

Fedora API Spec and Delta Document Verification

Fedora's alignment with each category of the Fedora API Specification needs to be verified for completeness and correctness. Below is a listing of the specification categories, the person/people taking the lead on ensuring alignment, and the current status of alignment.

- [2018 Spring API Alignment Sprint 1 Planning](#)

Legend

- ? - Untested
- ✓ - Tested, working
- ✗ - Tested, not working
- - Tested, not applicable
- ⚠ - Needs review

Environment

- Version of Fedora: <https://github.com/fcrepo4/fcrepo4/commit/fe92e09c54949b930a27dbd5f24a591cbd4ed568> (as of 2018-06-12)
- Version of Fedora Specification: <https://github.com/fcrepo/fcrepo-specification/commit/83b3bca9627e5ba9fda5b0c1718bea455747f559> (as of 2018-06-13)
- [Test Compatibility Suite](#)
- Legacy - Version of script: 9d20fad (repo and usage here: <https://github.com/rotated8/fedora-spec-testing>)

3 Resource Management

Lead

- [Jared Whiklo](#)
- [Yinlin Chen](#)

3.1 General ([Jared Whiklo](#))

- Empty section

3.1.1 LDP Containers

- [blocked URL](#) MUST be able to create LDP Containers: Tested in 3.3
- ✓ MUST distinguish between triple types OR MUST return 409 with constrainedBy Link in headers for ldp:contains membership predicate if server cannot distinguish between triple types
 - We return a 409 because we can't distinguish and therefore the next 2 tests are not applicable.
- — MAY permit ldp:contains membership predicate if server can distinguish between triple types
- — SHOULD allow Prefer header in request to distinguish triple types if server can distinguish triple types

3.1.2 LDP-NR creation

- ✓ SHOULD create an LDP-NR if creation request includes NonRDFSource type Link in headers, regardless of Content-Type headers

3.1.3 Constraints Document

- ✓ SHOULD respond with <Link: <http://www.w3.org/ns/ldp#constrainedBy>> header on failures due to implementation choices

3.1.4 Data Model

- ✓ MUST respond with <Link: <http://www.w3.org/ns/ldp#constrainedBy>> header on failures due to unallowed data model ... like single-subject-restriction scenario

3.2 HTTP GET

3.2.1 Additional values for the Prefer header

- ✓ SHOULD support PreferInboundReferences URI in Prefer header
 - Supports the old " <http://fedora.info/definitions/v4/repository#InboundReferences> " but not the one defined in the spec.
- [blocked URL](#) MAY support PreferContainedDescriptions URI in Prefer header

3.2.2 LDP-RSs

- **blocked URL** MUST return Preference-Applied header if request's Prefer header is honored (Always applied)
 - note: also test with a combinations of Prefer headers: some valid **blocked URL**, some invalid **blocked URL**
- **blocked URL** MUST return describes Link to LDP-NR if request is to associated LDP-RS

3.2.3 LDP-NRs

- **blocked URL** MUST return Digest header as directed by request's Want-Digest header

3.3 HTTP HEAD

- **blocked URL** MUST NOT return a body
- ✓ SHOULD return same headers as if the request was a GET

◦ **blocked URL** MAY omit payload headers from response

that are not seen on HEAD

server for this macro. It may be due to Application Link configuration.

Unable to locate Jira

- **blocked URL** MAY omit payload headers from response
- **blocked URL** MAY omit payload headers from response

3.4 HTTP OPTIONS (Yinlin Chen)

- **blocked URL** Any LDP-RS must support OPTIONS per [LDP] 4.2.8. 4.2. LDP servers must support the HTTP OPTIONS method.

3.5 HTTP POST

- **blocked URL** MUST be supported on LDPC
- ✗ MAY not be supported on LDPCv
- ✓ MUST include default interaction model in constrainedBy Link header
 - Correct for both LDP-RS and LDP-NR

3.5.1 LDP-NRs

- **blocked URL** MUST support creation of LDP-NRs
- **blocked URL** MUST create and associate an LDP-RS when an LDP-NR is created
- **blocked URL** MUST return 409 if request Digest header does not match calculated value for content of new LDP-NR
- **blocked URL** SHOULD return 400 if request Digest header's type is not supported (Should 'type' be 'algorithm', like the RFC?)

3.6 HTTP PUT

- ✓ MAY include type Link header in request
- ✓ SHOULD return 409 if request's type Link is not resource's current type or subtype thereof, or not in LDP namespace
- ✗ MUST change resource's type if request's type Link is a subtype of resource's current type
- ✗ MUST change resource's interaction model if request's type Link has an LDP interaction model

3.6.1 LDP-RSs

- ✓ MUST support PUT on LDP-RSs for non-server-managed triples
- ✓ MUST return 4xx (409) if request modifies server-managed triples on a LDP-RS
- **blocked URL** MUST return constrainedBy Link in headers if request modifies server-managed triples on a LDP-RS
- ✓ MUST return info in body about which statements could not be persisted if request modifies server-managed triples on a LDP-RS
 - Currently we allow the use of the -Dfcrepo.properties.management=relaxed option to allow updating server managed triples, which is fine

3.6.2 LDP-NRs (Danny Bernstein)

- ✓ MUST support PUT on LDP-NRs to replace binary content
- ✓ MUST return 409 if request Digest header does not match calculated value for new content of target LDP-NR
- ✓ SHOULD return 400 if request Digest header's type is not supported

3.6.3 Creating resources with HTTP PUT

- ✓ If PUT is supported for creation of LDP-NRs, MUST create and associate an LDP-RS when an LDP-NR is created (Jared Whiklo)


3.7 HTTP PATCH (Jared Whiklo)

- **blocked URL** MUST be supported on LDP-RSs
- **blocked URL** MUST support Content-Type: application/sparql-update
- ✗ MAY support other update types
- **blocked URL** MUST return 4xx (409) when modifying protected resource statements
 - Tested by attempting to add "fedora:lastModifiedBy" property to a container via PATCH
- **blocked URL** MUST return info in body about which statements could not be persisted when modifying protected resource statements
 - Returns "Could not persist triple containing predicate <http://fedora.info/definitions/v4/repository#lastModifiedBy> to node /test_container"
- **blocked URL** MUST return constrainedBy Link in headers when modifying protected resource statements
- **blocked URL** MUST return 2xx if successful

3.7.1 Containment Triples

- **blocked URL** SHOULD return 409 Conflict if PATCH attempts to update containment triples
 - Tested by attempting to add "ldp:contains" relation referencing another LDPR via PATCH.
 - Rejected with status 409
 - Link: <<http://localhost:8080/static/constraints/ServerManagedPropertyException.rdf>>; rel="<http://www.w3.org/ns/ldp#constrainedBy>"
 - Could not persist triple containing predicate <http://www.w3.org/ns/ldp#contains> to node /test_container

3.7.2 Interaction models

-  **MUST** return 409 when modifying the interaction model to a type that is not a subtype of the current type


3.8 HTTP DELETE (Yinlin Chen)

- **blocked URL** MAY be supported

3.8.1 Recursive Delete

- **blocked URL** An implementation that cannot recurse should not advertise DELETE in response to OPTIONS requests for container with contained resources.
- **blocked URL** MUST use LDP containment relations for recursive deletion, if recursive deletion is supported
 - NOTE: Contained resource and all subresources were return the tombstone of the root resource deleted
- **blocked URL** An implementation must not return a 200 (OK) or 204 (No Content) response unless the entire operation successfully completed.
- **blocked URL** An implementation must not emit a message that implies successful DELETE of a resource until the resource has been successfully removed.
- **blocked URL** Compliance with LDP 5.2.5.1 When a **contained LDPR** is deleted, the LDPC server **must** also remove the corresponding containment triple, which has the effect of removing the deleted LDPR from the containing LDPC.
- **blocked URL** Compliance with LDP 5.2.5.2 When a **contained LDPR** is deleted, and the LDPC server created an associated LDP-RS (see the **LDPC POST** section), the LDPC server **must** also delete the associated LDP-RS it created.
 - LDP-NR and associated LDP-RS both return 410
 - Confirm LDP-NR and LDP-RS both return 410 after being deleted recursively

3.9 External Binary Content

- **blocked URL** Fedora servers **should** support the **creation** of **LDP-NRs** with content external to the request entity, as indicated by a link with rel="<http://fedora.info/definitions/fcrepo#ExternalContent>" and target that is the location of the external content.
 - **blocked URL** handling="copy"
 - **blocked URL** handling="redirect"
 - **blocked URL** handling="proxy"
- **blocked URL** Fedora servers **should** support the **update** of **LDP-NRs** with content external to the request entity, as indicated by a link with rel="<http://fedora.info/definitions/fcrepo#ExternalContent>" and target that is the location of the external content.
 - **blocked URL** handling="redirect"
 - **blocked URL** handling="copy"
 - **blocked URL** handling="proxy"
- **blocked URL** Fedora servers that do not support the creation of **LDP-NRs** with content external **must** reject with a 4xx range status code
-  Fedora servers that do not support the creation of **LDP-NRs** with content external **must** describe this restriction in a resource indicated by a rel="<http://www.w3.org/ns/ldp#constrainedBy>" link in the Link response header.
- **blocked URL** Fedora servers **must** use the handling attribute in the external content link to determine how to process the request.
 - At least one of the following handling attributes must be supported
 - **blocked URL** copy - requests that the server dereference the external content URI and treat that as if it were the entity body of the request.
 - **blocked URL** redirect - requests that the server record the location of the external content and handle requests for that content using HTTP redirect responses with the Content-Location header specifying the external content location.
 - **blocked URL** proxy - requests that the server record the location of the external content and handle requests for that content by proxying. See also 3.9.3 **Redirected and Proxied External Content**.
- **blocked URL** Fedora servers **must** reject with a 4xx range status code requests for which the handling attribute is not present or cannot be respected.
- **blocked URL** In the case that the specified handling cannot be respected, the restrictions causing the request to fail **must** be described in a resource indicated by a rel="<http://www.w3.org/ns/ldp#constrainedBy>" link in the Link response header.
- **blocked URL** Fedora servers **must** use the value of the type attribute in the external content link as the media type of the external content, if provided.
- **blocked URL** Fedora servers **should** ignore any Content-Type header in the request.
 - **blocked URL** no "type=" attribute in the Link header results in 'application/octet-stream'
 - **blocked URL** "type=" as well as 'Content-Type' header result in "type=" taking precedence
 - **blocked URL** no "type=", but with 'Content-Type' results in 'Content-Type' being ignored (as it should be)
- If there is no type attribute:
 - **blocked URL** Servers **may** use the media type obtained when accessing the external content via the specified scheme (e.g. the Content-Type header for external content accessed via http).
 - **blocked URL** Servers **may** use a default media type.
 - server uses default content type of "application/octet-stream"
 - **blocked URL** Servers **may** reject the request with a 4xx range status code.
- **blocked URL** A Fedora server receiving requests that would create or update an **LDP-NR** with content external to the request entity **must** reject request if it cannot guarantee all of the response headers required by the **LDP-NR** interaction model in this specification
 - Required "describedby" Link header present for all non-historic-memento

- [blocked URL](#)Historic mementos of external binaries are currently failing, so cannot confirm behavior for historic mementos (although they most likely will violate the Link requirement after the historic binary has been created but not the historic description):

```
curl -i -XPUT -H "Link: <http://mementoweb.org/ns#OriginalResource>; rel=\"type\" \" -H "Link: <https://duraspace.org/wp-content/themes/duraspace/assets/images/whitedura.png>; rel=\"http://fedora.info/definitions/fcrepo#ExternalContent\"; handling=\"proxy\"; type=\"image/png\" \" http://localhost:8080/rest/coollogo" -ufedoraAdmin:fedoraAdmin

curl -XPOST http://localhost:8080/rest/coollogo/fcr:versions -H "Memento-Datetime: Sat, 1 Jan 2000 00:00:00 GMT" -H "Link: <https://wiki.duraspace.org/download/attachments/31655033/fedora_logo_2in.png>; rel=\"http://fedora.info/definitions/fcrepo#ExternalContent\"; handling=\"proxy\"; type=\"image/png\" \" -ufedoraAdmin:fedoraAdmin

#Response:
# < HTTP/1.1 415 Unsupported Media Type
# Invalid Content Type application/octet-stream
```

- Unable to locate Jira server for this macro. It may be due to Application Link configuration.
- Server pr
- Confirmed for copy, redirect and proxy HTTP URLs.
- NOTE: For a proxy binary from a HTTP URL that does not return a Content-Length header, the premis:hasSize property will be set to -1 and no Content-Length header is returned from Fcrepo.

3.9.1 Advertising External Content Support

- ✖ Fedora
- Unable to locate Jira server for this macro. It may be due to Application Link configuration.
- ✖ The v
- (copy/red
- Unable to locate Jira server for this macro. It may be due to Application Link configuration.

3.9.2 External Content for RDF Resources

- Non-normative section

3.9.3 Redirected and Proxied External Content

- ✔ Fedora servers supporting "redirect" external content types MUST correctly respond to the "Want-Digest" header
- ✔ Fedora servers supporting "proxy" external content types MUST correctly respond to the "Want-Digest" header
- ✔ A successful response to a GET and HEAD request for external content with handling of redirect must have status code of either 302 (Found) or 307 (Temporary Redirect)

4 Versioning

Leads

- [Jared Whiklo](#)
- [Danny Bernstein](#)

4 Resource Versioning

- ✔ When an [LDPR](#) is created with a rel="type" link in the Link header specifying type <http://mementoweb.org/ns#OriginalResource> to indicate versioning, it must be created as an [LDPRv](#)
- ✔ When an [LDPR](#) is created with a rel="type" link in the Link header specifying type <http://mementoweb.org/ns#OriginalResource> to indicate versioning, a version container ([LDPCv](#)) capturing time-varying representations of the [LDPRv](#) MUST be created

4.1 Versioned Resources

- MUST provide TimeGate interaction model, detailed below

4.1.1 HTTP GET (LDPRv)

- ✔ The Accept-Datetime header is used to request a past state, exactly as per [[RFC7089](#)] [section 2.1.1](#). A successful response must be a 302 (Found) redirect to the appropriate [LDPRm](#)
- ✔ If no [LDPRm](#) is appropriate to the Accept-Datetime value, an implementation should return a 406 (Unacceptable).

- Unable to locate Jira server for this macro. It may be due to Application Link configuration.
- The response must include:
 - ✓ A `rel="original" type="timemap"` link in the Link header referencing itself (Jared Whiklo)
 - ✓ A `<http://mementoweb.org/ns#TimeGate>; rel="type"` link in the Link header (Jared Whiklo)
 - ✓ A `<http://mementoweb.org/ns#OriginalResource>; rel="type"` link in the Link header
 - ✓ At least one `rel="timemap"` link in the Link header referencing an associated `LDPCv`
 - ✓ A `Vary: Accept-Datetime` header, exactly as per [RFC7089] section 2.1.2.

4.1.2 HTTP PUT (LDPRv) (Danny Bernstein)

- ✓ An implementation must support PUT, as is the case for any `LDPR`.

4.2 Version Resources (LDPRm)

- ✓ An `LDPRm` may be deleted
- ✓ An `LDPRm` must not be modified once created.

4.2.1 HTTP GET (LDPRm)

- ✓ An implementation must support GET, as is the case for any `LDPR` (LDP-RS memento)
- ✓ An implementation must support GET, as is the case for any `LDPR` (LDP-NR memento)
- ✓ The headers for GET requests and responses on this resource must conform to [RFC7089] section 2.1 . Particularly it should be noted that the relevant `TimeGate` for an `LDPRm` is the original versioned `LDPRv` .
- ✓ Any response to a GET request must include a `<http://mementoweb.org/ns#Memento>; rel="type"` link in the Link header.

4.2.2 HTTP OPTIONS (LDPRm)

- ✓ An implementation must support OPTIONS.
- ✓ A response to an OPTIONS request must include `Allow: GET, HEAD, OPTIONS`
- ✓ An implementation may include `Allow: DELETE` if clients can remove a version from the version history

4.2.3 HTTP POST (LDPRm)

- ✓ An implementation must not support POST for `LDPRms`.

4.2.4 HTTP PUT (LDPRm)

- ✓ An implementation must not support PUT for `LDPRms`.

4.2.5 HTTP PATCH (LDPRm)

- ✓ An implementation must not support PATCH for `LDPRms`.

4.2.6 HTTP DELETE (LDPRm)

- ✓ An implementation may support DELETE for `LDPRms`. If DELETE is supported, the server is responsible for all behaviors implied by the LDP-containment of the `LDPRm`.

4.3 Version Containers (LDPCv) (Jared Whiklo)

- ✓ An implementation must indicate `TimeMap` in the same way it indicates the container interaction model of the resource via HTTP headers.
- ✓ An implementation must not allow the creation of an `LDPCv` that is `LDP-contained` by its associated `LDPRv`.

4.3.1 HTTP GET (LDPCv) (Jared Whiklo)

- ✓ An implementation must support GET, as is the case for any `LDPR`.
- ✓ Any response to a GET request must include a `<http://mementoweb.org/ns#TimeMap>; rel="type"` link in the Link header.
- ✓ An `LDPCv` must respond to GET `Accept: application/link-format` as indicated in [RFC7089] section 5 and specified in [RFC6690] section 7.3.
- ✓ An implementation must include the `Allow` header
 - Unable to locate Jira server for this macro. It may be due to Application Link configuration.
- ✗ If an `LDPCv` is `LDP-contained` by its associated `LDPRv`, it must not support GET
- ✓ An `LDPCv` must not support PATCH
 - Unable to locate Jira server for this macro. It may be due to Application Link configuration.

4.3.2 HTTP OPTIONS (LDPCv) (Jared Whiklo)

- ✓ Implementations MUST support OPTIONS
- ✓ Implementation's response to an OPTIONS request MUST include "Allow: GET, HEAD, OPTIONS"
- ✓ Implementations may `Allow: DELETE` if the versioning behavior is removable by deleting the `LDPCv`
- ✓ Implementations may `Allow: PATCH` if the `LDPCv` has mutable properties
 - (it does not allow PATCH because `LDPCv` does not have mutable properties).
- ✓ Implementations may `Allow: POST` if versions can be explicitly minted by a client
- ✓ If an `LDPCv` is `LDP-contained` by its associated `LDPRv`, it must not support OPTIONS
 - Unable to locate Jira server for this macro. It may be due to Application Link configuration.
- ✓ If an `LDPCv` is `LDP-contained` by its associated `LDPRv`, it must not support PATCH

4.3.3 HTTP POST (LDPCv)

- ✔ Although an LDPCv is both a TimeMap and an LDPC, it may disallow POST requests. - POST is allowed

4.3.3.1 Implementations that allow POSTs for LDPCvs

- ✔ If an LDPCv supports POST, a POST request that does not contain a Memento-Datetime header should be understood to create a new LDPRm contained by the LDPCv, reflecting the state of the LDPRv at the time of the POST.
- ✔ If an LDPCv supports POST, a POST request that does not contain a Memento-Datetime header MUST ignore any request body
- ✔ If an LDPCv supports POST, a POST with a Memento-Datetime header should be understood to create a new LDPRm contained by the LDPCv, with the state given in the request body
- ✔ If an LDPCv supports POST, a POST with a Memento-Datetime header should be understood to create a new LDPRm contained by the LDPCv, with the datetime given in the Memento-Datetime request header.

4.3.3.2 Implementations that disallow POSTs for LDPCvs

- ❌ If an implementation does not support one or both of POST cases above, it must respond to such requests with a 4xx range status code and a link to an appropriate constraints document

4.3.4 HTTP PUT (LDPCv)

- ✔ Imple

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Unable to locate Jira server for this macro. It may be due to Application Link configuration.

4.3.5 HTTP PATCH (LDPCv)

- ❌ Implementations MAY disallow PATCH - disallowed

4.3.6 HTTP DELETE (LDPCv)

- ✔ An implementation may support DELETE.
- ✔ An implementation that does support DELETE should do so by both removing the LDPCv and removing the versioning interaction model from the original LDPRv.

4.4 Implementation Patterns

- Non-normative section

5 Resource Authorization

Leads

- Aaron Birkland
- Peter Eichman
- Danny Bernstein

5. Resource Authorization

- ❌ Implementations MUST follow the recommendations of Web Access Control

- ✔
- ✔
- ❌
- ✔

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

5.1 ACLs are LDP RDF Sources

- ✔ An AC

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Unable to locate Jira server for this macro. It may be due to Application Link configuration.

5.2 ACL Representation and Interpretation (Danny Bernstein)


- ✔ Implementations MUST inspect the ACL RDF for authorizations.
- ✔ Implementations MUST use only statements associated with an authorization in the ACL RDF to determine access,

- Unable to locate Jira server for this macro. It may be due to Application Link configuration.
- The a
- If none of the authorizations grant the requested access then the request *MUST* be denied.

5.3 ACLs are discoverable via Link Headers

- A conforming server *MUST* advertise the individual resource [ACL](#) for every controlled resource in HTTP responses with a `rel="acl"` link in the `Link` header, whether or not the [ACL](#) exists.
- The [ACL](#) resource *SHOULD* be located in the same server as the controlled resource.

5.4 ACL linking on resource creation (Peter Eichman)

- A client HTTP `POST` or `PUT` request to create a new [LDPR](#) *MAY* include a `rel="acl"` link in the `Link` header referencing an **existing** [LDP-RS](#) to use as the [ACL](#) for the new [LDPR](#).
 - (Peter Eichman) the `rel="acl"` link header for the second LDPR is ignored
 - (Peter Eichman) instead, the second LDPR's `rel="acl"` link is to the `/fcr:acl` endpoint appended to that LDPR's URI
 - The server *MUST* reject the request and respond with a 4xx or 5xx range status code, such as 409 (Conflict) if it isn't able to create the [LDPR](#) with the specified [LDP-RS](#) as the [ACL](#).
 - (Peter Eichman) see the previous point; a 201 is returned instead of an expected 409 (or other 4xx or 5xx)
 - In that response, the restrictions causing the request to fail *MUST* be described in a resource indicated by a `rel="http://www.w3.org/ns/ldp#constrainedBy"` link in the `Link` response header
 - need to 4xx to change these to . Unable to locate Jira server for this macro.
- macro. It may be due to Application Link configuration.

5.5 Cross-Domain ACLs (Peter Eichman)

- Implementations *MAY* restrict support for [ACLs](#) to local resources.
- If an implementation chooses to reject requests concerning remote [ACLs](#),
 - it *MUST* respond with a 4xx range status code
 - and *MUST* advertise the restriction with a `rel="http://www.w3.org/ns/ldp#constrainedBy"` link in the `Link` response header.
 - (Peter Eichman) these are failing in the same manner as the requests in 5.4: the `rel="acl"` Link header in the request is
- Unable to locate Jira server for this macro. It may be due to Application Link configuration.

5.6 Cross-Domain Group Listings

- [blocked URL](#) Implementations *MAY* restrict support for [groups of agents](#) to local Group Listing documents.
- If an implementation chooses to reject requests concerning remote Group Listings,
 - it *MUST* respond with a 4xx range status code
 - it *MUST* advertise the restriction with a `rel="http://www.w3.org/ns/ldp#constrainedBy"` link in the `Link` response header.

5.7 Append Mode

- In the context of a Fedora implementation, `acl:Append` should be understood as operations that only append, such as `POSTING` to a container, or performing a `PATCH` that only adds triples.

5.7.1 LDP-RS (Append)

- When a client is allowed to perform `acl:Append`
 - test *MUST* be denied. Unable to locate Jira server for this macro. It may be due to Application Link configuration.
 - triples *MUST* be denied. Unable to locate Jira server for this macro. It may be due to Application Link configuration.
 - SHOULD* be allowed. Unable to locate Jira server for this macro. It may be
 - MUST* be denied. Unable to locate Jira server for this macro. It may be due to
 - sources using `PUT`
 - Unable to locate Jira server for this macro. It may be due to Application Link configuration.

5.7.2 LDPC (Append)

- Unable to locate Jira server for this macro. It may be due to Application Link configuration. request *MUST* be allowed.

5.7.3 LDP Link (Append)

- ❌ When a client is allowed to perform `acl:Append` but not `acl:Write`
 - requests *MUST* be denied
 - Application Link configuration.
 - or modifies existing content *MUST* be denied
 - ❌ A PATCH request that only adds content *SHOULD* be allowed.
- Unable to locate Jira server for this macro. It may be due to Application Link configuration. (Jared Whiklo)

5.8 Access To Class

- ✔ The `acl:accessToClass` predicate *MUST* be supported.
- ✔ When an ACL includes an `acl:accessToClass` statement, it gives access to all resources with the specified type, whether that type is client-managed or server-managed.
- ❌ Implementations *MAY* use inference to infer types not present in a resource's triples or `rel="type"` links in the Link header.

5.9 Inheritance and Default ACLs

- ✔ Inheritance of ACLs in Fedora implementations *MUST* be reckoned along the LDP [containment relationships](#) linking controlled resources, with the following modification:
 - ❌ In the case that the controlled resource is uncontained and has no ACL, or that there is no ACL at any point in the containment hierarchy
 - Unable to locate Jira server for this macro. It may be due to Application Link configuration.
- ❌ The default
- blocked URL
 - Unable to locate Jira server for this macro. It may be due to Application Link configuration. `acl:default` is not supported - c

6 Notifications

Lead

- [Danny Bernstein](#)

6.1 Notification Events

- ✔ For every resource whose state is changed as a result of an HTTP operation, there *must* be a corresponding notification made available describing that change.

6.2 Notification Serialization

- ✔ The notification serialization *must* conform to the [[activitystreams-core](#)] specification.
- ✔ Wherever possible, data *should* be expressed using the [[activitystreams-vocabulary](#)].
- Each event described by a notification *must* contain:
 - ✔ The IRI of the resource that was created, modified or deleted
 - ✔ The event type(s) corresponding to the HTTP operation
- Each event described by a notification *should* contain:
 - ✔ The agent(s) that caused the change to occur
 - ✔ The RDF type(s) of the resource that was changed
 - ❌ The location of the `ldp:inbox` for the resource that was changed, if such an inbox link exists
- ✔ Notifications *should not* contain the entire content of repository resources.

6.3 Examples

- Non-normative section

7 Binary Resource Fixity

Lead

- [Bethany Seeger](#)

7.1 Transmission Fixity

- non-normative section

7.2 Persistence Fixity

- non-normative section