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

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]
PATCH	PATCH	[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]/[type]?[search parameters] No matches: Create 1 match: Update Multi matches: 412 Precondition Failed
DELETE	DELETE	[base]/[type]?[search parameters] No matches: Delete 1 match: Delete Multi matches: Delete all, or 412

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          sa starts after
[parameter]=le100   less or equal to 100   eb ends before
[parameter]=gt100   greater than 100       ap approximately
[parameter]=ge100   greater or equal to 100
[parameter]=ne100   not equal to 100
```

Search

Parameter Types

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

number field (:modifier)=(comparator)number
`probability=gt0.5`

date field (:modifier) = comparator yyyy-mm-ddThh:mm:ss[Zl(+l-)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/administrative-gender|female`
`gender=|female`

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

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

Composite field = value$value
field = value$value,value$value
`code-value-quantity=http://loinc.org|2951-2$gt145`

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

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://terminology.hl7.org/CodeSystem/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=MedicationRequest: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`