

Antora Tracer

Test Plan

Version 0.7.0, 2026-07-29

This document maps the test suite to the requirements it verifies. Each test file is a traceable `[item]` referencing the requirements it covers.

1. Test Coverage

TST-001 — Core Extension Tests

Test file: `test/v2-unified-item-architecture.test.ts`

Tests the `RequirementsTraceabilityExtension` orchestrator — initialization, processing, query methods, role statistics, lifecycle. Covers the public API surface of the main extension class.

Relation	ID	Title
verifies	REQ-001	REQ-001 — Single <code>item</code> macro replaces all block macros
verifies	REQ-002	REQ-002 — <code>item</code> macro accepts role attribute
verifies	REQ-003	REQ-003 — <code>item</code> macro maintains existing attributes
verifies	REQ-004	REQ-004 — <code>item</code> macro supports block content
verifies	REQ-005	REQ-005 — Old macro syntax generates deprecation error
verifies	REQ-029	REQ-029 — Configurable matrix generation with coverage calculations
verifies	REQ-030	REQ-030 — Role statistics reporting
verifies	REQ-034	REQ-034 — Mustache template rendering

[Relationship graph for TST-001] |

https://kroki.io/graphviz/svg/eJyd08Fq20AQBub7nmJQrw4oknwQRQXTBHpoKXV8cwoZ7Y7UatdsTtO7ZZCH6JP2CcpkqU0IkmJdVukf-dbdmY1Vx6bLaw8KsKSDcsBfpwBeLR3mn3xcfn2DMA6TbAOW2yoKN1-BkEOhorIu53VpGcbNoZ0NIONs2KxpIL6QOaehBVGX9sKpCuC9XO_j5sCf6fIU6y0ep6dR7HfXGs28LKGeL6M1lni2yRZ8_fvy2ZaEZGCzJFMO2G9sv4M-v3_DeeyKrvZAN7CysKEg4HilaXn15hskWeXyZ_4fpt93YftEx12wrQ3DLQvUt1Ki8A0-NQUUBcAqm08BkAJMOHEmoFDUSwDtDgCJ-BKbTwHQA06dgiWwF2QagPQdhOwKzaWA2gNlTMOyaxnkjUBqn7kC5ETifBs4HcN6Bn40etIMV3ENFljwKBdDUPAaTfBKY5D2Y5P1s2g1XO4-IlahRPD-Y7EZXmsaTwDTuwTTuwGU7H0FQ2p6p0E6o88K2GlnT2pcO7UuP7fu0C4JqSyBUNwaFwJPV5P9pD8_8_N3jx9gXvSfPG6bwcjg5JZyeEs5OCc9PCHeD89pw1_RXh18488-_nkfQng

TST-002 — Antora Extension Tests

Test file: `test/antora-extension.test.ts`

Tests the `AntoraTraceabilityExtension` — initialization with default config, preset, config path, and disabled state. Tests event handler registration, content processing via `contentClassified` event, matrix generation via `sitePublished` event, and API access patterns.

Relation	ID	Title
verifies	REQ-035	REQ-035 — Antora extension integration
verifies	REQ-040	REQ-040 — Context-aware link generation

TST-003 — CLI Tests

Test file: `test/cli.test.ts`

Tests the Commander-based CLI — process command (valid content, empty content, invalid paths, malformed macros), matrix command (generation, empty graph), validate command (invalid graph state), export command (empty graph), stats command (empty statistics), preset commands (invalid names, init, listing), and help command.

Relation	ID	Title
verifies	REQ-009	REQ-009 — Configuration is required for validation
verifies	REQ-010	REQ-010 — Configuration file location
verifies	REQ-026	REQ-026 — Export command in CLI
verifies	REQ-036	REQ-036 — CLI commands

TST-004 — ConfigLoader Tests

Test file: `test/config-loader.test.ts`

Tests the `ConfigLoader` — initialization, built-in preset listing and loading, preset structure validation, configuration loading from file, missing file handling, invalid YAML handling, role and relation validation, matrix definition retrieval, configuration merging, and error messages for invalid configurations and preset names.

Relation	ID	Title
verifies	REQ-006	REQ-006 — Configuration defines roles
verifies	REQ-007	REQ-007 — Configuration defines relations
verifies	REQ-008	REQ-008 — Configuration defines matrices
verifies	REQ-010	REQ-010 — Configuration file location
verifies	REQ-011	REQ-011 — Configuration validation
verifies	REQ-012	REQ-012 — Configuration can extend presets
verifies	REQ-018	REQ-018 — Built-in preset configurations
verifies	REQ-019	REQ-019 — Each preset contains complete configuration
verifies	REQ-020	REQ-020 — Each preset includes documentation
verifies	REQ-021	REQ-021 — Each preset includes Neo4j Cypher queries
verifies	REQ-022	REQ-022 — Presets have independent versioning
verifies	REQ-023	REQ-023 — Users can define custom presets

TST-005 — Graph and API Tests

Test file: `test/graph-and-api.test.ts`

Tests the `TraceabilityGraph` (Section 4 — extended queries: `merge`, `getRelatedItems`, `getItemsWithRelationTo`, `getRelationshipsByRoles`, `findPath`, `getImpactAnalysis`) and `RequirementsTraceabilityExtension` API methods (Section 5 — `processFiles`, `validate`, `export`,

coverage, config access, preset management, lifecycle).

Relation	ID	Title
verifies	REQ-013	REQ-013 — Role-based relation validation
verifies	REQ-014	REQ-014 — Directional relation checking
verifies	REQ-015	REQ-015 — Error messages list allowed relations
verifies	REQ-016	REQ-016 — Warnings for unknown roles
verifies	REQ-017	REQ-017 — Graceful degradation for unknown roles
verifies	REQ-031	REQ-031 — Graph path finding
verifies	REQ-032	REQ-032 — Impact analysis
verifies	REQ-033	REQ-033 — Graph merge

TST-006 — MatrixGenerator Tests

Test file: [test/matrix-generator.test.ts](#)

Tests the **MatrixGenerator** — basic matrix generation with empty graph, matrix generation with default and named configurations, role-based matrix rows and columns, coverage percentage calculation and status determination, coverage relation filtering, CSV export, HTML export, JSON export, coverage report generation, and edge cases (no matching items, missing titles, missing source files, unknown matrix names).

Relation	ID	Title
verifies	REQ-008	REQ-008 — Configuration defines matrices
verifies	REQ-029	REQ-029 — Configurable matrix generation with coverage calculations
verifies	REQ-037	REQ-037 — Matrix row items are clickable links
verifies	REQ-038	REQ-038 — Matrix cell items are clickable links
verifies	REQ-039	REQ-039 — Source file tooltips on matrix links
verifies	REQ-042	REQ-042 — Backward compatibility without LinkResolver
verifies	REQ-043	REQ-043 — Non-HTML matrix outputs unchanged

TST-007 — Neo4jExporter Tests

Test file: [test/neo4j-exporter.test.ts](#)

Tests the **Neo4jExporter** — empty graph CSV export, items and relationships in CSV, all attributes in export, special character escaping, empty graph Cypher export, items and relationships in Cypher, **includeContent** option, **includeAllAttributes** option, output directory creation, multiple role types, and export result counts and file paths.

Relation	ID	Title
verifies	REQ-024	REQ-024 — Neo4j CSV export

verifies	REQ-025	REQ-025 — Neo4j Cypher export
verifies	REQ-027	REQ-027 — Export includes all item attributes
verifies	REQ-028	REQ-028 — Export is optional

TST-008 — Relationship Link Substitution Tests

Test file: `test/relationship-link-substitution.test.ts`

Tests the in-memory regex substitution that replaces relationship macros with Asciidoctor xrefs. Covers same-page xref generation, cross-page xref generation with basename path resolution, orphan reference handling, non-relationship text preservation, hyphenated/dotted IDs, missing sourceFile fallback, and surrounding text preservation.

Relation	ID	Title
verifies	REQ-010	REQ-010 — Configuration file location