

FHIR R4 — REST & Conformance

Interactions, Bundle types, status codes & a conformance checklist

Objective: Interact with a FHIR R4 server and recognise a conformant resource at a glance.

REST interactions

Interaction	HTTP	URL	Returns
read	GET	/[Type]/[id]	the resource (+ ETag)
search	GET	/[Type]?param=value	searchset Bundle
create	POST	/[Type]	201 Created + Location
update	PUT	/[Type]/[id]	200, versionId bumped
patch	PATCH	/[Type]/[id]	partial update
delete	DELETE	/[Type]/[id]	204 No Content
capability	GET	/metadata	CapabilityStatement

Bundle types

- **searchset** — Results of a search — entry.search.mode = match | include.
- **transaction** — Atomic — every entry succeeds or all roll back.
- **batch** — Independent entries — each can succeed or fail on its own.
- **document / collection** — A fixed, signed set / a loose bag of resources.

Status codes

Code	Meaning
200 / 201	OK / Created
204	No Content (delete)
400	Invalid resource / bad request
401 / 403	Not authenticated / not authorised
404	Unknown resource
409 / 412	Version conflict / ETag precondition failed

Conformance checklist

- resourceType is present and a known type.
- Required elements set — Observation: status + code; MedicationRequest: status + intent + medication[x] + subject.
- status is a value from the resource's status value set.
- Every coding carries BOTH a system URI and a code.
- References look like Type/id (e.g. Patient/PAT-1).
- Quantities carry a value + a UCUM unit/code (system <http://unitsofmeasure.org>).
- Use meta.versionId / ETag (If-Match) for optimistic concurrency on update.