

# Event Messaging

## Overview

Fedora generates event messages when a resource is **created, updated or deleted**. The messages are composed for headers and body. ActivityStreams JSON is now used for message bodies of transmitted events. The new ActivityStreams based [JSON-LD](#) uses proper actor values for emitted messages.

## Message Headers

Header	Description	Values	Sample Value
org.fcrepo.jms.user	The Fedora user who made the change.		bypassAdmin
org.fcrepo.jms.eventID	A UUID associated with the event		urn:uuid:2096784f-8915-4f76-9114-10f516553554
org.fcrepo.jms.identifier	The identifier portion of the URI of the changed resource		/test1
org.fcrepo.jms.timestamp	Timestamp in epoch time (milliseconds since January 1st, 1970)		1524580811763
org.fcrepo.jms.baseURL	The base portion of the identifiers URI.		<a href="http://localhost:8080/rest">http://localhost:8080/rest</a>
org.fcrepo.jms.resourceType	A comma separated list of URIs identifying the types that describe the resource that changed.		<a href="http://www.w3.org/ns/ldp#Container">http://www.w3.org/ns/ldp#Container</a> , <a href="http://fedora.info/definitions/v4/repository#Resource">http://fedora.info/definitions/v4/repository#Resource</a> , <a href="http://fedora.info/definitions/v4/repository#Container">http://fedora.info/definitions/v4/repository#Container</a> , <a href="http://www.w3.org/ns/ldp#RDFSource">http://www.w3.org/ns/ldp#RDFSource</a> , <a href="http://www.w3.org/ns/ldp#BasicContainer">http://www.w3.org/ns/ldp#BasicContainer</a>
org.fcrepo.jms.eventType	A comma separated list of URIs identifying the event types that describe the resource that changed.	<a href="https://www.w3.org/ns/activitystreams#Create">https://www.w3.org/ns/activitystreams#Create</a> , <a href="https://www.w3.org/ns/activitystreams#Update">https://www.w3.org/ns/activitystreams#Update</a> , <a href="https://www.w3.org/ns/activitystreams#Delete">https://www.w3.org/ns/activitystreams#Delete</a>	<a href="https://www.w3.org/ns/activitystreams#Create">https://www.w3.org/ns/activitystreams#Create</a> , <a href="https://www.w3.org/ns/activitystreams#Update">https://www.w3.org/ns/activitystreams#Update</a>
org.fcrepo.jms.userAgent	The type of client user agent that was used to effect the change to the resource.		Mozilla/5.0 (Macintosh; Intel Mac OS X 10_13_4) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/66.0.3359.117 Safari/537.36

## Message Body

The format of the body is [JSON-LD](#).

Below is an example of a message emitted on resource creation.

```
{
  "id": "urn:uuid:2096784f-8915-4f76-9114-10f516553554",
  "type": ["Create", "Update"],
  "name": "create resource, update resource",
  "published": "2018-04-24T14:40:11.763Z",
  "actor": [
    {
      "type": ["Person"],
      "id": "info:fedoralocal-user#bypassAdmin"
    },
    {
      "type": ["Application"],
      "name": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_13_4) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/66.0.3359.117 Safari/537.36"
    }
  ],
  "object": {
    "type": [
      "http://www.w3.org/ns/ldp#Container",
      "http://fedora.info/definitions/v4/repository#Resource",
      "http://fedora.info/definitions/v4/repository#Container",
      "http://www.w3.org/ns/ldp#RDFSource",
      "http://www.w3.org/ns/ldp#BasicContainer",
      "http://www.w3.org/ns/prov#Entity"
    ],
    "id": "http://localhost:8080/rest/test1",
    "isPartOf": "http://localhost:8080/rest"
  },
  "@context": [
    "https://www.w3.org/ns/activitystreams",
    {
      "prov": "http://www.w3.org/ns/prov#",
      "dcterms": "http://purl.org/dc/terms/",
      "type": "@type",
      "id": "@id",
      "isPartOf": {
        "@id": "dcterms:isPartOf",
        "@type": "@id"
      }
    }
  ]
}
}
```

Below is an example of a message emitted on resource update.

```
{
  "id": "urn:uuid:b511e8bc-add1-47ac-bb6c-20e068b424fc",
  "type": ["Update"],
  "name": "update resource",
  "published": "2018-04-24T17:58:49.495Z",
  "actor": [
    {
      "type": ["Person"],
      "id": "info:fedoralocal-user#bypassAdmin"
    },
    {
      "type": ["Application"],
      "name": "curl/7.54.0"
    }
  ],
  "object": {
    "type": [
      "http://www.w3.org/ns/ldp#Container",
      "http://fedora.info/definitions/v4/repository#Resource",
      "http://fedora.info/definitions/v4/repository#Container",
      "http://www.w3.org/ns/ldp#RDFSource",
      "http://www.w3.org/ns/ldp#BasicContainer",
      "http://www.w3.org/ns/prov#Entity"
    ],
    "id": "http://localhost:8080/rest/8e/5c/ce/65/8e5cce65-8272-4046-beb0-b7992bf07828",
    "isPartOf": "http://localhost:8080/rest"
  },
  "@context": [
    "https://www.w3.org/ns/activitystreams",
    {
      "prov": "http://www.w3.org/ns/prov#",
      "dcterms": "http://purl.org/dc/terms/",
      "type": "@type",
      "id": "@id",
      "isPartOf": {
        "@id": "dcterms:isPartOf",
        "@type": "@id"
      }
    }
  ]
}
```

Below is an example of a message emitted on resource deletion.

```
{
  "id": "urn:uuid:31410238-7a73-4014-a457-1b6d7df5adac",
  "type": ["Delete"],
  "name": "delete resource",
  "published": "2018-04-24T17:51:15.968Z",
  "actor": [
    {
      "type": ["Person"],
      "id": "info:fedoralocal-user#bypassAdmin"
    },
    {
      "type": ["Application"],
      "name": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_13_4) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/66.0.3359.117 Safari/537.36"
    }
  ],
  "object": {
    "type": [
      "http://www.w3.org/ns/ldp#Container",
      "http://fedora.info/definitions/v4/repository#Resource",
      "http://fedora.info/definitions/v4/repository#Container",
      "http://www.w3.org/ns/ldp#RDFSource",
      "http://www.w3.org/ns/ldp#BasicContainer",
      "http://www.w3.org/ns/prov#Entity"
    ],
    "id": "http://localhost:8080/rest/test1",
    "isPartOf": "http://localhost:8080/rest"
  },
  "@context": [
    "https://www.w3.org/ns/activitystreams",
    {
      "prov": "http://www.w3.org/ns/prov#",
      "dcterms": "http://purl.org/dc/terms/",
      "type": "@type",
      "id": "@id",
      "isPartOf": {
        "@id": "dcterms:isPartOf",
        "@type": "@id"
      }
    }
  ]
}
```

See :

[How to Inspect Event Messages Generated by Fedora](#)