Federal Aviation Administration

Technical Design Document

Application:	Dynamic Regulatory System (DRS)
Interface Names:	External Applications

Revision History

Version	Description	Date
1.0	Initial version	02/09/2022
2.0	FOC - Release 7 Changes	05/19/2022

Contents

1.0   Overview

This document presents the details for retrieving regulatory and guidance documents from Dynamic Regulatory System (DRS) by external applications.

2.0   Scope

The scope of this document is to provide technical details of DRS API for external applications.

2.1 Dynamic Regulatory System (DRS)

DRS is a comprehensive knowledge center of regulatory and guidance material from the Office of Aviation Safety (AVS) and beyond. It provides one central location for aviation regulations and guidance materials.

DRS combines more than 65 document types from a dozen repositories into a single searchable application. The system includes pending, current and historical versions of all documents along with their revision history. And to ensure you have the most current documents, it is updated every 24 hours.

3.0   Interface Details

Environments:

Environment	URL
PROD	https://drs.faa.gov/api/drs/data-pull/<doctypeName>

API Keys:

Environment	Header parameters key	Header parameters value for external only documents
PROD	x-api-key	To request an API key, please submit a request using the DRS Feedback link on the homepage.

Document Data:

Call this endpoint to obtain summary, metadata and document attachment URLs for a given document type from DRS

URL	https://drs.faa.gov/api/drs/data-pull/<doctypeName>
Method	GET

Request Parameters	Header:
	{
	   "x-api-key" : "{key}"
	}
	{key}: To request an API key, please submit a request using the DRS Feedback link on the homepage.
	
	Input parameters :
	
	Path variable : doctypeName
	
	Request Parameters : offset(optional), docLastModifiedDate(optional)
	
	1. Use Document Type name as path parameter in the API URL.
	
	   https://drs.faa.gov/api/drs/data-pull/AC
	
	2. Provide "offset" as request parameter. It is an optional field. The DRS API will return the first 750 documents by default if an "offset" is not received in the request. If an offset is provided in the request parameter, the API skips the documents till the offset value and returns next 750 documents starting from the "offset value +1".
	
	   https://drs.faa.gov/api/drs/data-pull/AC (return first 750)
	
	   https://drs.faa.gov/api/drs/data-pull/AC?offset=750 (Skip first 750,
	
	   start = 751 and returns next 750)
	
	   https://drs.faa.gov/api/drs/data-pull/AC?offset=1500 (Skip first 1500, start=1501 and returns next 750)
	
	3. Provide "docLastModifiedDate" as request parameter. It is an optional field. This request parameter is used to retrieve documents added or updated after the requested date.
	
	   "docLastModifiedDate" value is populated in the DRS API response. Response data is not sorted by docLastModifiedDate. Once a DRS API consumer has all the documents from DRS and need documents added or updated after a specific date, "docLastModifiedDate" can be used in the API request parameter as a filter.
	
	   https://drs.faa.gov/api/drs/data-pull/AC?docLastModifiedDate=2021-05-09T14:38:11.964Z&offset=0 (Return first 750 documents that have docLastModifiedDate > 2021-05-09T14:38:11.964Z)
	
	   https://drs.faa.gov/api/drs/data-pull/AC?docLastModifiedDate=2021-05-09T14:38:11.964Z&offset=750 (Skip first 750, start = 751 and return next 750 documents that have docLastModifiedDate > 2021-05-09T14:38:11.964Z)

	https://drs.faa.gov/api/drs/data-pull/AC?docLastModifiedDate=2021-05-09T14:38:11.964Z&offset=1500 (Skip first 1500, start=1501 and returns next 750 documents that have docLastModifiedDate > 2021-05-09T14:38:11.964Z)
CURL Request Examples	To get First 750 documents from document type "AC" curl --location --request GET 'https://drs.faa.gov/api/drs/data-pull/AC?offset=0' --header 'x-api-key: xxx' > AC_external_only.json To get First 750 documents from document type "AC" that are added or updated after the date-time '2021-05-09T14:38:11.964Z' curl --location --request GET 'https://drs.faa.gov/api/drs/data-pull/AC?docLastModifiedDate=2021-05-09T14:38:11.964Z&offset=0' --header 'x-api-key: xxx' > AC_external_only.json

Response - Success	Received response with HTTP Code 200
	{
	   "summary": {
	     "doctypeName": "AC",
	     "drsDoctypeName": "Advisory Circulars (AC)",
	     "count": 750,
	     "hasMoreItems": **true**,
	     "totalItems": 1765,
	     "offset": 0,
	     "sortBy": "drs:documentNumber",
	     "sortByOrder": "ASC"
	   },
	   "documents": [..list of documents…]
	}
	
	Summary section has below details
	
	1. doctypeName – Requested Document Type name
	2. drsDoctypeName – Document Type name used in DRS application
	3. count – Number of documents returned in the response (Maximum 750 in each call, can expect less than 750 based on offset and available items)
	4. hasMoreItems – Boolean flag indicates whether more documents are available or not
	5. totalItems – Total number of documents available
	6. offset – Offset value from the request
	7. sortBy – Metadata field name used for sorting while retrieving documents
	8. sortByOrder – The sort order used for sorting while retrieving documents

'Documents' is an array of documents and each entry has a list of metadata names and values for the document. Metadata name is a String and metadata value can be of type "text" or "array of text values" or "date".

Below metadata are common for all documents across all document types in DRS.

docLastModifiedDate - Document last modified date in UTC. This metadata can be used as a request filter to retrieve documents added/updated after a specific date.

documentGuid - Unique Id for the document in DRS

documentURL - Unique URL for the document in DRS

Example is provided below

```json
{
    "summary": {
        "doctypeName": "AC",
        "drsDoctypeName": "Advisory Circulars (AC)",
        "count": 750,
        "hasMoreItems": true,
        "totalItems": 7639,
        "offset": 0,
        "sortBy": "drs:documentNumber",
        "sortByOrder": "ASC"
    },
    "documents": [
        {
            "drs:documentNumber": "AC 23-3",
            "drs:status": "Historical",
            "drs:docID": "AC 23-3",
            "drs:changeNumber": null,
            "drs:title": "Structural Substantiation of Secondary Structures",
            "drs:cancels": null,
            "drs:cancelledBy": "AC 23-19",
            "drs:primaryRespOffice": [
                "ACE-111"
            ],
            "drs:changeDesc": null,
            "drs:partNumber": [
                "Part 23"
            ],
            "drs:subPart": null,
            "drs:sectionNumber": [
                "Sec. 23.251",
                "Sec. 23.301",
                "Sec. 23.303",
                "Sec. 23.305",
                "Sec. 23.307"
            ],
            "drs:approvalDate": "1985-08-29T00:00:00.000Z",
            "drs:comments": null,
            "docLastModifiedDate": "2017-04-17T06:56:47.000Z",
            "documentGuid": "F85F0BC246B7D61A862569B2005E7D7D",
            "documentURL": "https://drs-uat.faa.gov/browse/excelExternalWindow/F85F0BC246B7D61A862569B2005E7D7D.0001"
        },
```

Response - Error	
	• Response received with error message.

1. If the document type requested is invalid

```
{
    "errorMessage": "The doctype <document type name> is not present in DRS"
}
```

2. If the internal only document type is requested using external only api-key

```
{
    "errorMessage": "Could not process the request. The doctype <document type name> is internal only doctype"
}
```

3. If any system error occurs

```
{
    "errorMessage": "Unable to retrieve documents due to system error, Please try after some time or contact DRS application team."
```

	`}`

4.0   Additional Details:

DRS will provide a detailed spreadsheet of all Document Types available along with their metadata field names. The details below can be found in the spreadsheet.

1.   Document Type Name in API request (a short name for the document type)

2.   Document Type name in DRS

3.   Metadata names for the Document Type that are sent in the response

4.   Metadata names for the Document Type that are used in DRS application

5.   Metadata value data type (can be Text or Date or Array of values)