

Resource

Name	Card.
Resource	
id	0..1
meta	0..1
implicitRules	0..1
language	0..1

Domain Resource

Name	Card.
DomainResource	
text	0..1
contained	0..*
extension	0..*
modifierExtension	0..*

Meta

Name	Card.
Meta	
versionId	0..1
lastUpdated	0..1
source	0..1
profile	0..*
security	0..*
tag	0..*

Terminology Systems

SNOMED CT
http://snomed.info/sct

LOINC
http://loinc.org

UCUM
http://unitsofmeasure.org

Version 2 table code
http://terminology.hl7.org/CodeSystem/v2-[X]

Version 3 code system
http://terminology.hl7.org/CodeSystem/v3-[X]

MIME Types

JSON
application/fhir+json

XML
application/fhir+xml

RDF
application/fhir+turtle

Search

Parameter Types

Base search URL `base-url / resource ? parameter & parameter & ..`
 https://server.fire.ly/Patient?name=john

number `field (:modifier)=(comparator)number`
 length=27

date `field (:modifier) = comparator yyyy-mm-ddThh:mm:ss[Z|(+|-)hh:mm]`
 birthdate=1964-12-10

string `field (:modifier) = text`
 name=John
 name:exact=John-William

token `field = system | code`
 gender=female
 gender=http://hl7.org/fhir/v3/AdministrativeGender|female
 gender=|female

Reference `field (:modifier) = id`
 subject:Patient=23

Quantity `field = (comparator) number | system | code`
 value=5.4|http://unitsofmeasure.org|mg
 value=lt5.4|http://unitsofmeasure.org|mg

Composite `field = value , value`
`field = state$value,state$value`
 state-on-date=new\$2013-05-04,active\$2013-05-05

uri `field (:modifier) = uri`
 uri:below=http://acme.org/fhir/

Bundle

Name	Card.
Bundle	
identifier	0..1
type	1..1
timestamp	0..1
total	0..1
link	0..*
relation	1..1
url	1..1
entry	0..*
link	0..*
fullUrl	0..1
resource	0..1
search	0..1
mode	0..1
score	0..1
request	0..1
method	1..1
url	1..1
ifNoneMatch	0..1
ifModifiedSince	0..1
ifMatch	0..1
ifNoneExist	0..1
response	0..1
status	1..1
location	0..1
etag	0..1
lastModified	0..1
outcome	0..1
signature	0..1

Operations

For more see: <https://hl7.org/fhir/operationslist.html>

Validate a resource
 [base]/[Resource]/\$validate
 [base]/[Resource]/[id]/\$validate

Terminology operations
 [base]/ValueSet/[id]/\$expand
 [base]/ValueSet/[id]/\$validate-code
 [base]/CodeSystem/\$lookup
 [base]/CodeSystem/[id]/\$subsumes
 [base]/CodeSystem/[id]/\$find-matches

Fetch records
 [base]/Patient/[id]/\$everything

Meta Operations
 [base]/\$meta
 [base]/[Resource]/\$meta
 [base]/[Resource]/[id]/\$meta
 [base]/[Resource]/[id]/\$meta-add
 [base]/[Resource]/[id]/\$meta-delete

Generate a Document
 [base]/Composition/[id]/\$document

Process Message
 [base]/\$process-message

Find a functional List
 [base]/List/\$find

ConceptMap operations
 [base]/ConceptMap/\$translate
 [base]/ConceptMap/[id]/\$translate

Closure Table Maintenance
 [base]/\$closure

Questionnaire operations
 [base]/StructureDefinition/\$questionnaire
 [base]/StructureDefinition/[id]/\$questionnaire

Interactions

Instance

READ	GET	[base]/[type]/[id]
VREAD	GET	[base]/[type]/[id]/_history/[vid]
UPDATE	PUT	[base]/[type]/[id]
DELETE	DELETE	[base]/[type]/[id]
HISTORY	GET	[base]/[type]/[id]/_history

Type level

CREATE	POST	[base]/[type]
SEARCH	GET	[base]/[type]?[parameters]
HISTORY	GET	[base]/[type]/_history

Whole System

CAPABILITY	GET	[base]/metadata
BATCH TRANSACTION	POST	[base]/
HISTORY	GET	[base]/_history
SEARCH	GET	[base]?[parameters]

Conditional Interactions

CREATE	POST	If-None-Exist: [search parameters] No matches: Create 1 match: 200 OK Multi matches: 412 Precondition Failed
UPDATE	PUT	[base-url] /[type]/?[search parameters] No matches: Create 1 match: Update Multi matches: 412 Precondition Failed
DELETE	DELETE	[base-url] /[type]/?[search parameters] No matched: Delete 1 match: Delete Multi matches: Depends on server

Comparators for Search

[parameter]=100	equal 100 in range [99.5..100.5]
[parameter]=100.00	equal 100 in range [99.995..100.005]
[parameter]=lt100	less than 100
[parameter]=le100	less or equal to 100
[parameter]=gt100	greater than 100
[parameter]=ge100	greater or equal to 100
[parameter]=ne100	not equal to 100

Parameters for all resources

_id	_id=23
_lastUpdated	_lastUpdated=gt2010-10-01
_tag	_tag=http://acme.org/codes needs-review
_profile	_profile=http://hl7.org/fhir/StructureDefinition/lipid
_security	_security = http://hl7.org/fhir/v3/ActCode CEL
_text	_text=(bone OR liver) and metastases
_content	_content=(bone OR liver) and metastases
_list	_list=42
_has	_has=Observation:patient:code=1234-5
_type	_type=Observation,Condition

Search result parameters

_include	_include=MedicationPrescription:patient
_revinclude	_revinclude=Provenance:target
_count	_count=50
_sort	_sort=status,-date,category
_total	_total=estimate
_summary	_summary=true text data count false
_elements	_elements=identifier,active,link
_contained	_contained = true false both
_containedType	_containedType = container contained

Chained parameters

GET [base-url]/DiagnosticReport?subject.name=peter