

Package: rho.coding (via r-universe)

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Type Package

Depends R (>= 4.4.0)

Title Rho Coding Tools

Version 0.0.1.9001

Description Supplies coding-agent tools with explicit execution semantics, including cross-platform Bash selection, process execution in mirai workers, isolated R evaluation, opt-in current-session R evaluation, and a locked JSONL implementation of the agent session-journal contract.

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Imports S7, s7contract, rho.async (>= 0.0.1.9001), rho.ai (>= 0.0.1.9001), rho.agent (>= 0.0.1.9001), rho.compute (>= 0.0.1.9001), processx, yyjsonr, filelock, digest

Suggests tinytest, knitr

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RGenomicsETL/Rho/packages/rho.ai,
RGenomicsETL/Rho/packages/rho.agent,
RGenomicsETL/Rho/packages/rho.compute

URL <https://github.com/RGenomicsETL/Rho>,
<https://rgenomicsetl.github.io/Rho/rho.coding/>

BugReports <https://github.com/RGenomicsETL/Rho/issues>

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rho_coding_contracts	<i>Coding tools and their execution contracts</i>
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Description

The shell contract preserves Bash semantics across platforms and returns a typed resolution explaining which executable was selected. Shell processes execute through `rho.compute` and `processx`.

Details

R evaluation has explicit state semantics: `RhoMiraiExpressionEvaluator` is isolated and may overlap, while `RhoCurrentSessionREvaluator` receives a caller-supplied environment and requires exclusive scheduling.

rho_coding_memory	<i>Authored memory revisions and tools</i>
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Description

Authored memory is an append-only temporal port. `rho_remember()` creates a live note, `rho_edit_memory()` applies a typed edit only when its expected revision is still current, and `rho_forget()` appends a tombstone. Recall and history retain attribution and revision identity; no operation destroys an earlier observation.

Details

`MemoryStore` is the structural interface consumed by the coding tools. `rho_in_memory_memory_store()` is the process-local reference implementation. Other packages can implement the same generics over DuckDB, NNG, or another temporal observation store.

`rho_memory_tools()` returns `remember`, `recall`, `edit_memory`, `forget`, and `memory_history`. Mutating calls require an explicit author. Edit and forget require the revision identifier returned by recall, so a stale model action resolves to `RhoMemoryConflict` instead of overwriting newer work.

rho_coding_session_contracts*JSON session documents and the coding-host JSONL journal*

Description

`rho_json_session_codec()` contains an explicit registry of stable semantic record types. A [RhoJsonSemanticAdapter](#) maps one stable wire tag and field set to the current in-memory S7 class. Package names, S7 class names, and reflected property sets are never written to the journal. An extension adds a value by supplying `rho_json_semantic_adapter()` with its own stable tag and explicit fields.

Details

`rho_encode_session_value()` and `rho_decode_session_value()` retain R atomic storage modes, list names, missing values, and registered semantic values. Unknown S7 objects resolve to `RhoSessionCodecErrorValue` rather than acquiring an accidental storage schema from the current package namespace.

`rho_jsonl_session_journal()` implements the `SessionJournal` interface as a coding-host adapter. File reads, locking, validation, and append run in mirai workers. Each LF-delimited entry record carries a committed position and typed entry document. A file lock and the append request's expected position reject stale writers before mutation. A missing final LF, malformed record, or invalid semantic document resolves to a typed error value.

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