

REST API Specification

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Overview

Introduction

The Fedora HTTP API is generally a RESTful API. HTTP methods like GET, PUT, POST and DELETE are implemented on most resource paths. The API also relies heavily on content negotiation to deliver context-appropriate responses, and a HATEOAS-driven text/html response (providing a decent GUI experience on top of the repository).

The Fedora RDF-based responses may be serialized as:

- [application/ld+json](#)
- [application/n-triples](#)
- [application/rdf+xml](#)
- [text/n3](#) (or [text/rdf+n3](#))
- [text/plain](#)
- [text/turtle](#) (or [application/x-turtle](#))

The text/html response also includes embedded RDFa markup.

Fedora implements the [Linked Data Platform 1.0 Architecture](#), which:

[...] describes the use of HTTP for accessing, updating, creating and deleting resources from servers that expose their resources as Linked Data. It provides clarifications and extensions of the rules of Linked Data [LINKED-DATA]:

1. Use URIs as names for things
2. Use HTTP URIs so that people can look up those names
3. When someone looks up a URI, provide useful information, using the standards (RDF*, SPARQL)
4. Include links to other URIs, so that they can discover more things

Endpoints

Resources

Repository objects can be loosely divided into two classes of resources:

- Containers ("fedora:Container"), containing RDF properties and 0 or more child resources
- Binaries, containing any binary payload (roughly corresponding to Fedora 3 datastreams)

Containers

RESTful HTTP API - Containers

Request URI: **/path/to/some/resource**

Methods: GET, POST, PUT, PATCH, HEAD, OPTIONS, DELETE

GET

Retrieve the content of the resource

Request Headers:

RANGE

Byte range of content to retrieve, of the form: "Range: bytes=500-999"

ACCEPT

RDF sources support content negotiation with these formats: application/ld+json, application/n-triples, application/rdf+xml, application/x-turtle, text/html, text/n3, text/plain, text/rdf+n3, text/turtle

Note: JSON-LD profiles can be requested by using the following `Accept` headers:

Accept: application/ld+json; profile="http://www.w3.org/ns/json-ld#expanded" - *default*

Accept: application/ld+json; profile="http://www.w3.org/ns/json-ld#compacted"

Accept: application/ld+json; profile="http://www.w3.org/ns/json-ld#flattened"

LIMIT

Number of child resources to list. If paired with Accept: (X)HTML, the default is 100. Otherwise, the default is -1 (all children are listed)

IF-NONE-MATCH

IF-MODIFIED-SINCE

PREFER

return=representation
return=representation; include=" **URIs** "
return=representation; omit=" **URIs** "

where representation indicates that links to other resources and their properties should also be included. **URIs** is a space-separated list of LDP defined preferences, and also:

URI	Description
http://fedora.info/definitions/fcrepo#PreferInboundReferences	Include assertions from other Fedora resources to this node (excluded from representation by default)
http://fedora.info/definitions/fcrepo#ServerManaged	Embed server managed properties in the representation (enabled by default)
http://www.w3.org/ns/oa#PreferContainedDescriptions	Embed "child" resources in the returned representation
http://www.w3.org/ns/ldp#PreferContainment	Include/Exclude "ldp:contains" assertions to contained resources (enabled by default)
http://www.w3.org/ns/ldp#PreferMembership	Include/Exclude assertions to member resources established by the Direct and Indirect containers (enabled by default)
http://www.w3.org/ns/ldp#PreferMinimalContainer	Include/Exclude triples that would be present when the container is empty (enabled by default)

Example (1): Turtle

```
curl -H "Accept: text/turtle" "http://localhost:8080/rest/path/to/resource"
```

Response:

Status: 200 OK

Headers:

ETag: W/"51FA3512608877FD9197C8701F986014"
X-State-Token: 0366B7A7332BADF807F473D5579CD1E5
Last-Modified: Thu, 04 Mar 2021 14:23:46 GMT
Link: <http://localhost:8080/rest/path/to/resource>; rel="timegate"
Link: <http://localhost:8080/rest/path/to/resource>; rel="original"
Link: <http://localhost:8080/rest/path/to/resource/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Accept-External-Content-Handling: copy,redirect,proxy
Accept-Patch: application/sparql-update
Accept-Post: text/turtle,text/rdf+n3,text/n3,application/rdf+xml,application/n-triples,application/ld+json
Allow: DELETE,POST,HEAD,GET,PUT,PATCH,OPTIONS
Link: <http://localhost:8080/rest/path/to/resource/fcr:acl>; rel="acl"
Preference-Applied: return=representation
Vary: Prefer
Vary: Accept
Vary: Range
Vary: Accept-Encoding
Vary: Accept-Language
Vary: Accept-Datetime
Content-Type: text/turtle;charset=utf-8
Content-Length: 822

Body:

```
@prefix rdf:    <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix fedora: <http://fedora.info/definitions/v4/repository#> .
@prefix ldp:    <http://www.w3.org/ns/ldp#> .

<http://localhost:8080/rest/path/to/resource>
  fedora:created      "2021-03-04T14:23:46.625848Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
  fedora:lastModified "2021-03-04T14:23:46.625848Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
  fedora:createdBy    "fedoraAdmin" ;
  fedora:lastModifiedBy "fedoraAdmin" ;
  rdf:type             ldp:BasicContainer ;
  rdf:type             ldp:Resource ;
  rdf:type             fedora:Resource ;
  rdf:type             ldp:RDFSSource ;
  rdf:type             ldp:Container ;
  rdf:type             fedora:Container .
```

Example (2): RDF/XML

```
curl -H "Accept: application/rdf+xml" "http://localhost:8080/rest/path/to/resource"
```

Response:

Status: 200 OK

Headers:

ETag: W/"2295E7A75138993E8EB9A961F053FAC7"
X-State-Token: 0366B7A7332BADF807F473D5579CD1E5
Last-Modified: Thu, 04 Mar 2021 14:23:46 GMT
Link: <http://localhost:8080/rest/path/to/resource>; rel="timegate"
Link: <http://localhost:8080/rest/path/to/resource>; rel="original"
Link: <http://localhost:8080/rest/path/to/resource/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Accept-External-Content-Handling: copy,redirect,proxy
Accept-Patch: application/sparql-update
Accept-Post: text/turtle,text/rdf+n3,text/n3,application/rdf+xml,application/n-triples,application/ld+json
Allow: DELETE,POST,HEAD,GET,PUT,PATCH,OPTIONS
Link: <http://localhost:8080/rest/path/to/resource/fcr:acl>; rel="acl"
Preference-Applied: return=representation
Vary: Prefer
Vary: Accept
Vary: Range
Vary: Accept-Encoding
Vary: Accept-Language
Vary: Accept-Datetime
Content-Type: application/rdf+xml
Content-Length: 1096

Body:

```
<rdf:RDF
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:fedora="http://fedora.info/definitions/v4/repository#"
  xmlns:ldp="http://www.w3.org/ns/ldp#" >

  <rdf:Description rdf:about="http://localhost:8080/rest/path/to/resource">
    <rdf:type rdf:resource="http://fedora.info/definitions/v4/repository#Container"/>
    <fedora:createdBy>fedoraAdmin</fedora:createdBy>
    <fedora:created rdf:datatype="http://www.w3.org/2001/XMLSchema#dateTime">2021-03-04T14:23:46.625848Z<
  /fedora:created>
    <fedora:lastModifiedBy>fedoraAdmin</fedora:lastModifiedBy>
    <rdf:type rdf:resource="http://www.w3.org/ns/ldp#BasicContainer"/>
    <rdf:type rdf:resource="http://www.w3.org/ns/ldp#Resource"/>
    <rdf:type rdf:resource="http://fedora.info/definitions/v4/repository#Resource"/>
    <fedora:lastModified rdf:datatype="http://www.w3.org/2001/XMLSchema#dateTime">2021-03-04T14:23:46.625848Z<
  /fedora:lastModified>
    <rdf:type rdf:resource="http://www.w3.org/ns/ldp#Container"/>
    <rdf:type rdf:resource="http://www.w3.org/ns/ldp#RDFSSource"/>
  </rdf:Description>

</rdf:RDF>
```

Example (3): Prefer headers

```
curl -i -u fedoraAdmin:fedoraAdmin http://localhost:8080/rest/collection -H 'Prefer: return=representation;
include="http://fedora.info/definitions/fcrepo#PreferInboundReferences"; omit="http://www.w3.org/ns
/ldp#PreferMembership
http://www.w3.org/ns/ldp#PreferContainment"
```

Response:

Status: 200 OK

Headers:

ETag: W/"16E9753D375AB3E9306140DA1AD24193"
X-State-Token: EE5D77CFC717FF045DB3F9821AB25472
Last-Modified: Thu, 04 Mar 2021 14:28:00 GMT
Link: <http://localhost:8080/rest/collection>; rel="timegate"
Link: <http://localhost:8080/rest/collection>; rel="original"
Link: <http://localhost:8080/rest/collection/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Accept-External-Content-Handling: copy,redirect,proxy
Accept-Patch: application/sparql-update
Accept-Post: text/turtle,text/rdf+n3,text/n3,application/rdf+xml,application/n-triples,application/ld+json
Allow: DELETE,POST,HEAD,GET,PUT,PATCH,OPTIONS
Link: <http://localhost:8080/rest/collection/fcr:acl>; rel="acl"
Preference-Applied: return=representation; include="http://fedora.info/definitions/fcrepo#PreferInboundReferences"; omit="http://www.w3.org/ns/ldp#PreferMembership http://www.w3.org/ns/ldp#PreferContainment"
Vary: Prefer
Vary: Accept
Vary: Range
Vary: Accept-Encoding
Vary: Accept-Language
Vary: Accept-Datetime
Content-Type: text/turtle;charset=utf-8
Content-Length: 927

Body:

@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix fedora: <http://fedora.info/definitions/v4/repository#> .
@prefix ldp: <http://www.w3.org/ns/ldp#> .

<http://localhost:8080/rest/collection>
 fedora:created "2021-03-04T14:28:00.682730Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
 fedora:lastModified "2021-03-04T14:28:00.682730Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
 fedora:createdBy "fedoraAdmin" ;
 fedora:lastModifiedBy "fedoraAdmin" ;
 rdf:type ldp:BasicContainer ;
 rdf:type ldp:Resource ;
 rdf:type fedora:Resource ;
 rdf:type ldp:RDFSource ;
 rdf:type ldp:Container ;
 rdf:type fedora:Container .

<http://localhost:8080/rest/item>
 ldp:isMemberOfCollection <http://localhost:8080/rest/collection> .

Example (4): Non-RDF Source

```
curl "http://localhost:8080/rest/path/to/binary/resource"
```

Response:

Status: 200 OK

Headers:

ETag: "0DFF05D21B40AF6576241DB58A91A7E3"
X-State-Token: 0DFF05D21B40AF6576241DB58A91A7E3
Last-Modified: Thu, 04 Mar 2021 14:32:03 GMT
Content-Type: text/plain
Accept-Ranges: bytes
Content-Disposition: attachment; filename=""; creation-date="Thu, 04 Mar 2021 14:32:03 GMT"; modification-date="Thu, 04 Mar 2021 14:32:03 GMT"; size=20
Link: <http://localhost:8080/rest/path/to/binary/resource/fcr:metadata>; rel="describedby"
Link: <http://localhost:8080/rest/path/to/binary/resource>; rel="timegate"
Link: <http://localhost:8080/rest/path/to/binary/resource>; rel="original"
Link: <http://localhost:8080/rest/path/to/binary/resource/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Accept-External-Content-Handling: copy,redirect,proxy
Allow: DELETE,HEAD,GET,PUT,OPTIONS
Link: <http://localhost:8080/rest/path/to/binary/resource/fcr:acl>; rel="acl"
Cache-Control: no-transform, must-revalidate, max-age=0
Content-Length: 20

Body:

{binary content}

Status:

200

OK

304

Not Modified

404

Not Found

406

Not Acceptable (the 'Accept' request-header media type is either invalid or unsupported)

POST

Create new resources within a LDP container

Request Headers:

CONTENT-DISPOSITION (Optional) The filename provided in the content disposition header will be stored in a `ebucore:filename` property. (See ['Example \(6\): Uploaded file with filename'](#))

CONTENT-TYPE (Optional) MIME type of the uploaded binary or RDF content (See ['Example \(2\): Create a new child binary resource with empty content'](#))

If the MIME type corresponds to a supported *RDF format*, the uploaded content will be parsed as RDF and used to populate the child node properties.



RDF will be interpreted using the current resource as the base URI (e.g. `<>` will be expanded to the current URI). Namespaces must be declared in full.

If the MIME type corresponds to a supported *RDF format*, and you also provide a `Link: <http://www.w3.org/ns/ldp#NonRDFSource>; rel="type"` header. Then the contents will be stored as a binary resource with the provided MIME type as Content-type.

For other MIME types, the uploaded content will be used to create a binary resource.

Supported RDF formats: text/turtle, text/rdf+n3, application/n3, text/n3, application/rdf+xml, application/n-triples, application/ld+json

SLUG

(Optional) A suggested name for the new child resource, which the repository may ignore.

The slug you provide does not guarantee the location of the created resource. Clients must check the Location header for the path to the created resource.

DIGEST

(Optional) A way of providing one or more checksums (SHA-1, SHA-256, MD5) which will be checked against the uploaded content to ensure error-free transfer. The header is interpreted according to [RFC-3230](#) (see 'Example (4): Uploaded file with checksum', 'Example (4b): Uploaded file with multiple checksum' and 'Example (5): Uploaded file with checksum mismatch'). If the provided checksum does not match the calculated value for the uploaded file a 409 Conflict will be returned. See [PATCH example](#) for documentation on how to change the default algorithm used during on-demand fixity checking. Valid 'Digest' algorithms/values are: sha, sha-256, sha-512, sha-512/256 or md5.

LINK

With a value containing subfield `rel=` <http://fedora.info/definitions/fcrepo#ExternalContent> the client may provide binary content from an external path. See the [external content documentation](#) for details about syntax and handling options (note, this is disabled by default), and [Example 7](#) for usage. With a `rel="type"` and a URI of <http://fedora.info/definitions/v4/repository#ArchivalGroup> the client may create an Archival Group container. See the [Fedora OCFL Object Structure](#) for more information about how this affects the OCFL structure and see [Example 2b](#)

Example (1a): Create a new child node

```
curl -X POST "http://localhost:8080/rest/"
```

Response:

Status: 201 Created

Headers:

ETag: W/"0AA840C9923E2DCAE850E70E56575771"
X-State-Token: 56AEFC5E47294A2D336BDC23727BEC2A
Last-Modified: Thu, 04 Mar 2021 14:34:00 GMT
Link: <http://localhost:8080/rest/64b9d374-5e20-4b06-964a-d4724528d1e2>; rel="timegate"
Link: <http://localhost:8080/rest/64b9d374-5e20-4b06-964a-d4724528d1e2>; rel="original"
Link: <http://localhost:8080/rest/64b9d374-5e20-4b06-964a-d4724528d1e2/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSsource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Link: <http://localhost:8080/rest/64b9d374-5e20-4b06-964a-d4724528d1e2/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/64b9d374-5e20-4b06-964a-d4724528d1e2

Body:

http://localhost:8080/rest/64b9d374-5e20-4b06-964a-d4724528d1e2

Example (1b): Create a new Archival Group node

See definition of [archival group](#).

```
curl -X POST -u fedoraAdmin:fedoraAdmin -H "Slug: my-archival-group" -H "Link: <http://fedora.info/definitions/v4/repository#ArchivalGroup>;rel=\"type\"" http://localhost:8080/rest
```

Status: 201 Created

Headers:

ETag: W/"2012C77920D7115A29671223FB5C78CC"
X-State-Token: B39C9CC391FE7CEEA41F88F62189ED92
Last-Modified: Thu, 04 Mar 2021 14:36:39 GMT
Link: <http://localhost:8080/rest/my-archival-group>; rel="timegate"
Link: <http://localhost:8080/rest/my-archival-group>; rel="original"
Link: <http://localhost:8080/rest/my-archival-group/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#ArchivalGroup>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Link: <http://localhost:8080/rest/my-archival-group/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/my-archival-group
Content-Type: text/plain
Content-Length: 44

Body:

http://localhost:8080/rest/my-archival-group

Note any subsequent posts to the above created ArchivalGroup endpoint will cause those new resources to be nested within that Archival Group. For details on the structure and workings of Archival Groups see [Fedora OCFL Object Structure](#).

Example (2): Create a new child binary resource with empty content

```
curl -i -X POST -H "Content-Type:text/plain" "http://localhost:8080/rest"
```

Response:

Status: 201 Created

Headers:

ETag: "842E0D598779799191CE1D8D79F8E812"
X-State-Token: 842E0D598779799191CE1D8D79F8E812
Last-Modified: Thu, 04 Mar 2021 14:38:38 GMT
Link: <http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903/fcr:metadata>; rel="describedby"; anchor="http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903"
Link: <http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903>; rel="timegate"
Link: <http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903>; rel="original"
Link: <http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Link: <http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903
Content-Type: text/plain
Content-Length: 63

Body:

http://localhost:8080/rest/40a0d656-1f70-4135-b6a8-ee956dfb1903

Example (3): Create a new container with RDF properties

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST -H "Content-Type: text/turtle" --data-binary "PREFIX dc:
<http://purl.org/dc/elements/1.1/> <> dc:title \"some-resource-title\" http://localhost:8080/rest/
```

Response:

Status: 201 Created

Headers:

ETag: W/"541702CF94C0D6BD8B2423DED7687BC1"
X-State-Token: B9F8FBFA0B1D724160181298C299242C
Last-Modified: Thu, 04 Mar 2021 14:42:02 GMT
Link: <http://localhost:8080/rest/febddb7c-4526-4c0d-90dc-c83c11921586>; rel="timegate"
Link: <http://localhost:8080/rest/febddb7c-4526-4c0d-90dc-c83c11921586>; rel="original"
Link: <http://localhost:8080/rest/febddb7c-4526-4c0d-90dc-c83c11921586/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Link: <http://localhost:8080/rest/febddb7c-4526-4c0d-90dc-c83c11921586/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/febddb7c-4526-4c0d-90dc-c83c11921586
Content-Type: text/plain
Content-Length: 63

Body:

http://localhost:8080/rest/febddb7c-4526-4c0d-90dc-c83c11921586

Example (4): Uploaded file with checksum

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST --data-binary "@picture.jpg" -H"digest:
sha=cbl576f22e8e3e110611b616e3e2f5ce9bdb941" "http://localhost:8080/rest/parent"
```

Response:

Status: 201 Created

Headers:

ETag: "1F819784173CD233B8EA9691778E1BB0"
X-State-Token: 1F819784173CD233B8EA9691778E1BB0
Last-Modified: Thu, 04 Mar 2021 14:45:55 GMT
Link: <http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b/fcr:metadata>; rel="describedby"; anchor="http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b"
Link: <http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b>; rel="timegate"
Link: <http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b>; rel="original"
Link: <http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Link: <http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b
Content-Type: text/plain
Content-Length: 70

Body:

http://localhost:8080/rest/parent/e4b7add5-7860-4130-a6a6-42391e86248b

Example (4b): Uploaded file with multiple checksum

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST --data-binary "@picture.jpg" -H'digest:  
sha=cbl1a576f22e8e3e110611b616e3e2f5ce9bdb941, sha-256=95331b60710d0400ee4913b5613c78f54" "http://localhost:  
8080/rest/parent"
```

Response:

Status: 201 Created

Headers:

ETag: "C19921567DCDD99C9E17A9151005824A"
X-State-Token: C19921567DCDD99C9E17A9151005824A
Last-Modified: Thu, 04 Mar 2021 14:48:10 GMT
Link: <http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7/fcr:metadata>; rel="describedby"; anchor="http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7"
Link: <http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7>; rel="timegate"
Link: <http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7>; rel="original"
Link: <http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Link: <http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7
Content-Type: text/plain
Content-Length: 70

Body:

http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbefa8dbd7

Example (5): Uploaded file with checksum mismatch

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST --data-binary "@picture.jpg" -H"digest: sha=checksumdoesntmatch"
"http://localhost:8080/rest/parent/object"
```

Response:

Status: 409 Conflict

Body:

Checksum mismatch, computed SHA digest 726956f62748a7976ddb58e0ff72ae3856a0af7a did not match expected value checksumdoesntmatch

Example (6): Uploaded file with filename

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST --data-binary "@picture.jpg" -H "Content-Disposition: attachment;
filename=\"picture.jpg\"" "http://localhost:8080/rest/parent"
```

Response:

Status: 201 Created

Headers:

ETag: "8695FEA5692396C39D84333EADEBC2C2"
X-State-Token: 8695FEA5692396C39D84333EADEBC2C2
Last-Modified: Thu, 04 Mar 2021 14:50:55 GMT
Link: <http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea/fcr:metadata>; rel="describedby"; anchor="http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea"
Link: <http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea>; rel="timegate"
Link: <http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea>; rel="original"
Link: <http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSsource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Link: <http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea
Content-Type: text/plain
Content-Length: 70

Body:

http://localhost:8080/rest/parent/ae434c08-f505-433b-b353-35e9021bd0ea

Example (7): Creating a new binary resource using proxied external content

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST -H"Link: <http://example.org/path/to/picture.jpg>; rel=\"
http://fedora.info/definitions/fcrepo#ExternalContent\"; handling=\"proxy\"; type=\"image/jpg\""
"http://localhost:8080/rest/parent"
```

Response:

Status: 201 Created

Headers:

ETag: "E77D53C833121E2930A7F057B91A8C26"
X-State-Token: E77D53C833121E2930A7F057B91A8C26
Last-Modified: Thu, 04 Mar 2021 14:59:29 GMT
Link: <http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21/fcr:metadata>; rel="describedby"; anchor="http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21"
Link: <http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21>; rel="timegate"
Link: <http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21>; rel="original"
Link: <http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Content-Location: http://example.org/path/to/picture.jpg
Link: <http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21
Content-Type: text/plain
Content-Length: 70

Body:

http://localhost:8080/rest/parent/42bebbb3-c0b7-425c-90c4-8584c399db21

Status:

201

Created

404

Not Found (resource does not exist – use PUT to specify a new resource name)

409

Conflict (checksum mismatch)

PUT

Create a resource with a specified path, or replace the binary content or triples associated with a resource with the binary content or triples provided in the request body.

For RDFSource resources



Some resource properties are repository managed and cannot be removed or modified. Any attempt to do so may result in a 4xx error.

Request Headers:


CONTENT-DISPOSITION

(Optional) The filename provided in the content disposition header will be stored in a ebucore:filename property. (See 'Example (6): Uploaded file with filename' in POST above)

CONTENT-TYPE

(Optional) MIME type of the uploaded binary or RDF content

If the MIME type corresponds to a supported *RDF format*, the uploaded content will be parsed as RDF and used to populate the child node properties.

 RDF will be interpreted using the current resource as the base URI (e.g. <> will be expanded to the current URI). Namespaces must be declared in full.

If the MIME type corresponds to a supported *RDF format*, and you also provide a `Link: <http://www.w3.org/ns/ldp#NonRDFSource>; rel="type"` header. Then the contents will be stored as a binary resource with the provided MIME type as Content-type.

For other MIME types, the uploaded content will be used to create a binary resource.

Supported RDF formats: text/turtle, text/rdf+n3, application/n3, text/n3, application/rdf+xml, application/n-triples, application/ld+json

IF-MATCH

IF-UNMODIFIED-SINCE

X-IF-STATE-TOKEN Allows the client to specify a state token as defined in [section 3.10 of the Fedora API](#)

DIGEST

(Optional) A way of providing one or more checksums (SHA-1, SHA-256, MD5) which will be checked against the uploaded content to ensure error-free transfer. The header is interpreted according to [RFC-3230](#) (see '[Example \(3\): Creating new binary resource at a specified path](#)'). If the provided checksum does not match the calculated value for the uploaded file a 409 Conflict will be returned. See [Fixity Service](#) for documentation on how to change the default algorithm used during on-demand fixity checking. Valid 'Digest' algorithms/values are: sha, sha-256, sha-512, sha-512/256, or md5.

PREFER

With the value `handling=lenient` allows replacing the properties of a container without having to provide all of the server-managed triples.

LINK

With a value containing subfield `rel=http://fedora.info/definitions/fcrepo#ExternalContent` the client may provide binary content from an external path. See the [external content documentation](#) for details about syntax and handling options (note, this is disabled by default), and [Example 4](#) for usage. With a `rel="type"` and a URI of [http://fedora.info/definitions/v4/repository#ArchivalGroup](#) the client may create an Archival Group container. See the [Fedora OCFL Object Structure](#) for more information about how this affects the OCFL structure.

Example (1): Updating properties with RDF content

1.1 Perform a GET to the current container's RDF content

```
curl -u fedoraAdmin:fedoraAdmin -X GET -H "Accept: text/turtle" "http://localhost:8080/rest/path/to/resource"
```

Response Body:

```
@prefix rdf:    <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix fedora: <http://fedora.info/definitions/v4/repository#> .
@prefix ldp:    <http://www.w3.org/ns/ldp#> .
```

```
<http://localhost:8080/rest/path/to/resource>
  fedora:created      "2021-03-04T14:23:46.625848Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
  fedora:lastModified "2021-03-04T14:23:46.625848Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
  fedora:createdBy    "fedoraAdmin" ;
  fedora:lastModifiedBy "fedoraAdmin" ;
  rdf:type            ldp:BasicContainer ;
  rdf:type            ldp:Resource ;
  rdf:type            fedora:Resource ;
  rdf:type            ldp:RDFSource ;
  rdf:type            ldp:Container ;
  rdf:type            fedora:Container .
```

1.2 Add your updates (e.g. <> dc:title "some-resource-title" .) under the full result of the GET response in 1.1 and PUT back

```
curl -u fedoraAdmin:fedoraAdmin -i -X PUT -H "Content-Type: text/turtle" -H"Prefer: handling=lenient" --data-binary "@new-triples.rdf" "http://localhost:8080/rest/path/to/resource"
```

Request Body:

```
@prefix rdf:    <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix fedora: <http://fedora.info/definitions/v4/repository#> .
@prefix ldp:    <http://www.w3.org/ns/ldp#> .

<http://localhost:8080/rest/path/to/resource>
  <http://purl.org/dc/elements/1.1/title> "some-resource-title" ;
  fedora:created      "2021-03-04T14:23:46.625848Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
  fedora:lastModified "2021-03-04T14:23:46.625848Z"^^<http://www.w3.org/2001/XMLSchema#dateTime> ;
  fedora:createdBy    "fedoraAdmin" ;
  fedora:lastModifiedBy "fedoraAdmin" ;
  rdf:type            ldp:BasicContainer ;
  rdf:type            ldp:Resource ;
  rdf:type            fedora:Resource ;
  rdf:type            ldp:RDFSSource ;
  rdf:type            ldp:Container ;
  rdf:type            fedora:Container .
```

Response:

Status: 204 No Content

Headers:

```
ETag: W/"8CE776D040FAAA4641C0E44706DA6747"
X-State-Token: 62D5EAC8EE143FAB049E2485BC1A4122
Last-Modified: Thu, 04 Mar 2021 15:09:20 GMT
Link: <http://localhost:8080/rest/path/to/resource>; rel="timegate"
Link: <http://localhost:8080/rest/path/to/resource>; rel="original"
Link: <http://localhost:8080/rest/path/to/resource/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Link: <http://localhost:8080/rest/path/to/resource/fcr:acl>; rel="acl"
```

Note the `handling=lenient` prefer header instructs the server to ignore any server managed triples in the request.

Without this prefer header the same request body would result in the following

```
curl -u fedoraAdmin:fedoraAdmin -i -X PUT -H "Content-Type: text/turtle" --data-binary "@new-triples.rdf"
"http://localhost:8080/rest/path/to/resource"
```

Status: 409 Conflict

Headers:

```
Content-Type: text/plain;charset=utf-8
Link: <http://localhost:8080/static/constraints/ServerManagedTypeException.rdf>; rel="http://www.w3.org/ns
/ldp#constrainedBy"
Link: <http://localhost:8080/static/constraints/ServerManagedPropertyException.rdf>; rel="http://www.w3.org/ns
/ldp#constrainedBy"
Content-Length: 1099
```

Body:

```
The server managed type (http://fedora.info/definitions/v4/repository#Container) cannot be modified by the
client.
The server managed predicate (http://fedora.info/definitions/v4/repository#createdBy) cannot be modified by
the client.
The server managed predicate (http://fedora.info/definitions/v4/repository#created) cannot be modified by the
client.
The server managed predicate (http://fedora.info/definitions/v4/repository#lastModifiedBy) cannot be modified
by the client.
The server managed type (http://www.w3.org/ns/ldp#BasicContainer) cannot be modified by the client.
The server managed type (http://www.w3.org/ns/ldp#Resource) cannot be modified by the client.
The server managed type (http://fedora.info/definitions/v4/repository#Resource) cannot be modified by the
client.
The server managed predicate (http://fedora.info/definitions/v4/repository#lastModified) cannot be modified
by the client.
The server managed type (http://www.w3.org/ns/ldp#Container) cannot be modified by the client.
The server managed type (http://www.w3.org/ns/ldp#RDFSsource) cannot be modified by the client.
```

Note that to prevent conflicts, the value of the `fedora:lastModified` triple in the request must match its current counterpart in the repository. The way to ensure this is to base the changes in a PUT request on the RDF content obtained in an immediately prior GET request, and never try to PUT consecutively, as this will result in a 400 error.

Example (2): Creating a new resource at a specified path

```
curl -i -X PUT "http://localhost:8080/rest/node/to/create"
```

Response:

Status: 201 Created

Response Headers:

ETag: W/"D386215480648929F3BFCA2854D9EF7E"
X-State-Token: D0F20662F78E1C4D063E9512F9068785
Last-Modified: Thu, 04 Mar 2021 15:15:35 GMT
Link: <http://localhost:8080/rest/node/to/create>; rel="timegate"
Link: <http://localhost:8080/rest/node/to/create>; rel="original"
Link: <http://localhost:8080/rest/node/to/create/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Link: <http://localhost:8080/rest/node/to/create/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/node/to/create
Content-Type: text/plain
Content-Length: 41

Body:

http://localhost:8080/rest/node/to/create

Example (3): Creating new binary resource at a specified path

```
curl -X PUT --upload-file image.jpg -H"Content-Type: image/jpeg" -H"digest:  
sha=cbl1a576f22e8e3e110611b616e3e2f5ce9bdb941" "http://localhost:8080/rest/new/image"
```

Response:

Status: 201 Created

Headers:

ETag: "DA0CCC5486A2C7E2551AAA1E528799D0"
X-State-Token: DA0CCC5486A2C7E2551AAA1E528799D0
Last-Modified: Thu, 04 Mar 2021 15:16:56 GMT
Link: <http://localhost:8080/rest/new/image/fcr:metadata>; rel="describedby"; anchor="http://localhost:8080/rest/new/image"
Link: <http://localhost:8080/rest/new/image>; rel="timegate"
Link: <http://localhost:8080/rest/new/image>; rel="original"
Link: <http://localhost:8080/rest/new/image/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Link: <http://localhost:8080/rest/new/image/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/new/image
Content-Type: text/plain
Content-Length: 36

Body:

http://localhost:8080/rest/new/image

Note that once a resource is created as an RDF or non-RDF source, it must remain an RDF or non-RDF source. In order to change the type of resource, you must DELETE and then re-create the resource.

Status:

204

No Content

412

Precondition Failed

Example (4): Creating a new binary resource at a specified path redirecting to external content

```
curl -i -u fedoraAdmin:fedoraAdmin -X PUT -H"Link: <http://www.example.com/file>; rel=\"http://fedora.info/definitions/fcrepo#ExternalContent\"; handling=\"redirect\"; type=\"text/plain\" \"http://localhost:8080/rest/node/to/redirect"
```

Response:

Status: 201 Created

Headers:

ETag: "D3400C2CA6018C1DC996BFBB68A65BAF"
X-State-Token: D3400C2CA6018C1DC996BFBB68A65BAF
Last-Modified: Thu, 04 Mar 2021 15:19:28 GMT
Link: <http://localhost:8080/rest/node/to/redirect/fcr:metadata>; rel="describedby"; anchor="http://localhost:8080/rest/node/to/redirect"
Link: <http://localhost:8080/rest/node/to/redirect>; rel="timegate"
Link: <http://localhost:8080/rest/node/to/redirect>; rel="original"
Link: <http://localhost:8080/rest/node/to/redirect/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#NonRDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Binary>; rel="type"
Content-Location: http://www.example.com/file
Link: <http://localhost:8080/rest/node/to/redirect/fcr:acl>; rel="acl"
Location: http://localhost:8080/rest/node/to/redirect
Content-Type: text/plain
Content-Length: 43

Body:

http://localhost:8080/rest/node/to/redirect

PATCH

Modify the triples associated with a resource with SPARQL-Update

Request Headers:

IF-MATCH

IF-UNMODIFIED-SINCE

CONTENT-TYPE

Example (1):

```
curl -X PATCH -H "Content-Type: application/sparql-update" --data-binary "@body.rdf" "http://localhost:8080/rest/node/to/update"
```

Request Body:

```
PREFIX dc: <http://purl.org/dc/elements/1.1/>
INSERT {
  <> dc:title "some-resource-title" .
}
WHERE { }
```

Response:

Status: 204 No Content

Example (2) Update default fixity algorithm of a binary's description:

```
curl -X PATCH -H "Content-Type: application/sparql-update" --data-binary "@body.rdf" "http://localhost:8080/rest/binary/resource/to/binary/fcr:metadata"
```

Request Body:

```
PREFIX fedoraconfig: <http://fedora.info/definitions/v4/config#>
INSERT {
  <> fedoraconfig:defaultDigestAlgorithm "sha-256"
}
WHERE { }
```

Response:

Status: 204 No Content

Status:

204

No Content

412

Precondition Failed

DELETE

Delete a resource

Example:

```
curl -X DELETE "http://localhost:8080/rest/resource/to/delete"
```

Response:

Status: 204 No Content

All child resources of a deleted resource will also be removed. Delete requests create "tombstone" resources which need to be removed before you can reuse a URI.

Example:

```
curl -X GET "http://localhost:8080/rest/some/deleted/resource"
```

Status: 410 Gone

Link: <http://localhost:8080/rest/some/deleted/resource/fcr:tombstone>; rel="hasTombstone"

Body:

Discovered tombstone resource at /some/deleted/resource, departed: 2016-11-14T17:26:17.334-06:00

```
curl -X DELETE "http://localhost:8080/rest/some/deleted/resource/fcr:tombstone"
```

Status: 204 No Content

Create a new node and reuse the deleted URL

```
curl -X PUT "http://localhost:8080/rest/some/deleted/resource"
```

Status: 201 Created

Status:

204

No Content

404

Not Found

HEAD

Retrieve the resource headers**Example:**

```
curl -u fedoraAdmin:fedoraAdmin -i -X HEAD "http://localhost:8080/rest/resource/to/head"
```

Response:

Status: 200 OK

Headers:

ETag: W/"8CE776D040FAAA4641C0E44706DA6747"
X-State-Token: 62D5EAC8EE143FAB049E2485BC1A4122
Last-Modified: Thu, 04 Mar 2021 15:09:20 GMT
Link: <http://localhost:8080/rest/path/to/resource>; rel="timegate"
Link: <http://localhost:8080/rest/path/to/resource>; rel="original"
Link: <http://localhost:8080/rest/path/to/resource/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Accept-External-Content-Handling: copy,redirect,proxy
Accept-Patch: application/sparql-update
Accept-Post: text/turtle,text/rdf+n3,text/n3,application/rdf+xml,application/n-triples,application/ld+json
Allow: DELETE,POST,HEAD,GET,PUT,PATCH,OPTIONS
Link: <http://localhost:8080/rest/path/to/resource/fcr:acl>; rel="acl"
Preference-Applied: return=representation
Vary: Prefer
Vary: Accept
Vary: Range
Vary: Accept-Encoding
Vary: Accept-Language
Vary: Accept-Datetime
Content-Type: text/turtle;charset=utf-8
Content-Length: 0

Status:

200

OK

404

Not Found

OPTIONS

Outputs information about the supported HTTP methods, etc.

Example:

```
curl -i -X OPTIONS "http://localhost:8080/rest/node/to/options"
```

Response:

Status: 200 OK

Headers:

Link: <http://localhost:8080/rest/path/to/resource>; rel="timegate"
Link: <http://localhost:8080/rest/path/to/resource>; rel="original"
Link: <http://localhost:8080/rest/path/to/resource/fcr:versions>; rel="timemap"
Link: <http://www.w3.org/ns/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ns/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ns/ldp#RDFSource>; rel="type"
Link: <http://www.w3.org/ns/ldp#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Accept-External-Content-Handling: copy,redirect,proxy
Accept-Patch: application/sparql-update
Accept-Post: text/turtle,text/rdf+n3,text/n3,application/rdf+xml,application/n-triples,application/ld+json
Allow: DELETE,POST,HEAD,GET,PUT,PATCH,OPTIONS
Content-Length: 0

Status:

200 OK

Versioning

RESTful HTTP API - Versioning

- Working with a versionable resource (a LDPRv)
 - GET Retrieve the versioned resource from a specific point in time.
- Working with a versions container (a LDPCv)
 - GET Get a list of the available versions of an object
 - POST Create a new versioned resource (a new LDPRm)
- Working with a versioned resource (a LDPRm)
 - GET Get a specific versioned resource

Services

Backup and Restore

Error rendering macro 'excerpt-include'

User 'null' does not have permission to view the page.

Fixity

RESTful HTTP API - Fixity

Request URI: `/path/to/some/binary`

Methods: HEAD, GET

HEAD

Request the fixity checksum for a given digest algorithm

Checking fixity requires retrieving the content from the binary store and may take some time.

Request Headers:

WANT-DIGEST

md5, sha, sha-256, sha-512, sha-512/256

Example:

```
curl -I -H "Want-Digest: sha-256" "http://localhost:8080/rest/path/to/some/binary"
```

Response (fixity success):

```
Status: 200 OK

Headers:
ETag: "51c5ed5fff4b6c79233cc7573a387902f7d171e7"
Last-Modified: Fri, 04 May 2018 18:14:47 GMT
Content-Type: image/jpeg
Accept-Ranges: bytes
Content-Disposition: attachment; filename="IMG_4023.JPG.jpg"; creation-date="Fri, 04 May 2018 18:14:47 GMT";
modification-date="Fri, 04 May 2018 18:14:47 GMT"; size=47021
Link: <http://www.w3.org/ns/ldp#Resource>;rel="type"
Link: <http://www.w3.org/ns/ldp#NonRDFSource>;rel="type"
Link: <http://localhost:8080/rest/examples/binary/fcr:acl>; rel="acl"
Link: <http://localhost:8080/rest/examples/binary/fcr:metadata>; rel="describedby"
Link: <http://localhost:8080/static/constraints/NonRDFSourceConstraints.rdf>; rel="http://www.w3.org/ns
/ldp#constrainedBy"
Link: <http://localhost:8080/rest/examples/binary>; rel="timegate"
Link: <http://localhost:8080/rest/examples/binary>; rel="original"
Link: <http://localhost:8080/rest/examples/binary/fcr:versions>; rel="timemap"
Link: <http://mementoweb.org/ns#OriginalResource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Accept-External-Content-Handling: copy,redirect,proxy
Allow: DELETE,HEAD,GET,PUT,OPTIONS
Digest: sha-256=08692ca74dc1e08c84f90feda5e64c72617be850a7c7adca88b03f6ccd3db406
Content-Length: 47021
```

Status:

200

OK

400

Bad request (the 'Want-Digest' request-header algorithm type is either invalid or unsupported)

404

Resource not found

Request URI: **/path/to/some/resource/fcr:fixity**

Methods: GET

GET

Get the fixity report for an object

Checking fixity requires retrieving the content from the binary store and may take some time.
The `/fcr:fixity` endpoint is not part of the Fedora API Specification at this time.

Request Headers:

ACCEPT

application/ld+json, application/n-triples, application/rdf+xml, application/x-turtle, text/html, text/n3, text/plain, text/rdf+n3, text/turtle

Example:

```
curl -H "Accept: text/turtle" "http://localhost:8080/rest/path/to/some/resource/fcr:fixity"
```

Response (fixity success):

Status: 200 OK

Headers:

Content-Type: text/turtle

Body:

```
@prefix premis: <http://www.loc.gov/premis/rdf/v1#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

<http://localhost:8080/rest/path/to/some/resource>
  premis:hasFixity <http://localhost:8080/rest/path/to/some/resource#fixity/1494431303920> .

<http://localhost:8080/rest/path/to/some/resource#fixity/1494431303920>
  rdf:type          premis:Fixity ;
  rdf:type          premis:EventOutcomeDetail ;
  premis:hasEventOutcome "SUCCESS" ;
  premis:hasMessageDigestAlgorithm "SHA-1" ;
  premis:hasMessageDigest <urn:sha1:ca3392593351ef8e6554bdabfbd8bdc1002ecb6f> ;
  premis:hasSize       "1277811"^^<http://www.w3.org/2001/XMLSchema#long> .
```

Response (fixity failure):

```
Status: 200 OK
Headers:
Content-Type: text/turtle

Body:

@prefix premis: <http://www.loc.gov/premis/rdf/v1#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

<http://localhost:8080/rest/path/to/some/resource>
  premis:hasFixity <http://localhost:8080/rest/path/to/some/resource#fixity/1494445619308> .

<http://localhost:8080/rest/path/to/some/resource#fixity/1494445619308>
  rdf:type          premis:Fixity ;
  rdf:type          premis:EventOutcomeDetail ;
  premis:hasEventOutcome "BAD_CHECKSUM" ;
  premis:hasEventOutcome "BAD_SIZE" ;
  premis:hasMessageDigestAlgorithm "SHA-1" ;
  premis:hasMessageDigest <urn:sha1:1d3d03c656cf0a944c393bf9257c6cecdba5263f> ;
  premis:hasSize        "1287509"^^<http://www.w3.org/2001/XMLSchema#long> .
```

Status:

200

OK

404

Resource not found

Note: Default Fixity Algorithm

When ingesting a binary resource, one or more checksums may be provided, see [API reference](#) (POST example 4, POST example 4b, PUT example 3). The supported algorithms are: SHA-1, SHA-256 and MD5.

By default, the algorithm used by the /fcr:fixity endpoint is SHA-1. However, that may be changed - per resource - to one of the other supported algorithms by configuring the property: `fedoraconfig:defaultDigestAlgorithm`. See [API reference](#) (PATCH example 2).

Transactions

RESTful HTTP API - Transactions

POST

Create a new transaction

After retrieving a transaction URI from the "Location" header in the response to the following HTTP request, the client can execute any POST/PUT/PATCH/DELETE/GET REST API method within the transaction scope by including the transaction URI in the "Atomic-ID" request header.

Transactions are automatically closed and rolled back after 3 minutes of inactivity. Transactions can be refreshed by POSTing to the transaction URI

Example:

```
curl -i -X POST "http://localhost:8080/rest/fcr:tx"
```

Response:

```
Status: 201 Created

Headers:
Location: http://localhost:8080/rest/fcr:tx/ce4bb2bf-8ced-4c7d-b281-f2132e3064bb
Atomic-Expires: Thu, 07 May 2020 17:34:37 GMT
```

Usage:

When a transaction has been created, it will return a Location header. Use this location (transaction URI) as the value of the "Atomic-ID" request header for performing REST API operations within the transaction. When you are done with the transaction, either commit the transaction to the repository by making a PUT request to the transaction URI, or discard the changes and rollback the transaction by making a DELETE request to the transaction URI.

For further examples of the usage of Transactions, see: [Transactions](#)

Status:

201

Created: if the transaction is created successfully

GET

Get the current status of the repository in a transaction

To get the status of a transaction, perform a GET request on the transaction URI that was previously returned as the value of the "Location" header from the transaction creation request. The "Atomic-Expires" header indicates the time at which the transaction will auto-rollback.

Example:

```
curl -i -X GET "http://localhost:8080/rest/fcr:tx/ce4bb2bf-8ced-4c7d-b281-f2132e3064bb"
```

Response:

Status: 204 No Content

Headers:

Expires: Thu, 7 May 2020 17:46:17 GMT

Status:

204

No Content: If the request was successful

404

Not Found: Transaction not found

410

Gone: Transaction expired

POST

Keep an existing transaction alive

By performing a POST request on an existing transaction URI, the transaction's expiration time is extended by the value of the session timeout duration (default: 3 minutes)

Example:

```
curl -i -X POST "http://localhost:8080/rest/fcr:tx/ce4bb2bf-8ced-4c7d-b281-f2132e3064bb"
```

Response:

Status: 204 No Content

Headers:

Atomic-Expires: Thu, 7 May 2020 18:00:38 GMT

Status:

204

No Content: if the transaction is renewed successfully

404

Not Found: if the transaction doesn't exist

410

GONE:

TRANSACTION EXPIRED

PUT

Commit an open transaction

Any operations you made within the scope of the transaction will be applied together, meaning if any of them fail, the whole transaction will fail.

Example:

```
curl -X PUT "http://localhost:8080/rest/fcr:tx/ce4bb2bf-8ced-4c7d-b281-f2132e3064bb"
```

Response:

Status: 204 No Content

Status:

204

No Content: if the transaction is committed successfully

404

Not Found: if the transaction doesn't exist

409

Conflict: Transaction did not commit successfully

410

Gone: Transaction expired

DELETE

Rollback and close an open transaction

Example:

```
curl -i -X DELETE "http://localhost:8080/rest/fcr:tx/ce4bb2bf-8ced-4c7d-b281-f2132e3064bb"
```

Response:

Status: 204 No Content

Status:

204

No Content: if the transaction is discarded successfully

410

Gone: if the transaction has already been committed or rolled back

404

Not Found: if the transaction does not exist