

Tutorial: Copy, Move, Link and Unlink Objects in REST Services

This doc shows a series of JSON message samples to do copy, move, link or unlink in Documentum REST Services(seeing [IIG RESTful Web Services](#)).

1. Copy a sysobject to a target location

Assumed that you have gotten the resources for a document ("EMCW IIG Rick Keynote FFBD[1].pptx" , with oid 090004d28000511b) and a target folder ("Documentum Old Staffs", with oid 0b0004d2800051b7).

The top screenshot shows the Documentum web interface. On the left, the 'My Home Cabinet' is expanded, and 'Documentum Old Staffs' is selected. The right pane shows the contents of this folder:

Name	Object ID
BOF White Paper.doc	090004d2800051ce
D66 Platform KT ATMOS.pptx	090004d2800051cf
distributed.pptx	090004d2800051d0
DQL_Editor_screenshot.doc	090004d2800051d1
Webtop_Netegrity_SiteMinder.pdf	090004d2800051d2
White-Paper-session-management.doc	090004d2800051d3

The bottom screenshot shows the same interface, but 'EMC World 2013' is selected in the left pane. The right pane shows its contents, with 'EMCW IIG Rick Keynote FFBD[1].pptx' highlighted. A red arrow labeled 'copy' points from this document to the 'Documentum Old Staffs' folder in the top screenshot.

Name	Object ID
EMCW IIG Rick Keynote FFBD[1].pptx	090004d28000511b
EMCW IIG Rohit Keynote FFBD[1].pptx	090004d28000511c
iig.01 Tues_4PM_Galileo905_EMC_Baird.pdf	090004d28000511d
iig.03 Thurs_830AM_Galileo905_EMC_Merchan.pdf	090004d28000511e
iig.04 Tues_530PM_Galileo905_EMC_Brighthouse.pdf	090004d28000511f
iig.06 Mon_4PM_Galileo905_EMC_Brighthouse.pdf	090004d2800051c2

On the folder resource, there is a link relation "<http://identifiers.emc.com/linkrel/objects>" pointing to the folder child sysobjects feed.

```
{
  "name": "folder",
  "type": "dm_folder",
  "definition": "http://rest-demo/dctm-rest/repositories/acme01/types/dm_folder",
  "properties": {"r_object_id": "0b0004d2800051b7"...},
  "links": [
    {"rel": "self"...},
    {"rel": "edit"...},
    {"rel": "http://identifiers.emc.com/linkrel/delete"...},
    {"rel": "http://identifiers.emc.com/linkrel/parent-links"...},
    {"rel": "parent"...},
    {"rel": "http://identifiers.emc.com/linkrel/folders"...},
    {"rel": "http://identifiers.emc.com/linkrel/documents"...},
    {
      "rel": "http://identifiers.emc.com/linkrel/objects",
      "href": "http://rest-demo/dctm-rest/repositories/acme01/folders/0b0004d2800051b7/objects"
    },
    {"rel": "http://identifiers.emc.com/linkrel/child-links"...},
    {"rel": "http://identifiers.emc.com/linkrel/cabinet"...},
    {"rel": "http://identifiers.emc.com/linkrel/relations"...}
  ]
}
```

A copy operation needs to POST the source object URI to this feed.

```
POST http://rest-demo/dctm-rest/repositories/acme01/
folders/0b0004d2800051b7/objects

Accept: application/vnd.emc.documentum+json

Content-Type: application/vnd.emc.documentum+json

Authorization: Basic ZG1hZG1pbjpwYXNzd29yZA==

{ "href": "http://rest-demo/dctm-rest/repositories/acme01/
documents/090004d28000511b", "deep-copy": true }
```

From the response, the new object resource is returned. And the URI for the new resource can also be found in the Location header.

```
HTTP 201 Created
```

Location: <http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000ba85>

Content-Type: application/vnd.emc.documentum+json;charset=UTF-8

Content-Length: 4213

2. Move a sysobject from one location to a target location

Assumed that you have gotten the resources for a document ("iig.01 Tues_4PM_Galileo905_EM_C_Baird.pdf", with oid 090004d28000511d) and a target folder ("Documentum Old Staffs", with oid 0b0004d2800051b7).

acme01 : dmadmin

- Inbox
- Saved Searches
- Subscriptions
- My Files
- Categories
- Administration
- My Home Cabinet
 - Business Data 2010+ of San Francisco
 - Documentum Old Staffs**
 - EMC World 2013
- Cabinets
- Add Repository

File Edit View Tools

My Home Cabinet / Documentum Old Staffs

My Home Cabinet (Documentum Old Staffs)

Name	Object ID
BOF White Paper.doc	090004d2800051ce
D66 Platform KT ATMOS.pptx	090004d2800051cf
distributed.pptx	090004d2800051d0
DQL_Editor_screenshot.doc	090004d2800051d1
EMCW IIG Rick Keynote FFBD[1].pptx	090004d28000ba85
Webtop_Netegrity_SiteMinder.pdf	090004d2800051d2
White-Paper-session-management.doc	090004d2800051d3

acme01 : dmadmin

- Inbox
- Saved Searches
- Subscriptions
- My Files
- Categories
- Administration
- My Home Cabinet
 - Business Data 2010+ of San Francisco
 - Documentum Old Staffs
 - EMC World 2013**
- Cabinets
- Add Repository

File Edit View Tools

My Home Cabinet / EMC World 2013

My Home Cabinet (EMC World 2013)

Name	Object ID
EMCW IIG Rick Keynote FFBD[1].pptx	090004d28000511b
EMCW IIG Rohit Keynote FFBD[1].pptx	090004d28000511c
iig.01 Tues_4PM_Galileo905_EM_C_Baird.pdf	090004d28000511d
iig.03 Thurs_830AM_Galileo905_EM_C_Merchan.pdf	090004d28000511e
iig.04 Tues_530PM_Galileo905_EM_C_Brighthouse.pdf	090004d28000511f
iig.06 Mon_4PM_Galileo905_EM_C_Brighthouse.pdf	090004d2800051c2
iig.36 Tues_230PM_Galileo1001_EM_C_Bueche.pdf	090004d2800051c3

move

On the sysobject resource, there is a link relation "<http://identifiers.emc.com/linkrel/parent-links>" pointing to the parent folder links feed.

```
{
  "name": "object",
  "type": "dm_document",
  "definition": "http://rest-demo/dctm-rest/repositories/acme01/types/dm_document",
  "properties": {"r_object_id": "090004d28000511d"...},
  "links": [
    {"rel": "self"...},
    {"rel": "edit"...},
    {"rel": "http://identifiers.emc.com/linkrel/delete"...},
    {"rel": "canonical"...},
    {
      "rel": "http://identifiers.emc.com/linkrel/parent-links",
      "href": "http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links"
    },
    {"rel": "parent"...},
    {"rel": "http://identifiers.emc.com/linkrel/cabinet"...},
    {"rel": "contents"...},
    {"rel": "http://identifiers.emc.com/linkrel/primary-content"...},
    {"rel": "http://identifiers.emc.com/linkrel/checkout"...},
    {"rel": "version-history"...},
    {"rel": "http://identifiers.emc.com/linkrel/current-version"...},
    {"rel": "http://identifiers.emc.com/linkrel/relations"...}
  ]
}
```

Get the parent links feed and find the corresponding entry of the folder link for the source folder location.

GET <http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links>

Accept: application/vnd.emc.documentum+json

Authorization: Basic ZG1hZG1pbjpwYXNzd29yZA==

```
{
  "id": "http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links",
  "title": "Parent folder links of object 090004d28000511d",
  "updated": "2014-02-19T10:29:20.937+08:00",
  "author": [
    {
      "name": "EMC Documentum"
    }
  ],
  "total": 1,
  "links": [
    {
      "rel": "self",
      "href": "http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links"
    }
  ],
  "entries": [
    {
      "id": "http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links/0b0004d2800051b6",
      "title": "Folder link between child 090004d28000511d and parent 0b0004d2800051b6",
      "updated": "2013-05-21T12:07:58.000+08:00",
      "summary": "0b0004d2800051b6",
      "content": {
        "content-type": "application/json",
        "src": "http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links/0b0004d2800051b6"
      },
      "links": [
        {
          "rel": "edit",
          "href": "http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links/0b0004d2800051b6"
        }
      ]
    }
  ]
}
```

A move operation needs to PUT the target folder URI to this link resource.

PUT <http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links/0b0004d2800051b6>

Accept: application/vnd.emc.documentum+json

Content-Type: application/vnd.emc.documentum+json

Authorization: Basic ZG1hZG1pbjpwYXNzd29yZA==

```
{ "href": "http://rest-demo/dctm-rest/repositories/acme01/folders/0b0004d2800051b7" }
```

The response returns the new link resource for the sysobject and its new target folder.

```
HTTP 200 OK

Content-Type: application/vnd.emc.documentum+json;charset=UTF-8

Content-Length: 319

{

  "href": "http://rest-demo/dctm-rest/repositories/acme01/folders/0b0004d2800051b7",

  "parent-id": "0b0004d2800051b7",

  "child-id": "090004d28000511d",

  "links": [

    { "rel": "self",

      "href": "http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511d/parent-links/0b0004d2800051b7" }

  ]

}
```

3. Link a sysobject to a new location

Assumed that you have gotten the resources for a document ("iig.03 Thurs_830AM_Galileo905_EMC_Merchain.pdf", with oid 090004d28000511e) and a target folder ("Documentum Old Staffs", with oid 0b0004d2800051b7).

Tutorial: Copy, Move, Link and Unlink Objects in REST Services

The top screenshot shows the 'Documentum Old Staffs' folder selected in the left pane. The right pane displays a table of objects:

Name	Object ID
BOF White Paper.doc	090004d2800051ce
D66 Platform KT ATMOS.pptx	090004d2800051cf
distributed.pptx	090004d2800051d0
DQL_Editor_screenshot.doc	090004d2800051d1
EMCW IIG Rick Keynote FFBD[1].pptx	090004d28000ba85
iig.01 Tues_4PM_Galileo905_EMC_Baird.pdf	090004d28000511d
Webtop_Netegrity_SiteMinder.pdf	090004d2800051d2
White-Paper-session-management.doc	090004d2800051d3

The bottom screenshot shows the 'EMC World 2013' folder selected in the left pane. The right pane displays a table of objects:

Name	Object ID
EMCW IIG Rick Keynote FFBD[1].pptx	090004d28000511b
EMCW IIG Rohit Keynote FFBD[1].pptx	090004d28000511c
iig.03 Thurs_830AM_Galileo905_EMC_Merchan.pdf	090004d28000511e
iig.04 Tues_530PM_Galileo905_EMC_Brighthouse.pdf	090004d28000511f
iig.06 Mon_4PM_Galileo905_EMC_Brighthouse.pdf	090004d2800051c2
iig.36 Tues_230PM_Galileo1001_EMC_Bueche.pdf	090004d2800051c3
iig.76 Thu_10AM_Galileo1003_EMC_Silver.pdf	090004d2800051c4

A red arrow labeled 'link' points from the 'iig.01 Tues_4PM_Galileo905_EMC_Baird.pdf' object in the top screenshot to the 'iig.03 Thurs_830AM_Galileo905_EMC_Merchan.pdf' object in the bottom screenshot.

The link operation can be done in two ways: create a new link on the sysobject's parent links feed or create a new link on the target folder's child links feed. In the sample, we show the workflow for the former way.

As we know, the sysobject resource has a link relation "<http://identifiers.emc.com/linkrel/parent-links>" pointing to its parent links feed. A link operation can POST the target folder URI to this feed.

```
POST http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511e/parent-links
```

```
Accept: application/vnd.emc.documentum+json
```

```
Content-Type: application/vnd.emc.documentum+json
```

```
Authorization: Basic ZG1hZG1pbjpwYXNzd29yZA==
```

```
{ "href":"http://rest-demo/dctm-rest/repositories/acme01/  
folders/0b0004d2800051b7"}
```

The response returns the new link resource for the sysobject and its new target folder.

```
HTTP 201 OK
```

```
Content-Type: application/vnd.emc.documentum+json;charset=UTF-8
```

```
Content-Length: 319
```

```
{  
  
  "href":"http://rest-demo/dctm-rest/repositories/acme01/  
folders/0b0004d2800051b7",  
  
  "parent-id":"0b0004d2800051b7",  
  
  "child-id":"090004d28000511e",  
  
  "links":[  
  
    { "rel":"self",  
  
      "href":"http://rest-demo/dctm-rest/repositories/acme01/  
objects/090004d28000511e/parent-links/0b0004d2800051b7"}  
  
  ]  
  
}
```

4. Unlink a sysobject from a source folder

The unlink operation can just DELETE on a specified link resource.


```
DELETE http://rest-demo/dctm-rest/repositories/acme01/objects/090004d28000511e/parent-links/0b0004d2800051b7
```

```
Authorization: Basic ZG1hZG1pbjpwYXNzd29yZA==
```

Please note that Documentum sysobjects can not be unfiled (orphan), so DELETE on a single parent link will get a permission denied error, like:

```
HTTP 403 Forbidden
```

```
Content-Type: application/vnd.emc.documentum+json;charset=UTF-8
```

```
Content-Length: 271
```

```
{
  "status":403,
  "code":"E_PARENTLESS_NOT_ALLOWED",
  "message":"The operation failed because it is not allowed to make the
object parentless.",
  "details":"(DM_SYSOBJECT_E_CANT_SAVE_NO_LINK) Cannot save
iig.03 Thurs_830AM_Galileo905_EMC_Merchan.pdf sysobject without any
link."
}
```

[Learn more about Documentum REST Services >>](#)