

# Security and Authentication

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# Prerequisites check

- You need the structured logs from Chapter 5. If a tool call is not logged, you cannot audit sec
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# Authentication vs authorization

- **Authentication** answers "who is calling?" **Authorization** answers "may this caller do this action"
- **Authentication:** request includes a bearer token that maps to user\_123.
- **Authorization:** user\_123 may read demo project files but may not list production secrets.
- **Authentication:** the MCP server receives FINANCE\_API\_KEY as an environment variable.
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# Least privilege for connectors

- **Least privilege means the connector receives only the access needed for its declared operations**
- **MCP makes it easy to expose capabilities. That ease is exactly why you must design them narrowl**
- **Avoid "admin token plus prompt rules" as a security model. Prompt rules are instructions; autho**
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# Authorization wrapper

- Put authorization before tool execution and before detailed logging of target data.
- `roles: string[];`
- `function requirePermission(actor: Actor, permission: string) {`
- `if (!actor.roles.includes(permission)) {`
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# Human-in-the-loop approval

- Some tools should not execute immediately even when authorized. Approval gates are appropriate
- A safe tool can return a pending action:
  - "status": "awaiting\_approval",
  - "action": "send\_invoice\_reminder",
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# Try it next

- **Deploy a gateway with RBAC, rate limits, and JSONL auditing**
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