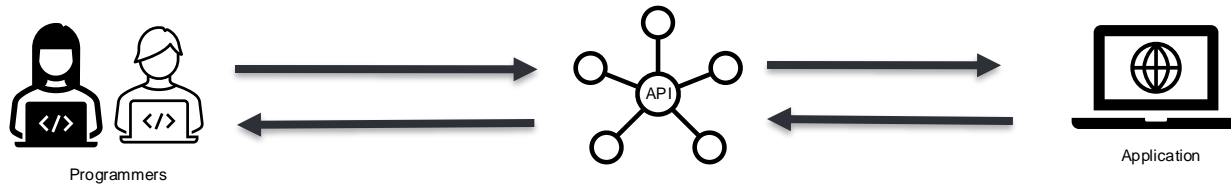




# DMPonline APIs

## What are APIs?



API stands for Application Programming Interface.

APIs are used for data transmission between one software product and another. Programmers use API to retrieve data from another application and use it in their own.



## APIs in DMPonline

APIs are used to retrieve data from DMPonline to be used in other software applications.



## Examples

- Track usage statistics.
- Based on popularity of the template, admins can add more guidance.
- Use it to transfer DMP metadata between systems (using V1 which complies with the required standard)

More use cases explained after the demonstration



# Versions of DMPonline APIs

Currently there are two versions: V0 and V1

# APIs| V0 and V1



	V0	V1
<b>Purpose</b>	Provides organisational administrators with access to the full text of all of their user's plans	Complies with the <a href="#">RDA Common Standard Metadata schema v1.0</a> . This schema is a recommendation for the transfer of DMP metadata between systems
<b>Endpoints</b>	Plans, Guidance, Templates, Departments and Statistics	Heartbeat, Authenticate, Plans, Templates
<b>Requirements</b>	API Access token	API Access token and authentication token
<b>Example</b>	GET /api/v0/plans?created_after=2019-01-01 GET /api/v0/departments/users	GET /api/v1/plans/123 GET /api/v1/templates

<https://github.com/DMPRoadmap/roadmap/wiki/API-V0-Documentation>

<https://github.com/DMPRoadmap/roadmap/wiki/API-Documentation-V1>



## How to use the API?

Two methods: RESTED (Firefox extension), command line



## DEMO

1. How to use V1 using RESTED
2. How to use V1 using Command Line
3. Examples of V0 using RESTED and Command Line
4. More use cases





## How to use API V1 with RESTED and command line



## What you need:

- Firefox browser
- RESTED extension (<https://addons.mozilla.org/en-GB/firefox/addon/rested/>)

## On DMPonline:

- Org Admin and API access permissions
- Your API access token (Edit profile -> API access tab -> Generate token)

## Edit profile

Personal Details Password **API Access** Notification Preferences

**Access token** jg9SZIDv71yPrTZkqx9ikw

**Documentation**

See the [documentation for v0](#) for more details on the original API which includes access to statistics, the full text of plans and the ability to connect users with departments.

See the [documentation for v1](#) for more details on the API that supports the [RDA Common metadata standard for DMPs](#).

Regenerate token



## Steps to get authentication token using RESTED:

- 1) Set **Request** type as **POST**
- 2) Insert link: <https://dmponline.dcc.ac.uk/api/v1/authenticate>
- 3) Add one **Header**  
Content-Type: application/json
- 4) Add **Request body, Type** set to **Custom**  

```
{"grant_type": "authorization_code", "email": "<YOUR EMAIL ID>", "code": "<YOUR ACCESS TOKEN>"}
```





## Steps to make a GET request using RESTED:

(a GET request retrieves the information requested)

1) Set **Request** to **GET**

2) Insert **link** with required endpoint

Example: <https://dmponline.dcc.ac.uk/api/v1/plans>

3) Add two **Headers**

Authorization -> Bearer <Your Authentication token>

Content-Type -> application/json

4) Click '**Send Request**'

### Note:

You can use any URL with the required endpoints. (dmponline.gla.ac.uk, dmponline.ed.ac.uk etc.)

Place the authentication token from the previous step after 'Bearer'

## Result of /api/v1/plans with RESTED



Request

GET  Send request

Headers

Content-Type	application/json	🗑️
Authorization	Bearer eyJhbGciOiJIUzI1NiJ9.eyJjbG1bnRfaWQiOiJnamRtcGFkbW5AZi	🗑️

+ Add header

Basic auth >

Response (0.686s) - https://dmponline.dcc.ac.uk/api/v1/plans

**200** OK

Headers >

```
{
  "application": "DMPonline",
  "source": "GET /api/v1/plans",
  "time": "2022-10-07T13:30:55+00:00",
  "caller": "Glenys Ad",
  "code": 200,
  "message": "OK",
  "page": 1,
  "per_page": 20,
  "total_items": 51,
  "next": "/api/v1/plans?page=2&per_page=20",
  "items": [
    {
      "dmp": {
        "schema": "https://github.com/RDA-DMP-Common/RDA-DMP-Common-Standard/tree/master/examples/JSON/JSON-schema/1.0",
        "title": "My project (Horizon 2020 DMP)",
        "description": "",
        "language": "eng",
        "created": "2014-04-10T15:09:59Z",
        "modified": "2017-06-23T08:07:47Z"
      }
    }
  ]
}
```



## Steps to get authentication token using the command line:

1) Open Terminal

2) `curl -k -v -X POST https://dmponline.dcc.ac.uk/api/v1/authenticate -H "Content-Type: application/x-www-form-urlencoded;charset=UTF-8" -H "Accept: application/json" -d {"grant_type":"authorization_code","email":"<YOUR EMAIL ID>","code":"<YOUR ACCESS CODE>"}`

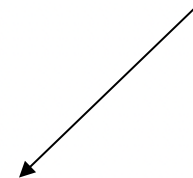
Note: Ensure correct quotes are used. Text editors occasionally change the quotes.

```
~$ curl -k -v -X POST https://dmponline.dcc.ac.uk/api/v1/authenticate -H "Content-Type: application/x-www-form-urlencoded;charset=UTF-8" -H "Accept: application/json" -d {"grant_type":"authorization_code","email":"gjdmpadmn@gmail.com","code":"jg9SZIDv71yPrTZkqx9ikw"}
```



```
* SSL connection using TLSv1.2 / ECDHE-RSA-AES256-GCM-SHA384
* ALPN, server accepted to use http/1.1
* Server certificate:
* subject: CN=dmponline.dcc.ac.uk
* start date: Aug 30 09:42:21 2022 GMT
* expire date: Nov 28 09:42:20 2022 GMT
* issuer: C=US; O=Let's Encrypt; CN=R3
* SSL certificate verify ok.
> POST /api/v1/authenticate HTTP/1.1
> Host: dmponline.dcc.ac.uk
> User-Agent: curl/7.79.1
> Content-Type: application/x-www-form-urlencoded;charset=UTF-8
> Accept: application/json
> Content-Length: 97
>
* Mark bundle as not supporting multiuse
< HTTP/1.1 200 OK
< Date: Fri, 07 Oct 2022 14:47:42 GMT
< Server: Apache
< X-Frame-Options: SAMEORIGIN
< X-XSS-Protection: 1; mode=block
< X-Content-Type-Options: nosniff
< X-Download-Options: noopen
< X-Permitted-Cross-Domain-Policies: none
< Referrer-Policy: strict-origin-when-cross-origin
< Content-Type: application/json; charset=utf-8
< ETag: W/"7d462f374dd7ddaab5b8a68e84e5196e"
< Cache-Control: max-age=0, private, must-revalidate
< X-Request-Id: 95430720-7358-4d33-8678-a1a517267a6b
< X-Runtime: 0.105100
< Set-Cookie: dmp_roadmap_session=5f8f9b1931fd3bed5a0f6b559debd787; path=/; HttpOnly
< Transfer-Encoding: chunked
< Set-Cookie: NSC_enapomjof-mc.edd.bd.v1=ffffffff82df155445525d5f4f58455e445a4a4231e0;path=/;secure
{
  "access_token": "eyJhbGciOiJIUzI1NiJ9.eyJjbG11bnRfawQ1OjnamRtcGfkbw5AZ21haWwvY291IiwizXhwIjojNjY1MjQwNDYzZfQ.hND-BhFk9eGtD0gU-A2ex_zKR1va1Bh0CbvJfn3uu4",
  "token_type": "Bearer",
  "expires_in": 1665240463,
  "created_at": "2022-10-07T14:47:43+00:00"
}
* Connection #0 to host dmponline.dcc.ac.uk left intact
```

Authentication token







## Steps to make a GET request using command line:

(a GET request retrieves the information requested)

1) Open Terminal

2) `curl -v https://dmponline.dcc.ac.uk/api/v1/plans/ -H "Accept: application/json" -H "Authorization: Bearer <YOUR AUTHENTICATION TOKEN>"`

### Note:

You can use any URL with the required endpoints. (dmponline.gla.ac.uk, dmponline.ed.ac.uk etc.)

Place the authentication token from the previous step after 'Bearer'

```
~$ curl -v https://dmponline.dcc.ac.uk/api/v1/plans/ -H "Accept: application/json" -H "Authorization: Bearer eyGci0iJIUzI1NiJ9.eyJjbG11bnRfaWQiOiJnamRtcGFkbW5AZ21haWwuyY29tIiwiaXhwIjojY1MjQwOTM4fQ.vyT5MH0Q7fABaneHt8xmEXktnNF22FnJCv0TW9vzv_Q"
```



## End of result when you run /api/v1/plans

```

    }
  }
},
{
  "dmp": {
    "schema": "https://github.com/RDA-DMP-Common/RDA-DMP-Common-Standard/tree/master/examples/JSON/JSON-schema/1.0",
    "title": "M's Plan",
    "language": "eng",
    "created": "2019-09-24T15:01:18Z",
    "modified": "2019-09-24T15:01:18Z",
    "ethical_issues_exist": "unknown",
    "dmp_id": {
      "type": "url",
      "identifier": "http://dmponline.dcc.ac.uk/api/v1/plans/45736"
    },
    "contact": {
      "name": "M Grootveld",
      "mbox": "mj.grootveld@gmail.com",
      "affiliation": {
        "name": "Digital Curation Centre",
        "abbreviation": "DCC"
      },
      "contact_id": {
        "type": "orcid",
        "identifier": "https://orcid.org/0000-0002-2789-322X"
      }
    }
  },
},
{
  "dmp": {
    "schema": "https://github.com/RDA-DMP-Common/RDA-DMP-Common-Standard/tree/master/examples/JSON/JSON-schema/1.0",
    "title": "Magdalena's Plan",
    "language": "eng",
    "created": "2019-11-22T12:42:19Z",
    "modified": "2020-03-10T11:39:12Z",
    "ethical_issues_exist": "unknown",
    "dmp_id": {
      "type": "url",
      "identifier": "http://dmponline.dcc.ac.uk/api/v1/plans/48694"
    },
    "contact": {
      "name": "Magdalena Drafiova",
      "mbox": "dmponlinetestmagdalena@gmail.com",
      "affiliation": {
        "name": "Digital Curation Centre",
        "abbreviation": "DCC"
      }
    }
  }
},
}
]
* Connection #0 to host dmponline.dcc.ac.uk left intact

```



## How to use API V0 with RESTED and command line



## End of result when you run /api/v0/plans

**Request**

Method: GET  
URL: https://dmponline.dcc.ac.uk/api/v0/plans/

**Headers**

Content-Type	application/json
Authorization	Token bHiUsjJNwmdq9f9MNUActg

**Response (0.511s) - https://dmponline.dcc.ac.uk/api/v0/plans/**

**200 OK**

Headers >

The response size exceeds 20 KB. Syntax highlighting has been disabled for performance reasons. This value is configurable in the options menu.

```
[
  {
    "id": 12069,
    "title": "My plan (Horizon 2020 DMP)",
    "grant_number": null,
    "last_updated": "2017-06-23 08:23:02 UTC",
    "creation_date": "2016-08-12 15:09:19 UTC",
    "test_plan": false,
    "template": {
```

Token not Bearer.  
API Access token not Authentication token

RESTED has a limited size for results



## Command to run:

```
curl -k -v -H "Accept: application/json" -H "Authorization: Bearer bHiUsjJNwmdq9f9MNUACtg" https://dmponline.dcc.ac.uk//api/v0/plans
```

## End of result when you run /api/v0/plans

```
    },
    {
      "theme": "Metadata & documentation"
    }
  ],
  "answered": true,
  "answer": {
    "text": "<p>dasdas</p>"
  }
}
]
}
]
}
]
}
* Connection #0 to host dmponline.dcc.ac.uk left intact
```



- DMPonline usage statistics: <https://dmponline.dcc.ac.uk/usage>

Note: Extra development effort is required to implement API in a way that would be beneficial to your institution

- Dr Christopher Tibbs from Exeter (for usage stats using python script): [https://www.youtube.com/watch?v=oWfPfim\\_kkg](https://www.youtube.com/watch?v=oWfPfim_kkg)
- Joaquim Phillipson from Stockholm: <https://www.youtube.com/watch?v=jFKLV0VTV-g>
- V0 is used to prefill information and create storage requirements
- Assign users to right department using V0
- Monitor plans to anticipate requests for feedback

Todd Matsumoto from Erasmus Uni Rotterdam (up next after the break)



# Thank You!

Up next..

- Questions
- Coffee break
- How Erasmus University Rotterdam uses the DMPonline API feature, by Todd Matsumoto