

Local AI Reply Envelope Schema

The uniform JSON envelope that every Local AI call returns — both the ChatRequest Display action and the TK.AIExecute script API — including success, error, disabled, and truncated cases.

[AI Integration](#) [Local AI](#) Reply Envelope Schema

Why a single envelope

Both Local AI consumer paths return the same JSON shape on every call. The shape is the same for success, for errors, for the master kill-switch being off, and for wall-clock truncation. Customers parse one structure and dispatch on the status field — never on a thrown exception, never on a missing field, never on a special-cased error string.

Schema

Error rendering macro 'code': Invalid value specified for parameter 'com.atlassian.confluence.ext.code.render.InvalidValueException'

```
{
  "text":      "<the LLM answer text, or empty string on non-ok status>",
  "status":    "ok | error | disabled | truncated",
  "toolTrace": [ ... ],
  "latencyMs": 480,
  "warnings":  [ ... ]
}
```

Field reference

Field	Type	Always present?	Notes
text	string	Yes	The LLM's terminal answer. Empty string ("") on every non-ok status. Callers can rely on the field being present and string-typed; check status before consuming the text.
status	enum string	Yes	Exactly one of ok / error / disabled / truncated. No other values.
toolTrace	array	Yes	Sequence of tool dispatches the LLM made during the turn. Empty array ([]) when no tools fired. Always empty for atomic TK.AIExecute calls (the atomic path has no tool surface). Each entry has the shape documented under Tool trace entry below.
latencyMs	integer (long)	Yes — including on errors	Wall-clock milliseconds from entry to envelope-build. Reports 0 for pre-condition errors caught before any work (master kill-switch off, query missing required fields). Reports actual elapsed time for post-condition errors (HTTP failure, timeout). Never omitted.
warnings	array of string	Yes	Empty array ([]) on success-with-no-issues. Populated for hook-handler errors, wall-clock truncation, tool-dispatch cap reached, HTTP errors, malformed query, and anything the platform notes but does not promote to a status flip. status="ok" with non-empty warnings is valid (e.g., a chat hook threw but the LLM call still succeeded).

No optional fields. Every field present on every envelope, every code path. Callers can parse with confidence:

```
var reply = JObject.Parse(replyJson);
string status = reply.Value<string>("status");           // never null
long ms      = reply.Value<long>("latencyMs");           // always parseable
string text  = reply.Value<string>("text") ?? "";        // empty on non-ok
```

Status values

ok

The LLM POST completed and returned a terminal reply. text contains the model's answer. warnings may still be non-empty if a hook handler threw mid-turn (the chat continues; warnings list the failure).

error

Pre-POST validation failed, or the HTTP call failed, or response parsing failed, or an exception was caught. text is empty. warnings carries the message(s) describing the failure. latencyMs reflects elapsed time to the error point.

disabled

A master gate is off:

- `SolutionSettings.ModelEnabled = false` — applies to BOTH paths.

- `SolutionSettings.ModelOptions` bit 0x02 (`EnableRuntimeMCP`) is OFF — applies to `ChatRequest` only. `TK.AIExecute` does not consult this bit.

`text` is empty. `warnings` carries the gate identifier so the caller can log which gate blocked the call. `latencyMs` is 0 (early-exit before any work).

truncated

One of the budget caps tripped mid-turn:

- Wall-clock budget exceeded (default 60 seconds for the full turn).
- Tool-dispatch cap reached (`ChatRequest` only; the LLM kept asking for more tool calls than the platform permits in one turn).
- Tool-dispatch loop hit the iteration limit before the LLM produced a terminal reply (`ChatRequest` only).

`text` carries the partial reply if the LLM produced one before truncation; otherwise empty. `warnings` describes which cap tripped.

Status decision matrix

Situation	status	text	warnings	latencyMs
Normal successful chat turn	ok	LLM answer	[]	elapsed
Successful turn, hook handler threw	ok	LLM answer	handler error message(s)	elapsed
<code>ModelEnabled = false</code>	disabled	""	kill-switch identifier	0
<code>ModelOptions</code> master bit OFF (<code>ChatRequest</code> only)	disabled	""	master-bit identifier	0
Query JSON malformed	error	""	parse error message	elapsed
LLM endpoint unreachable	error	""	HTTP error message	elapsed
LLM endpoint returned non-2xx	error	""	HTTP status code + reason	elapsed
Wall-clock budget (60 s) exceeded	truncated	partial reply, if any	budget-exceeded message	60000
Tool-dispatch cap reached (<code>ChatRequest</code>)	truncated	partial reply, if any	cap-reached message	elapsed

Tool trace entry

Each entry in `toolTrace[]` records one tool dispatch (cached `ChatRequest` path only — atomic `TK.AIExecute` calls always return an empty `toolTrace`):

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```
{
  "name":      "runtime_get_value",
  "args":      { "tag": "Pump1.MotorCurrent" },
  "result":    { "value": 12.4, "quality": "Good" },
  "status":    "ok",
  "timestamp": "2026-04-26T14:32:15.123Z",
  "elapsedMs": 3
}
```

Field	Type	Notes
name	string	Tool method the LLM invoked, e.g. <code>runtime_get_value</code> , <code>runtime_browse_uns</code> , <code>runtime_get_active_alarms</code> .
args	parsed JSON or string	Arguments the LLM supplied to the tool. Parsed JSON object when the tool's parameters are structured; raw string when the LLM passed an unstructured argument.
result	parsed JSON or string	Tool's return value. Parsed JSON when structured, raw string otherwise.
status	enum string	ok when the tool succeeded; error when the tool dispatch threw. Per-tool errors do NOT promote the envelope's top-level status away from ok — the LLM may still recover from the failed tool call and produce a terminal reply.
timestamp	ISO 8601 UTC string	When the tool was dispatched.
elapsedMs	integer	Wall-clock milliseconds the tool dispatch took.

JSON examples by status

Successful turn (atomic TK.AIExecute)

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```
{
  "text": "The likely cause is a partially blocked impeller given the high motor current with low flow rate.",
  "status": "ok",
  "toolTrace": [],
  "latencyMs": 832,
  "warnings": []
}
```

Successful chat turn with one tool dispatch

Error rendering macro 'code': Invalid value specified for parameter 'com.atlassian.confluence.ext.code.render.InvalidValueException'

```
{
  "text": "Pump1.MotorCurrent is currently 12.4 A.",
  "status": "ok",
  "toolTrace": [
    {
      "name": "runtime_get_value",
      "args": { "tag": "Pump1.MotorCurrent" },
      "result": { "value": 12.4, "quality": "Good" },
      "status": "ok",
      "timestamp": "2026-04-26T14:32:15.123Z",
      "elapsedMs": 3
    }
  ],
  "latencyMs": 1247,
  "warnings": []
}
```

Master kill-switch is off

Error rendering macro 'code': Invalid value specified for parameter 'com.atlassian.confluence.ext.code.render.InvalidValueException'

```
{
  "text": "",
  "status": "disabled",
  "toolTrace": [],
  "latencyMs": 0,
  "warnings": [ "Local AI master kill-switch (ModelEnabled) is off." ]
}
```

LLM endpoint unreachable

Error rendering macro 'code': Invalid value specified for parameter 'com.atlassian.confluence.ext.code.render.InvalidValueException'

```
{
  "text": "",
  "status": "error",
  "toolTrace": [],
  "latencyMs": 1043,
  "warnings": [ "LLM endpoint HTTP error: Connection refused (http://localhost:11434/v1/chat/completions)" ]
}
```

Wall-clock truncation with partial reply

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```
{
  "text": "Based on the readings I have so far, the early indicators suggest...",
  "status": "truncated",
  "toolTrace": [ /* dispatched tools up to truncation */ ],
  "latencyMs": 60012,
  "warnings": [ "LLM POST wall-clock budget (60s) exceeded." ]
}
```

Consuming the envelope

From a Server.Class script

```

string replyJson = TK.AIExecute(query);
JObject reply    = JObject.Parse(replyJson);

switch (reply.Value<string>("status"))
{
    case "ok":
        @Tag.Last.Answer = reply.Value<string>("text");
        break;
    case "disabled":
        @Tag.Last.Answer = "Local AI is currently disabled.";
        break;
    case "truncated":
        @Tag.Last.Answer = reply.Value<string>("text");
        // log warnings for diagnostics
        break;
    default: // "error"
        @Tag.Last.Answer = "Could not generate a reply.";
        // warnings array carries the cause
        break;
}

```

From a Display Action with no scripting

If the reply tag is typed **JSON**, the platform's tag-method surface lets a Display Expression extract fields directly:

- `@Tag.Chat.ReplyJson.JsonString("text")` — the answer text.
- `@Tag.Chat.ReplyJson.JsonString("status")` — the envelope status.
- `@Tag.Chat.ReplyJson.JsonValue<long>("latencyMs")` — the wall-clock latency.

Wire these into Result expressions on the ChatRequest Action; see [ChatRequest Action Reference](#).

Guarantees

- **Always parseable.** Every envelope is well-formed JSON. `JObject.Parse(reply)` never throws on a Local AI reply.
- **Field-level stability.** Adding new top-level fields in future versions is non-breaking; existing five fields stay present and stay typed as documented.
- **No exceptions ever surface to the caller.** Network failures, parser failures, gate-off conditions, exceptions in the platform's own LLM-handling code — all become envelopes with `status="error"` and a populated warnings array.

In this section...