RESTful HTTP API - Containers

- GET Retrieve the content of the resource
- POST Create new resources within a LDP container
- 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.
- PATCH Modify the triples associated with a resource with SPARQL-Update
- DELETE Delete a resource
- HEAD Retrieve the resource headers
- OPTIONS Outputs information about the supported HTTP methods, etc.

Request URI: /path/to/some/resource

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

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**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

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

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

**Example (1): Turtle**

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

Status: 200 OK

Headers:
ETag: "51FA3512608877FD9197C8701F986014"
X-State-Token: 0366B7A7332BADFP807F471D5579CD1E5
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/n3,text/n3, application/rdf+xml, application/n-triples, application/ld+json
Allow: DELETE,POST,HEAD,GET,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:RDFSResource ;
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:
Example (3): Prefer headers


http://www.w3.org/ns/ldp#PreferContainment"
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}
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

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

Response:

```
Status: 201 Created

Headers:
ETag: W/"0AA840C9923E2DCAE850E70E56575771"
X-State-Token: 56AEFC5E47294A2D336BD2C23727BEC2A
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://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/64b9d374-5e20-4b06-964a-d4724528d1e2/fcr:versions>; rel="timemap"
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.

```bash
```

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**

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

**Response:**

```
Status: 201 Created
Headers:
ETag: "842EDD5987799191CE1DB79F8E812"
X-State-Token: 842EDD5987799191CE1DB79F8E812
Last-Modified: Thu, 04 Mar 2021 14:38:38 GMT
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

```
```

Response:

```
Status: 201 Created

Headers:
ETag: W/"541702CF94C0D6BD8B2423DED7687BC1"
X-State-Token: B9F8FBFA0B17D24160181298C299242C
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://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#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Container>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#ac1>; 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=cb1a576f22e8e3e1061b61e3e2f5ce9b9b941" "http://localhost:8080/rest/parent"
```

Response:

```
```
```
Example (4b): Uploaded file with multiple checksums

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST --data-binary @picture.jpg -H "digest: sha=cb1a576f22e8e3e110611b616e3e2f5ce9dbb941, 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
Location: http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbea88d8d7
Content-Type: text/plain
Content-Length: 70

Body:
http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbea88d8d7
```

Example (5): Uploaded file with checksum mismatch

```
curl -i -u fedoraAdmin:fedoraAdmin -X POST --data-binary @picture.jpg -H "digest: sha=cb1a576f22e8e3e110611b616e3e2f5ce9dbb941" "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
Location: http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbea88d8d7
Content-Type: text/plain
Content-Length: 70

Body:
http://localhost:8080/rest/parent/b9216b25-bc78-4417-9587-43dbea88d8d7
```
Example (6): Uploaded file with filename


Response:

Status: 201 Created

Headers:

ETag: "8695FEA5692396C39D84333EAEDEBC2C2"
X-State-Token: 8695FEA5692396C39D84333EAEDEBC2C2
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#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/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


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/42bebb3-c0b7-425c-90c4-8584c399db21/fcr:metadata>; rel="describedby";
anchor="http://localhost:8080/rest/parent/42bebb3-c0b7-425c-90c4-8584c399db21"
Link: <http://localhost:8080/rest/parent/42bebb3-c0b7-425c-90c4-8584c399db21>; rel="timegate"
Link: <http://localhost:8080/rest/parent/42bebb3-c0b7-425c-90c4-8584c399db21>; rel="original"
Link: <http://localhost:8080/rest/parent/42bebb3-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"
Content-Location: http://example.org/path/to/picture.jpg
Location: http://localhost:8080/rest/parent/42bebb3-c0b7-425c-90c4-8584c399db21/fcr:acl; rel="acl"
Content-Type: text/plain
Content-Length: 70

Body:

http://localhost:8080/rest/parent/42bebb3-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.

If the MIME type corresponds to a supported RDF format, and you also provide a Link: `<http://www.w3.org/2001/06/rdf+') 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

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-MATCH</td>
<td>Allows the client to specify a state token as defined in section 3.10 of the Fedora API</td>
</tr>
<tr>
<td>IF-UNMODIFIED-SINCE</td>
<td>(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.</td>
</tr>
<tr>
<td>X-IF-STATE-TOKEN</td>
<td>(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.</td>
</tr>
<tr>
<td>DIGEST</td>
<td>(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.</td>
</tr>
<tr>
<td>PREFER</td>
<td>With the value handling=lenient allows replacing the properties of a container without having to provide all of the server-managed triples.</td>
</tr>
<tr>
<td>LINK</td>
<td>With a value containing subfield rel=<a href="http://fedora.info/definitions/fcrepo#ExternalContent">http://fedora.info/definitions/fcrepo#ExternalContent</a> 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=&quot;type&quot; and a URI of <a href="http://fedora.info/definitions/v4/repository#ArchivalGroup">http://fedora.info/definitions/v4/repository#ArchivalGroup</a> the client may create an Archival Group container. See the Fedora OCFL Object Structure for more information about how this affects the OCFL structure.</td>
</tr>
</tbody>
</table>

Example (1): Updating properties with RDF content

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

```bash
```

Response Body:

```turtle
@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               ldp:Container ;
rdf:type               ldp:RDFSource ;
rdf:type               ldp: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

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:RDFSource ;
  rdf:type               ldp:Container ;
  rdf:type               fedora:Container .

Response:

Status: 204 No Content

Headers:

ETag: W/"8CE776D040FAAA4641C0E44706DA747"
X-State-Token: 62D5EAC8EE143FAB049E24858C1A4122
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"

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

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#RDFSource) 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:
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=cb1a576f22e8e3e10661b616e3e2f5ce9dbb941" "http://localhost:8080/rest/new/image"

Response:

Status: 201 Created

Headers:

ETag: "DA0CCC5486A27E2551AAA1E528799D0"
X-State-Token: DA0CCC5486A27E2551AAA1E528799D0
Last-Modified: Thu, 04 Mar 2021 15:16:56 GMT
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#NonRDFSource>; 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

```bash
```

Response:

- **Status:** 201 Created
- **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"
- **Content-Location:** http://www.example.com/file
- **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):**

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:


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:

```bash
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

```bash
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

```bash
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:

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

Response:
Status: 200 OK

Headers:

ETag: W/"8CE776D040F AAAA4641C0E44706DA6747"
X-State-Token: 62D5EAC8EB143FAB049E2485BC1A4122
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#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/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/ldp#BasicContainer>; rel="type"
Link: <http://www.w3.org/ldp#Resource>; rel="type"
Link: <http://fedora.info/definitions/v4/repository#Resource>; rel="type"
Link: <http://mementoweb.org/ns#TimeGate>; rel="type"
Link: <http://www.w3.org/ldp#RDFSource>; 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