

OpenAct Implementation Plan (v1.0)

- Branch: `feature/manifest-auth-integration`
- Rule: Implement one task at a time. For each task: add tests → make it pass → mark done → proceed.
- Status tags: 未实现, 进行中, 已完成

0. Conventions

- Config format: YAML (default)
 - Expression engine: jsonada with `{% %}` syntax (per spec)
 - Merge order: provider → action → sidecar (deep merge; arrays replace)
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1) 配置与加载 (Configuration & Loading)

- ☒ Decide config file locations and naming — 已完成
 - Deliverable: finalize paths
 - `config/provider-auth-defaults.yaml`
 - `config/provider-defaults.yaml`
 - `config/sidecar-overrides.yaml` (optional)
 - `actions/<provider>/<action>.yaml`
 - Test: N/A (docs reviewed)
 - Done when: paths fixed in README and used by loader
 - ☒ Implement YAML loader utility — 已完成
 - Deliverable: `utils/yaml_loader.rs`
 - Test: load valid/invalid YAML, error includes filename and line
 - Done when: returns `serde_json::Value` for valid files; precise errors for invalid ones
 - ☒ Load provider-auth-defaults.yaml into registry — 已完成
 - Deliverable: `config/provider_auth_defaults.rs`
 - Test: load sample; query `api.github.com` returns injection template
 - Done when: cached by hostname (no hot-reload initially)
 - ☒ Load provider-defaults.yaml into registry — 已完成
 - Test: `api.github.com` has retry/timeout defaults
 - Done when: accessible via provider key
 - ☒ Load sidecar-overrides.yaml into registry (optional) — 已完成
 - Test: override by `operationId` merges on top
 - Done when: merges applied at runtime
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2) 配置模型与合并 (Models & Merge)

- ☒ Define AuthConfig and related structs per spec — 已完成
 - Files: `manifest/src/action/auth.rs`
 - Includes: `connection_trn`, `scheme`, `injection{type=jsonada,mapping}, expiry, refresh, failure`, `retry`, `pagination`, `output`
 - Test: `serde` (round-trip), defaulting rules
 - Done when: compiles and unit tests pass
 - ☒ Parse x-auth from Action YAML — 已完成
 - Files: `manifest/src/action/parser.rs`
 - Test: minimal action with only `connection_trn`
 - Done when: parsed into `AuthConfig`
 - ☐ Parse x-retry, x-pagination, x-timeout-ms, x-ok-path, x-error-path, x-output-pick — 未实现
 - Test: each field parsed; defaults applied
 - Done when: validated and surfaced in action model
 - ☒ Implement deep-merge provider → action → sidecar — 已完成
 - Files: `manifest/src/config/merger.rs`
 - Test: object fields deep-merge; arrays replace; precedence respected
 - Done when: deterministic merged snapshot printed for debug
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3) 表达式与注入 (Expressions & Injection)

- ☒ Add jsonada engine dependency / integration — 已完成
 - Files: `Cargo.toml` (manifest crate)
 - Test: trivial evaluation `{% 'x' %} → "x"`
 - ☒ Implement ExpressionEngine for `{% %}` — 已完成
 - Files: `manifest/src/action/expression_engine.rs`
 - Test: mapping string → headers map; invalid expr → readable error
 - ☐ Build expression context (`$access_token`, `$expires_at`, `$ctx`) — 进行中
 - Files: `manifest/src/utils/expression_context.rs`
 - Test: all expected keys present; timestamps as ISO8601
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4) AuthFlow 集成 (AuthFlow Integration)

- ☒ Create AuthFlowIntegration to fetch by connection TRN — 已完成 (以 `AuthAdapter` 形式, 支持 memory/sqlite 初始化)
 - Files: `manifest/src/action/authflow_integration.rs`
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- Test: given `connection_trn`, returns `{access_token, token_type, expires_at, provider}`
 - ☐ Support expiry/refresh strategies (proactive_or_401, proactive, on_401) — 未实现
 - Files: `manifest/src/action/auth.rs`
 - Test: simulate expired token; refresh invoked by strategy
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5) Action Runner 执行 (Execution)

- ☒ Wire ActionRunner auth injection using mapping — 已完成
 - Files: `manifest/src/action/runner.rs`
 - Test: merged config → fetch auth → evaluate mapping → set headers
 - ☒ Inject headers and query from mapping result — 已完成
 - Test: headers present on HTTP request; query params applied if provided
 - ☒ Apply x-timeout-ms to HTTP client — 已完成 (解析并透传至请求对象)
 - Test: short timeout triggers timeout error
 - ☒ Implement x-retry with backoff and Retry-After — 已完成 (可控开关 `x-real-http`)
 - Test: 500/503 retried; 429 respects Retry-After; jitter applied
 - ☐ Implement pagination: cursor, pageToken, link — 未实现
 - Test: aggregates items until stop_when; respects cursor_param
 - ☒ Evaluate x-ok-path and map success — 已完成
 - Test: ok-path true → success; 空/缺省 → 默认 2xx 为成功
 - ☒ Evaluate x-error-path and map errors — 已完成
 - Test: provider error extracted to standardized error
 - ☒ Apply x-output-pick projection — 已完成
 - Test: projection applied to final payload
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6) 测试与样例 (Tests & Samples)

- ☒ Unit tests: parser and config merger — 已完成
 - Test: cover edge cases (missing fields, overrides)
 - ☐ Unit tests: expression engine and injector — 未实现
 - Test: mapping variations, invalid syntax, context values
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- ☐ E2E golden test: GitHub Get User — 未实现
 - Test: action YAML + provider defaults → headers injected → response recorded
 - ☐ Add sample Action YAML and providers YAML — 未实现
 - Files: `samples/actions`, `config/*.yaml`
 - ☐ Add CLI lint tool for Action YAML — 未实现
 - Test: validates single operation, x-* schema, expression compile
 - ☐ Add logging and traces for injection/retries — 未实现
 - Test: structured logs; correlation IDs; redacted secrets
 - ☐ Document config layout and authoring guide — 未实现
 - Files: `docs/authoring.md`
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里程碑建议 (Milestones)

- M1: 打通最小链路 (加载→合并→取TRN→注入→请求)
- M2: 超时/重试/错误/输出裁剪
- M3: 分页与 E2E 测试
- M4: 工具化 (Lint/Logs/Samples/Docs)