

RESTful HTTP API - Fixity

- [HEAD](#) Request the fixity checksum for a given digest algorithm
- [GET](#) Get the fixity report for an object
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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#NonRDFSResource>;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/NonRDFSResourceConstraints.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:sha1:1d3d03c656cf0a944c393bf9257c6cecd5a5263f> ;
  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](#)).