuration, Quarkus integration details, and glossary, see the Appendix in the main index.