

| Digital Traffic Regulation Orders:  D-TRO Publication API Interface Control Document for Pu (Traffic Regulation Authority and/or Digital Solution Provide |                      |
|---|----------------------|
| A sadde a suf a V   | , , , ,              |
| Author(s)   | D-TRO Technical Team |
| Date  | 28/10/2024           |
| Version   | 2.2                  |
| Status  | Draft                |
| Protective Marking  | OFFICIAL             |

| 1  | Document Control                                 | 3  |
|----|--|----|
|    | 1.1 Version History                              | 3  |
|    | 1.2 Document Review                              | 3  |
|    | 1.3 Approved Versions                            | 3  |
| 2  | Terms and Abbreviations                          | 4  |
| 3  | Introduction                                     | 5  |
| 4  | Other Documents and Artefacts                    | 6  |
| 5  | Scope of this document                           | 7  |
| 6  | Target Audience                                  | 8  |
| 7  | Integration Architecture                         | 9  |
|    | 7.1 Overview (API v1 methods)                    | 9  |
|    | 7.2 Design Principles                            | 9  |
| 8  | Assumptions, Constraints, Risks and Dependencies | 10 |
|    | 8.1 Assumptions                                  | 10 |
|    | 8.2 Constraints                                  | 10 |
|    | 8.3 Risks  | 10 |
|    | 8.4 Dependencies                                 | 10 |
| 9  | Endpoints available for TRAs and/or DSPs         | 11 |
| 10 | Interface Specification                          | 12 |
|    | 10.1 Endpoints D-TROs                            | 13 |
|    | 10.2 Events and Search                           | 33 |
|    | 10.3 Rules                                       | 39 |
|    | 10.4 Schemas                                     | 47 |

# 1 Document Control

## 1.1 Version History

| Version | Author        | Summary of changes                                 | Date       |
|---------|---------------|--|------------|
| 2.0     | PA Consulting | Record Management enhancement for D-TRO submission | 01/07/2024 |
| 2.1     | PA Consulting | Changes in the API endpoints                       | 03/10/2024 |
| 2.2     | PA Consulting | Adjust the Date Time format to match ISO 8601      | 28/10/2024 |

# 1.2 Document Review

| Version | Reviewer(s)   | Date       |
|---------|---|------------|
| 2.0     | John Cooper (Department for Transport, Product Owner) | 01/07/2024 |
| 2.1     | John Cooper (Department for Transport, Product Owner) | 10/10/2024 |
| 2.2     | John Cooper (Department for Transport, Product Owner) | 28/10/2024 |

# 1.3 Approved Versions

| Version | Approver(s)              | Date       |
|---------|--------------------------|------------|
| 2.0     | Department for Transport | 01/07/2024 |
| 2.1     | Department for Transport | 10/10/2024 |
| 2.2     | Department for Transport | 28/10/2024 |

# 2 Terms and Abbreviations

| Term / Abbreviation | Definition                        |
|---------------------|-----------------------------------|
| API                 | Application Programming Interface |
| CRUD                | Create, Read, Update and Delete   |
| CSO                 | Central Service Operator          |
| DC                  | Data Consumer                     |
| DfT                 | Department for Transport          |
| DSP                 | Digital Solution Provider         |
| D-TRO               | Digital Traffic Regulation Order  |
| ICD                 | Interface Control Document        |
| JSON                | JavaScript Object Notation        |
| TRA                 | Traffic Regulation Authority      |
| TRO                 | Traffic Regulation Order          |
| URI                 | Uniform Resource Identifier       |

### 3 Introduction

As part of its 'Future of Mobility: Urban Strategy', the Department for Transport (DfT) is modernising the regulatory framework for Traffic Regulation Orders (TROs) (Traffic Management Orders in London) made under the Road Traffic Regulation Act 1984.

The Automated Vehicles Act 2024 (section 93) provides statutory instruction for TRAs to provide information on a defined set of TROs, in a specified manner and form, to be provided in accordance with a specified model, standard or set of specifications. These will be the D-TRO Data Specification including the D-TRO Data Model, which are expected to be specified under secondary legislation.

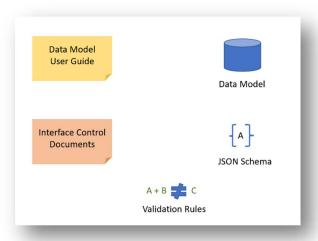
The new regulatory framework will, subject to necessary secondary legislation coming into force, mandate that Traffic Regulation Authorities (TRAs) in England and Wales publish TROs as open data in a standardised and digital format that anyone can access, use and share.

The standardised digital format will be based on the Digital TRO (D-TRO) Data Specification that is described in this and other associated documents. This Data Specification is intended to be a free resource for all. The Data Specification is candidate in nature and may be subject to change without notification.

Taking into account the needs arising from the UK Industrial Strategy and recognising the requirements that will emerge from the deployment of Connected and Automated Vehicles (CAVs), this Data Specification provides a framework for how the data and information relating to TROs can be formed in the future. Availability of such a draft Data Specification, when suitably tested, will support the move towards TROs being easily accessible to the public whether using apps or driving connected vehicles.

## 4 Other Documents and Artefacts

This Interface Control Document (ICD) is part of the documents and artefacts that are available in connection to the D-TRO Service:



Documents and artefacts supporting the D-TRO Service

This ICD forms part of the Data Specification that has been released for Beta, including the technical user guide which outlines the data modelling concepts defined to help support the definition and exchange of information relating traffic regulations.

All the latest versions of documents and other artefacts of this release are listed in GitHub [https://github.com/department-for-transport-public/D-TRO/issues/1].

# 5 Scope of this document

This ICD specifies the design of the interface for the D-TRO Publication API. This API enables integration between TRA systems and D-TRO Service for the purposes of allowing TRAs to:

- Publish their D-TROs to the D-TRO Service.
- Update and amend D-TROs that have been previously submitted to the D-TRO Service.
- Retrieve a history of the D-TROs issued by the TRAs held by the D-TRO Service.
- Search events and record of the existing D-TROs held by the D-TRO Service.
- Retrieve existing rules and schemas within the D-TRO Service.

# 6 Target Audience

The target audience of this document includes:

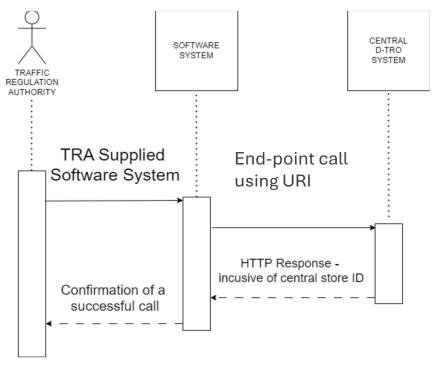
• Traffic Regulation Authorities (TRAs) and or their Digital Solution Providers (DSPs) that currently manage the IT contracts within the authority.

Throughout this document where reference is made to TRA systems, this also refers to DSP systems.

# 7 Integration Architecture

## 7.1 Overview (API v1 methods)

The figure below depicts the 'happy path' sequence of interactions between TRA systems and the D-TRO Service.



Expected API interactions.

### 7.2 Design Principles

When integrating with this interface, the following design patterns and principles should be adopted to ensure that the non-functional characteristics of TRA systems and the D-TRO Service are effectively implemented:

| ID   | Pattern / Principle                     | Description   |
|------|---|---|
| DP01 | Guaranteed delivery                     | TRA systems must adopt an architecture that ensures guaranteed delivery of requests/responses to and from the D-TRO Service.  |
| DP02 | Loose coupling                          | TRA systems must adopt an architecture that is loosely coupled with the D-TRO Service and can detect, respond to, and recover from exceptions where the D-TRO Service is unavailable. |
| DP03 | GOV.UK API technical and data standards | The interface will comply with published GOV.UK API technical and data standards.   |

# 8 Assumptions, Constraints, Risks and Dependencies

## 8.1 Assumptions

| ID  | Assumption   | Impact if not true   |
|-----|--|--|
| A01 | TRAs will adopt an 'API-first' approach to integrating with the D-TRO interface. | No web-based user interface is proposed to allow the registration of D-TROs. If API integration is not possible, the TRA will need a DSP to help with service integration. |

### 8.2 Constraints

| ID  | Constraint  |
|-----|---|
| C01 | Calls to the D-TRO Publication API will be subject to a quota constraining the number of requests that can be issued per second. Rate limiting values will be captured in future versions of this document. |

#### 8.3 Risks

| ID  | Risk  | Impact   | Mitigation   |
|-----|---|--|--|
| R01 | There is a risk that the D-TRO Service is unavailable due to a technical fault or unplanned maintenance.  (e.g., to address a critical security vulnerability identified in the underlying technology platform) | The operation of TRA systems that integrate with the D-TRO Service will be correspondingly impacted. | TRA systems will adopt the design patterns and policies specified in section 5 (see assumption A01). |

## 8.4 Dependencies

| ID  | Dependency   |
|-----|--|
| D01 | TRA systems must authenticate with the D-TRO Service using Google Apigee. API credentials will be supplied as part of activities to on-board and integrate with the D-TRO Service. |
| D02 | TRA systems must securely manage API credentials.  |
| D03 | TRA systems must adhere to the design patterns and policies specified in section 7.  |

# 9 Endpoints available for TRAs and/or DSPs

The table below lists the endpoints relevant for this ICD. Additional endpoints for consumers are documented in Beta-01-DfT-D-TRO-ICD for Consumers.

| Ref.    | HTTP<br>verb | Endpoints                                | Name   |  |  |
|---------|--------------|--|--|--|--|
|         | D-TROs       |  |  |  |  |
| D1      | POST         | /v1/dtros/createFromFile                 | Create a new D-TRO                                       |  |  |
| D2      | PUT          | /v1/dtros/updateFromFile/{id}            | Update an existing D-TRO                                 |  |  |
| D3      | POST         | /v1/dtros/createFromBody                 | Create a new D-TRO                                       |  |  |
| D4      | PUT          | /v1/dtros/updateFromBody/{id}            | Update an existing D-TRO                                 |  |  |
| D5      | GET          | /v1/dtros/{id}                           | Get D-TRO by ID  |  |  |
| D6      | DELETE       | /v1/dtros/{id}                           | Delete D-TRO by ID                                       |  |  |
| D7      | GET          | /v1/dtros/sourceHistory/{dtroId}         | Get D-TRO source history by ID                           |  |  |
| D8      | GET          | /v1/dtros/provisionHistory/{dtroId}      | Get D-TRO provisions history by ID                       |  |  |
| D9      | POST         | /v1/dtros/Ownership/{id}/{assignToTrald} | Assign D-TRO ownership by TRA ID                         |  |  |
|         |              |  |  |  |  |
|         |              | Events and Searc                         | h  |  |  |
| ES1     | POST         | /v1/events                               | Retrieve all data store events                           |  |  |
| ES2     | POST         | /v1/search                               | Find existing D-TROs that matches the requested criteria |  |  |
|         |              |  |  |  |  |
|         |              | Rules                                    |  |  |  |
| R1      | GET          | /v1/rules/versions                       | Get rule versions  |  |  |
| R2      | GET          | /v1/rules                                | Get rule   |  |  |
| R3      | GET          | /v1/rules/{versions}                     | Get rule by its version                                  |  |  |
| R4      | GET          | /v1/rules/{id}                           | Get rule by its ID                                       |  |  |
|         |              |  |  |  |  |
| Schemas |              |  |  |  |  |
| S1      | GET          | /v1/schemas/versions                     | Get schema versions                                      |  |  |
| S2      | GET          | /v1/schemas                              | Get schemas  |  |  |
| S3      | GET          | /v1/schemas/{version}                    | Get schema by its version                                |  |  |
| S4      | GET          | /v1/schemas/{id}                         | Get schema by its ID                                     |  |  |

Summary of Publisher API endpoints

# 10 Interface Specification

This interface enables integration, via a RESTful API, between TRAs business processes and systems and the D-TRO Service for the recording of Digital Traffic Regulation Orders.

| Overview                   |   |
|----------------------------|---|
| Item                       | Value   |
| Name                       | D-TRO Publication (API)   |
| Publisher                  | Department for Transport  |
| Consumer                   | TRA / DSP   |
| Interface type             | RESTful API SOAP API File transfer Other (please specify)   |
| Protocol                   | HTTP HTTPS – must be HTTPS 1.1 or higher. Other (please specify)  |
| Test URL                   | To publish shortly  |
| Pre-Production URL         | To published in a future revision of this document  |
| Production URL             | To published in a future revision of this document  |
| Security<br>Classification | UNMARKED OFFICIAL OFFICIAL-SENSITIVE SECRET TOP SECRET  |
| Authentication             | Authentication to the application via the API endpoints for all public-facing environments (Third-party test and Production) will be controlled using the OAuth 2.0 framework (in keeping with GOV.UK API technical and data standards). In order to obtain the necessary token, the user must be onboarded as a TRA, be a DSP working for a TRA, or cleared by the CSO before being allowed to self-register to use D-TRO via a portal and obtain the authentication token.  It should be noted that for Private-Beta, IP restrictions will be in place, only allowing a select few addresses to call D-TRO API endpoints. |
| Content type               | application/json  |
| Content encoding           | UTF-8   |
| Non-Repudiation            | The use of OAuth 2.0 credentials paired with X-Correlation-ID headers will be used to uniquely identify an API invocation for non-repudiation purposes.   |

Notes applicable to all methods:

- 1. Dates and times all date and time records shall be expressed in local time using the ISO 8601- 1:2019 format (e.g. YYYY-MM-DDTHH:MM:SS).
- 2. Correlation identifier all identifiers shall be expressed using UUID ISO/IEC 11578:1996 specification. The format consists of 32 hexadecimal digits plus 4 hyphens (8-4-4-12).
- 3. The size of a D-TRO submission must not exceed 10MB.

## 10.1Endpoints D-TROs

The below methods are provisioned for creation, modification, and retrieval of D-TRO records.

The tables below cover the following endpoints specific for D-TROs.

| Ref. | Endpoints                                | Name                               |
|------|--|------------------------------------|
| D1   | /v1/dtros/createFromFile                 | Create a new D-TRO                 |
| D2   | /v1/dtros/updateFromFile/{id}            | Update an existing D-TRO           |
| D3   | /v1/dtros/createFromBody                 | Create a new D-TRO                 |
| D4   | /v1/dtros/updateFromBody/{id}            | Update an existing D-TRO           |
| D5   | /v1/dtros/{id}                           | Get D-TRO by ID                    |
| D6   | /v1/dtros/{id}                           | Delete D-TRO by ID                 |
| D7   | /v1/dtros/sourceHistory/{dtroId}         | Get D-TRO source history by ID     |
| D8   | /v1/dtros/provisionHistory/{dtroId}      | Get D-TRO provisions history by ID |
| D9   | /v1/dtros/Ownership/{id}/{assignToTrald} | Assign D-TRO ownership by TRA ID   |

| Reference          | D1   |                          |               |                                   |              |   |  |  |  |
|--------------------|--|--------------------------|---------------|-----------------------------------|--------------|---|--|--|--|
| Item               | Value  |                          |               |                                   |              |   |  |  |  |
| POST               | /v1/dtros/creat                              | /v1/dtros/createFromFile |               |                                   |              |   |  |  |  |
| Name               | Create a new                                 | D-TRO                    |               |                                   |              |   |  |  |  |
| Description        | This POST me<br>Service by pro               |                          |               | oublishers to record<br>as a file | d a new D-TR | O to the D-TRO  |  |  |  |
| Input data type(s) | ☑ JSON ☑ XML ☑ File ☑ Other (please specify) |                          |               |                                   |              |   |  |  |  |
| Input              | Header Param                                 | neters                   |               |                                   |              |   |  |  |  |
| Structure          | Field Name                                   | Data<br>Type             | Min<br>Length | Max Length                        | Opportunity  | Notes   |  |  |  |
|                    | X-<br>Correlation-<br>ID                     | string                   | 36            | 36                                | Mandatory    | UUID formatted<br>string to track the<br>request through<br>the enquiries<br>stack. |  |  |  |

| Defenses            | D4  |           |            |                                       |               |   |  |  |  |
|---------------------|---|-----------|------------|---------------------------------------|---------------|---|--|--|--|
| Reference           | D1  |           |            |                                       |               |   |  |  |  |
| Item                | Value   |           |            |                                       |               |   |  |  |  |
| POST                | /v1/dtros/createFromFile  |           |            |                                       |               |   |  |  |  |
| Name                | Create a new D-TRO  This POST method allows data publishers to record a new D-TRO to the D-TRO  |           |            |                                       |               |   |  |  |  |
| Description         |   |           |            |                                       | rd a new D-TR | O to the D-TRO  |  |  |  |
|                     | Service by providing the D-TRO as a file  |           |            |                                       |               |   |  |  |  |
|                     | Request Parameters  |           |            |                                       |               |   |  |  |  |
|                     | Field Name  | Data      | Min        | Max Length                            | Opportunity   | Notes   |  |  |  |
|                     | £:1 -   | Туре      | Length     | 40MD                                  | NA            | A <b>f</b> :1 4 - i - i   |  |  |  |
| Input data scope    | file   file   1KB   10MB   Mandatory   A file containing JSON payload describing a D-TRO. File should be provided through a multipart/form-data request having UTF8 encoding.  When invoking this endpoint, the supplied file must contain a full D-TRO representation. Payloads will be assessed against the schema (created and activated in schemas endpoints), semantic JSON rules and custom rules (created in |           |            |                                       |               |   |  |  |  |
| Output<br>data type | For an exampl   | e of a D- | -TRO file, | please refer to G<br>File Index.docx) |               | x document at:  |  |  |  |
| data type           | ⊠ File  |           |            |                                       |               |   |  |  |  |
|                     | ☑ Other (pleas  | se specif | √v)        |                                       |               |   |  |  |  |
| Output              | Response Par  | •         |            |                                       |               |   |  |  |  |
| data                | Field Name  | Data      | Min        | Max Length                            | Opportunity   | Notes   |  |  |  |
| structure           |   | Type      | Length     | ŭ                                     | ,             |   |  |  |  |
| Doons               | Id  | string    | 36         | 36                                    | Mandatory     | UUID formatted<br>string containing a<br>D-TRO Service<br>identifier for the<br>newly created D-<br>TRO record. |  |  |  |
| Responses           |   |           |            |                                       |               |   |  |  |  |
| 201<br>Created      | {<br>"id": "3fa85f6<br>}  | 4-5717-4  | 1562-b3fc  | -2c963f66afa6"                        |               |   |  |  |  |
| 404 Not<br>Found    | {     "message": "I     "errors": [         "Schema ve     ] }  |           |            |                                       |               |   |  |  |  |

| Reference   | D1                       |  |  |  |  |  |  |
|-------------|--------------------------|--|--|--|--|--|--|
| Item        | Value                    |  |  |  |  |  |  |
| POST        | /v1/dtros/createFromFile |  |  |  |  |  |  |
| Name        | Create a new D           | -TRO   |  |  |  |  |  |
| Description | This POST met            | hod allows data publishers to record a new D-TRO to the D-TRO                  |  |  |  |  |  |
| •           |                          | iding the D-TRO as a file  |  |  |  |  |  |
| 400 Bad     | {                        |  |  |  |  |  |  |
| Request     | "errors": {              |  |  |  |  |  |  |
|             | property: [              | 1  |  |  |  |  |  |
|             | "Unexpected              | d end when deserializing object. Path <i>property</i> ."                       |  |  |  |  |  |
|             | ,]                       |  |  |  |  |  |  |
|             | }, "type": "bttpe://     | to all just and html/rfa7021 Hapption 6 F 1"                                   |  |  |  |  |  |
|             |                          | tools.ietf.org/html/rfc7231#section-6.5.1", more validation errors occurred.", |  |  |  |  |  |
|             | "status": 400,           | more validation errors occurred.   |  |  |  |  |  |
|             | -                        | 9f4aa677608b15827106b63502eb806f-ca691cf133c8871d-00"                          |  |  |  |  |  |
|             | }                        | 714440770005700277005000020500010400714100                                     |  |  |  |  |  |
| Error       | HTTP Code                | Error Type   |  |  |  |  |  |
| codes       | 400                      | Bad request  |  |  |  |  |  |
|             | 403                      | Access denied/forbidden  |  |  |  |  |  |
|             | 404                      | Not found  |  |  |  |  |  |
|             | 405                      | Method not allowed   |  |  |  |  |  |
|             | 429                      | Too many requests  |  |  |  |  |  |
|             | 500                      | Internal server error  |  |  |  |  |  |
|             | 502                      | Bad gateway  |  |  |  |  |  |
|             | 503                      | Service unavailable  |  |  |  |  |  |
|             | 504                      | Gateway timeout  |  |  |  |  |  |

| Reference    | D2  |                   |               |                     |                       |                                     |  |  |  |
|--------------|---|-------------------|---------------|---------------------|-----------------------|-------------------------------------|--|--|--|
| Item         | Value   |                   |               |                     |                       |                                     |  |  |  |
| PUT          | /v1/dtros/updateFromFile{id}  |                   |               |                     |                       |                                     |  |  |  |
| Name         | Updates an existing D-TRO   |                   |               |                     |                       |                                     |  |  |  |
|              | This PUT method allows data publishers to update an existing D-TRO to the D-TRO |                   |               |                     |                       |                                     |  |  |  |
| Description  | Service.  |                   |               |                     |                       |                                     |  |  |  |
| Input data   | Service.  ☑ JSON  |                   |               |                     |                       |                                     |  |  |  |
| type(s)      | ⊠ XML   |                   |               |                     |                       |                                     |  |  |  |
| 1) [ 2 ( 2 ) | ☑ File  |                   |               |                     |                       |                                     |  |  |  |
|              | ☑ Other (plea   | ase speci         | fy)           |                     |                       |                                     |  |  |  |
| Input        |   | Header Parameters |               |                     |                       |                                     |  |  |  |
| Structure    | Field Name Data Min Max Length Opportunity Notes                                |                   |               |                     |                       |                                     |  |  |  |
|              | V   | Type              | Length        | 20                  | Manadatami            | LILID forms off od                  |  |  |  |
|              | X-<br>Correlation-  | string            | 36            | 36                  | Mandatory             | UUID formatted string to track the  |  |  |  |
|              | ID  |                   |               |                     |                       | request through                     |  |  |  |
|              |   |                   |               |                     |                       | the enquiries                       |  |  |  |
|              |   |                   |               |                     |                       | stack.                              |  |  |  |
|              | Request Para  | meters            | •             |                     |                       |                                     |  |  |  |
|              | Field Name  | Data              | Min           | Max Length          | Opportunity           | Notes                               |  |  |  |
|              |   | Туре              | Length        |                     |                       |                                     |  |  |  |
|              | file  | file              | 1KB           | 10MB                | Mandatory             | A file containing                   |  |  |  |
|              |   |                   |               |                     |                       | JSON payload describing a D-        |  |  |  |
|              |   |                   |               |                     |                       | TRO. File should                    |  |  |  |
|              |   |                   |               |                     |                       | be provided                         |  |  |  |
|              |   |                   |               |                     |                       | through a                           |  |  |  |
|              |   |                   |               |                     |                       | multipart/form-data                 |  |  |  |
|              |   |                   |               |                     |                       | request having                      |  |  |  |
|              |   |                   | 00            | 00                  |                       | UTF8 encoding.                      |  |  |  |
|              | ld  | string            | 36            | 36                  | Mandatory             | UUID formatted                      |  |  |  |
|              |   |                   |               |                     |                       | string representing the D-TRO to be |  |  |  |
|              |   |                   |               |                     |                       | updated.                            |  |  |  |
| Input data   | When invokin  | ıa this en        | dpoint th     | e supplied file mus | ⊥<br>st contain a ful |                                     |  |  |  |
| scope        |   |                   |               | assessed agains     |                       |                                     |  |  |  |
|              |   |                   |               |                     |                       | tom rules (created in               |  |  |  |
|              | rules endpoin   | its) for va       | lidity aga    | inst the D-TRO da   | ta model.             |                                     |  |  |  |
|              | For an examp  | ole of a D        | -TRO file     | , please refer to G | itHub File Inde       | ex document at:                     |  |  |  |
|              |   |                   |               | b File Index.docx)  |                       |                                     |  |  |  |
| Output       | ☑ JSON  | _                 |               |                     |                       |                                     |  |  |  |
| data type    | ⊠ XML   |                   |               |                     |                       |                                     |  |  |  |
|              | ▼ File     Other (plea  |                   | <b>f</b> . () |                     |                       |                                     |  |  |  |
| Responses    | ☑ Other (plead  | se speci          | ıy <i>)</i>   |                     |                       |                                     |  |  |  |
| 200 OK       | ı   |                   |               |                     |                       |                                     |  |  |  |
| 200 010      | \<br>  "id" <sup>,</sup> "3fa85fi   | 64-5717-          | 4562-h3fa     | c-2c963f66afa6"     |                       |                                     |  |  |  |
|              | }   | J. J. 11-         | .002 0010     |                     |                       |                                     |  |  |  |
| L            | l J   |                   |               |                     |                       |                                     |  |  |  |

| Reference   | D2                           |   |  |  |  |  |  |  |
|-------------|------------------------------|---|--|--|--|--|--|--|
| Item        | Value                        |   |  |  |  |  |  |  |
| PUT         | /v1/dtros/updateFromFile{id} |   |  |  |  |  |  |  |
| Name        | Updates an existing D-TRO    |   |  |  |  |  |  |  |
| Description | •                            | d allows data publishers to update an existing D-TRO to the D-TRO |  |  |  |  |  |  |
| 2 2 2 2 3   | Service.                     |   |  |  |  |  |  |  |
| 404 Not     | {                            |   |  |  |  |  |  |  |
| Found       | `message": "No               | t found",   |  |  |  |  |  |  |
|             | "errors": [                  |   |  |  |  |  |  |  |
|             | "Schema versi                | on not found."  |  |  |  |  |  |  |
|             | ]                            |   |  |  |  |  |  |  |
|             | }                            |   |  |  |  |  |  |  |
| 400 Bad     | {<br>" " " "                 |   |  |  |  |  |  |  |
| Request     | "errors": {                  |   |  |  |  |  |  |  |
|             | property: [                  | and other description ships A. Dath many talk?                    |  |  |  |  |  |  |
|             | Unexpected                   | end when deserializing object. Path property."                    |  |  |  |  |  |  |
|             | <u> </u> ]                   |   |  |  |  |  |  |  |
|             | },<br>  "type": "https://t/  | pols.ietf.org/html/rfc7231#section-6.5.1",                        |  |  |  |  |  |  |
|             |                              | nore validation errors occurred.",                                |  |  |  |  |  |  |
|             | "status": 400,               | iore validation errors occurred.                                  |  |  |  |  |  |  |
|             | ,                            | 4aa677608b15827106b63502eb806f-ca691cf133c8871d-00"               |  |  |  |  |  |  |
|             | }                            | 1440110002100211002000020202001040010100000114                    |  |  |  |  |  |  |
| Error       | HTTP Code                    | Error Type  |  |  |  |  |  |  |
| Codes       | 400                          | Bad request   |  |  |  |  |  |  |
|             | 403                          | Access denied/forbidden   |  |  |  |  |  |  |
|             | 404                          | Not found   |  |  |  |  |  |  |
|             | 405                          | Method not allowed  |  |  |  |  |  |  |
|             | 429                          | Too many requests   |  |  |  |  |  |  |
|             | 500                          | Internal server error   |  |  |  |  |  |  |
|             | 502                          | Bad gateway   |  |  |  |  |  |  |
|             | 503                          | Service unavailable   |  |  |  |  |  |  |
|             | 504                          | Gateway timeout   |  |  |  |  |  |  |

| Reference                        | D3  |                                    |                     |                    |                        |  |  |  |  |
|----------------------------------|---|------------------------------------|---------------------|--------------------|------------------------|--|--|--|--|
| Item                             | Value   |                                    |                     |                    |                        |  |  |  |  |
| POST                             | /v1/dtros/creat   | eFromBo                            | ody                 |                    |                        |  |  |  |  |
| Name                             | Create a new D-TRO  |                                    |                     |                    |                        |  |  |  |  |
| Description                      | This POST me  | thod allo                          | ws data r           | oublishers to reco | ord a new D-TR         | O to the D-TRO   |  |  |  |
| '                                | Service.  |                                    |                     |                    |                        |  |  |  |  |
| Input data                       | ☑ JSON  |                                    |                     |                    |                        |  |  |  |  |
| type(s)                          | ⊠ XML   | ☑ XML<br>☑ File                    |                     |                    |                        |  |  |  |  |
|                                  |   |                                    |                     |                    |                        |  |  |  |  |
| Input                            | ☑ Other (please specify) Header Parameters                                |                                    |                     |                    |                        |  |  |  |  |
| Structure                        | Field Name   Data   Min   Max Length   Opportunity   Notes                |                                    |                     |                    |                        |  |  |  |  |
| Structure                        | I leiu Ivallie  | Type                               | Length              | Wax Length         | Оррогини               | INOIGS   |  |  |  |
|                                  | X-  | string                             | 36                  | 36                 | Mandatory              | UUID formatted   |  |  |  |
|                                  | Correlation-  |                                    |                     |                    | ,,                     | string to track the  |  |  |  |
|                                  | ID  |                                    |                     |                    |                        | request through  |  |  |  |
|                                  |   |                                    |                     |                    |                        | the enquiries  |  |  |  |
|                                  | Doguest Derer   | notoro                             |                     |                    |                        | stack.   |  |  |  |
|                                  | Request Parar<br>Field Name   |                                    | Min                 | May Langth         | Opportunity            | Notes  |  |  |  |
|                                  | rieid ivairie   | Data<br>Type                       | Length              | Max Length         | Opportunity            | Notes  |  |  |  |
|                                  | data  | object                             | 1KB                 | 10MB               | Mandatory              | A JSON payload   |  |  |  |
|                                  |   |                                    |                     |                    |                        | describing a D-  |  |  |  |
|                                  |   |                                    |                     |                    |                        | TRO. Payload   |  |  |  |
|                                  |   |                                    |                     |                    |                        | should be UTF8 encoded.  |  |  |  |
| Input data                       | For example o   | f D-TRO                            | ⊥<br>pavload r      | lease refer to G   | itHub File Index       |  |  |  |  |
| scope                            |   |                                    |                     | File Index.docx    |                        |  |  |  |  |
| Output                           | ☑ JSON  |                                    |                     |                    |                        |  |  |  |  |
| data type                        | ⊠ XML   |                                    |                     |                    |                        |  |  |  |  |
|                                  | ▼ Other (please)  | a anaoifi                          | Λ                   |                    |                        |  |  |  |  |
| Output                           | ☑ Other (please specify)  |                                    |                     |                    |                        |  |  |  |  |
| O di tp di t                     | Response Par  |                                    | <del>y )</del>      |                    |                        |  |  |  |  |
| data                             | Response Para   | ameters                            |                     | Max Length         | Opportunity            | Notes  |  |  |  |
|                                  |   | ameters                            | Min<br>Length       | Max Length         | Opportunity            | Notes  |  |  |  |
| data                             |   | ameters<br>Data                    | Min                 | Max Length         | Opportunity  Mandatory | UUID formatted   |  |  |  |
| data                             | Field Name  | Data<br>Type                       | Min<br>Length       |                    |                        | UUID formatted string containing   |  |  |  |
| data                             | Field Name  | Data<br>Type                       | Min<br>Length       |                    |                        | UUID formatted<br>string containing<br>a D-TRO Service   |  |  |  |
| data                             | Field Name  | Data<br>Type                       | Min<br>Length       |                    |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the                     |  |  |  |
| data                             | Field Name  | Data<br>Type                       | Min<br>Length       |                    |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |
| data                             | Field Name  | Data<br>Type                       | Min<br>Length       |                    |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the                     |  |  |  |
| data<br>structure                | Field Name  | Data<br>Type                       | Min<br>Length       |                    |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |
| data<br>structure<br>Responses   | Field Name id   | ameters Data Type string           | Min<br>Length<br>36 |                    |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |
| Responses 201 Created            | Field Name id   | ameters Data Type string           | Min<br>Length<br>36 | 36                 |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |
| data<br>structure  Responses 201 | Field Name id  {   "id": "3fa85f6- } {                                    | ameters Data Type string 4-5717-4  | Min<br>Length<br>36 | 36                 |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |
| Responses 201 Created 404 Not    | Field Name  id  {    "id": "3fa85f6- } {    "message": "I"    "errors": [ | ameters Data Type string  4-5717-4 | Min<br>Length<br>36 | 36                 |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |
| Responses 201 Created 404 Not    | Field Name  id  {   "id": "3fa85f64 } {   "message": "N                   | ameters Data Type string  4-5717-4 | Min<br>Length<br>36 | 36                 |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |
| Responses 201 Created 404 Not    | Field Name  id  {    "id": "3fa85f6- } {    "message": "I"    "errors": [ | ameters Data Type string  4-5717-4 | Min<br>Length<br>36 | 36                 |                        | UUID formatted<br>string containing<br>a D-TRO Service<br>identifier for the<br>newly created D- |  |  |  |

| Reference          | D3   |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|
| Item               | Value  |  |  |  |  |  |  |
| POST               | /v1/dtros/createFromBody   |  |  |  |  |  |  |
| Name               | Create a new D-  | •  |  |  |  |  |  |
| Description        | This POST meth   | nod allows data publishers to record a new D-TRO to the D-TRO  |  |  |  |  |  |
| Booonpaon          | Service.   | iod dilowo data pasiionoro to rocord a now B Trice to the B Trice  |  |  |  |  |  |
| 400 Bad<br>Request | {     "errors": {         property: [             "Unexpected ]       },     "type": "https://t     "title": "One or i status": 400, | l end when deserializing object. Path property."  cools.ietf.org/html/rfc7231#section-6.5.1", more validation errors occurred.",  f4aa677608b15827106b63502eb806f-ca691cf133c8871d-00" |  |  |  |  |  |
| Error              | HTTP Code  | Error Type   |  |  |  |  |  |
| Codes              | 400  | Bad request  |  |  |  |  |  |
|                    | 403  | Access denied/forbidden  |  |  |  |  |  |
|                    | 404  | Not found  |  |  |  |  |  |
|                    | 405  | Method not allowed   |  |  |  |  |  |
|                    | 429  | Too many requests  |  |  |  |  |  |
|                    | 500  | Internal server error  |  |  |  |  |  |
|                    | 502  | Bad gateway  |  |  |  |  |  |
|                    | 503  | Service unavailable  |  |  |  |  |  |
|                    | 504  | Gateway timeout  |  |  |  |  |  |

| Reference          | D4  |  |               |               |             |  |  |  |  |
|--------------------|---|--|---------------|---------------|-------------|--|--|--|--|
|                    | Value   |  |               |               |             |  |  |  |  |
| Item               |   |  |               |               |             |  |  |  |  |
| PUT                | /v1/dtros/updateFromBody{id}  |  |               |               |             |  |  |  |  |
| Name               | Updates an existing D-TRO   |  |               |               |             |  |  |  |  |
| Description        | TRO Service.  | This PUT method allows data publishers to update an existing D-TRO to the D-TRO Service. |               |               |             |  |  |  |  |
| Input data type(s) | ☑ JSON ☑ XML ☑ File ☑ Other (please specify)  |  |               |               |             |  |  |  |  |
| Input              | Header Paramete   |  | l             |               | I =         |  |  |  |  |
| Structure          | Field Name  | Data<br>Type   | Min<br>Length | Max<br>Length | Opportunity | Notes  |  |  |  |
|                    | X-Correlation- string 36 36 Mandatory UUID formatted string to track the request through the enquiries stack. |  |               |               |             |  |  |  |  |
|                    | Request Parame  | ters   |               |               |             |  |  |  |  |
|                    | Field Name  | Data<br>Type   | Min<br>Length | Max<br>Length | Opportunity | Notes  |  |  |  |
|                    | data  | object   | 1KB           | 10MB          | Mandatory   | A JSON payload describing a D-TRO. Payload should be UTF8 encoded. |  |  |  |
|                    | id  | string   | 36            | 36            | Mandatory   | UUID formatted string representing the D-TRO to be updated.        |  |  |  |
| Input data scope   | For example of D<br>Beta-01-DfT-D-T   |  |               |               |             | e Index document at:   |  |  |  |
| Output data type   | ☑ JSON ☑ XML ☑ File ☑ Other (please   |  |               |               |             |  |  |  |  |
| Responses          |   |  |               |               |             |  |  |  |  |
| 200 OK             | {     "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6" }  |  |               |               |             |  |  |  |  |
| 404 Not<br>Found   | {     "message": "No     "errors": [         "Schema versi     ] }  |  | ound."        |               |             |  |  |  |  |

| Reference          | D4   |   |  |  |  |  |  |
|--------------------|--|---|--|--|--|--|--|
| Item               | Value  |   |  |  |  |  |  |
| PUT                | /v1/dtros/updateFromBody{id}   |   |  |  |  |  |  |
| Name               | Updates an existir   | * * *   |  |  |  |  |  |
| Description        | •  | allows data publishers to update an existing D-TRO to the D-  |  |  |  |  |  |
| Boothplion         | TRO Service.   | anone data publishere to apadic an existing B 1110 to the B   |  |  |  |  |  |
| 400 Bad<br>Request | {     "errors": {         property: [             "Unexpected e       ]     },     "type": "https://to- "title": "One or me "status": 400, | end when deserializing object. Path property."  ols.ietf.org/html/rfc7231#section-6.5.1", ore validation errors occurred.",  aa677608b15827106b63502eb806f-ca691cf133c8871d-00" |  |  |  |  |  |
| Error              | HTTP Code  | Error Type  |  |  |  |  |  |
| Codes              | 400  | Bad request   |  |  |  |  |  |
|                    | 403  | Access denied/forbidden   |  |  |  |  |  |
|                    | 404  | Not found   |  |  |  |  |  |
|                    | 405  | Method not allowed  |  |  |  |  |  |
|                    | 429  | Too many requests   |  |  |  |  |  |
|                    | 500  | Internal server error   |  |  |  |  |  |
|                    | 502  | Bad gateway   |  |  |  |  |  |
|                    | 503  | Service unavailable   |  |  |  |  |  |
|                    | 504  | Gateway timeout   |  |  |  |  |  |

| Reference           | D5  |              |               |               |                |  |  |  |
|---------------------|---|--------------|---------------|---------------|----------------|--|--|--|
| Item                | Value   |              |               |               |                |  |  |  |
| GET                 | /v1/dtros/{id}  |              |               |               |                |  |  |  |
| Name                | Get a D-TRO by id   |              |               |               |                |  |  |  |
| Description         | This GET method allows data publishers retrieve an existing D-TRO from the D-TRO Service, based on its unique identification. |              |               |               |                |  |  |  |
| Input data type(s)  | ☑ JSON ☑ XML ☑ File ☑ Other (please specify)  |              |               |               |                |  |  |  |
| Input               | Header Paramet  |              |               |               | I -            |  |  |  |
| Structure           | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity    | Notes  |  |  |
|                     | X-Correlation- string 36 36 Mandatory UUID formatted string to track the request through the enquiries stack.                 |              |               |               |                |  |  |  |
|                     | Request Parame  | ters         |               |               |                |  |  |  |
|                     | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity    | Notes  |  |  |
|                     | id  | string       | 36            | 36            | Mandatory      | UUID formatted string containing the unique identification of a D-TRO. |  |  |
| Input data scope    |   | f the uniq   | ue identifi   | er match      | es with one of | contain a full UUID<br>the existing D-TROs                             |  |  |
| Output<br>data type | ☑ JSON  ☑ XML  ☑ File  ☑ Other (please specify)   |              |               |               |                |  |  |  |
| Output              | Response Paran  | neters       |               |               |                |  |  |  |
| data<br>structure   | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity    | Notes  |  |  |
|                     | Data  | JSON         | -             | -             | Mandatory      | D-TRO retrieved from the D-TRO Service.                                |  |  |
| Responses           |   |              |               |               |                |  |  |  |

| Reference                 | D5  |  |  |  |  |  |  |
|---------------------------|---|--|--|--|--|--|--|
| Item                      | Value   |  |  |  |  |  |  |
| GET                       | /v1/dtros/{id}  |  |  |  |  |  |  |
|                           |   |  |  |  |  |  |  |
| Name                      | Get a D-TRO by id   |  |  |  |  |  |  |
| Description               |   | allows data publishers retrieve an existing D-TRO from the D-<br>ed on its unique identification.  |  |  |  |  |  |
| 200 OK                    | {     "schemaVersion     "data": {         "Source": {             "actionTyp         "currentTra         "provision"            omitted f     GitHub File Index     }],     "reference'     "section": "     "traAffected     1000     ],     "traCreator     "troName": | n": "3.2.4",  e": "new", nowner": 1000,  [{  for brevity (For a full example of D-TRO response please refer to document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)  c": "B2787FE2-AD74-432A-BB32-76FDB065F3E8", All sections", cd": [  "": 1000,  "The Sample County Council (Prohibition of Waiting, Loading (on-Street Parking Places) (Civil Enforcement Area) |  |  |  |  |  |
| 404 Not<br>Found          | {     "message": "Not found",     "errors": [         "D-TRO with id 3fa85f64-5717-4562-b3fc-2c963f66afa6 not found."     ]   |  |  |  |  |  |  |
| Error codes               | HTTP Code   | Error Type   |  |  |  |  |  |
|                           | 400   | Bad request  |  |  |  |  |  |
|                           | 403   | Access denied/forbidden  |  |  |  |  |  |
|                           | 404 Not found   |  |  |  |  |  |  |
|                           | 405 Method not allowed  |  |  |  |  |  |  |
|                           | 429   | Too many requests  |  |  |  |  |  |
| 500 Internal server error |   |  |  |  |  |  |  |
|                           | 502   | Bad gateway  |  |  |  |  |  |
|                           | 503   | Service unavailable  |  |  |  |  |  |
|                           | 504   | Gateway timeout  |  |  |  |  |  |
|                           | JU <del>1</del>   | Oaleway IIIII60ul  |  |  |  |  |  |

| Reference        | D6                                    |   |             |           |                 |                        |
|------------------|---------------------------------------|---|-------------|-----------|-----------------|------------------------|
| Item             | Value                                 |   |             |           |                 |                        |
| DELETE           | /v1/dtros/{id}                        |   |             |           |                 |                        |
| Name             | Delete a D-TR                         | O by id                                 |             |           |                 |                        |
| Description      |                                       |   | llows data  | nuhlishe  | ers soft delete | an existing D-TRO from |
| Booonpaon        | the D-TRO Se                          |   |             |           |                 | an existing B The nem  |
| Input data       | ☑JSON                                 | , |             |           |                 |                        |
| type(s)          | <b>⋈</b> XML                          |   |             |           |                 |                        |
|                  | <b>⊠</b> File                         |   |             |           |                 |                        |
|                  | ☑ Other (please                       |   | <u>'</u> )  |           |                 |                        |
| Input            | Header Param                          | eters                                   |             |           |                 |                        |
| Structure        | Field Name                            | Data                                    | Min         | Max       | Opportunity     | Notes                  |
|                  |                                       | Туре                                    | Length      | Length    |                 |                        |
|                  | X-                                    | string                                  | 36          | 36        | Mandatory       | UUID formatted string  |
|                  | Correlation-                          |   |             |           |                 | to track the request   |
|                  | ID                                    |   |             |           |                 | through the enquiries  |
|                  | Request Parar                         | motors                                  |             |           |                 | stack.                 |
|                  | Field Name                            | Data                                    | Min         | Max       | Opportunity     | Notes                  |
|                  | rieid Name                            | Type                                    | Length      | Length    | Opportunity     | Notes                  |
|                  | id                                    | string                                  | 36          | 36        | Mandatory       | UUID formatted string  |
|                  |                                       | oung                                    |             |           | Wandatory       | containing the unique  |
|                  |                                       |   |             |           |                 | identification of a D- |
|                  |                                       |   |             |           |                 | TRO.                   |
| Input data       | "a30b3a58-44                          | 3c-485e-a                               | ab81-4d12   | 2e74076f  | 1"              |                        |
| scope            | E 100N                                |   |             |           |                 |                        |
| Output data type | I I I I I I I I I I I I I I I I I I I |   |             |           |                 |                        |
| туре             | ⊠ File                                |   |             |           |                 |                        |
|                  | ☑ Other (pleas                        | se specify                              | <b>'</b> )  |           |                 |                        |
| Responses        |                                       | or opening                              | /           |           |                 |                        |
| 204 No           |                                       |   |             |           |                 |                        |
| Content          |                                       |   |             |           |                 |                        |
| 404 Not          | {                                     |   |             |           |                 |                        |
| Found            | "message": "l                         | Not found                               | ",          |           |                 |                        |
|                  | "errors": [                           |   |             |           |                 |                        |
|                  | "D-TRO with                           | n id 3fa85                              | f64-5717-   | -4562-b3f | c-2c963f66afa   | 6 not found."          |
|                  | , ]                                   |   |             |           |                 |                        |
|                  | }                                     |   |             |           |                 |                        |
| Error codes      | HTTP Code                             | Error                                   | Гуре        |           |                 |                        |
|                  | 400                                   | Bad re                                  |             |           |                 |                        |
|                  | 403                                   |   | s denied/1  | forbidden |                 |                        |
|                  | 404                                   | Not fo                                  | und         |           |                 |                        |
|                  | 405                                   | Metho                                   | d not allo  | wed       |                 |                        |
|                  | 500                                   | Interna                                 | al server e | error     |                 |                        |
|                  | 502                                   |   | ateway      |           |                 |                        |
|                  | 503                                   |   | e unavail   |           |                 |                        |
|                  | 504 Gateway timeout                   |   |             |           |                 |                        |

| Reference          | D7  |               |               |               |             |   |  |  |
|--------------------|---|---------------|---------------|---------------|-------------|---|--|--|
| Item               | Value   |               |               |               |             |   |  |  |
| GET                | /v1/dtros/sourceHistory/{dtroId}  |               |               |               |             |   |  |  |
| Name               | Get the source h  | istory of a D | -TRO by i     | id            |             |   |  |  |
| Description        | This GET method existing D-TRO f  |               |               |               |             |   |  |  |
| Input data type(s) | ☑ JSON ☑ XML ☑ File ☑ Other (please   |               |               |               |             |   |  |  |
| Input Structure    | Header Paramet  | _             |               |               | T = -       |   |  |  |
|                    | Field Name  | Data<br>Type  | Min<br>Length | Max<br>Length | Opportunity | Notes   |  |  |
|                    | X-Correlation-<br>ID  | string        | 36            | 36            | Mandatory   | OUID formatted string to track the request through the enquiries stack. |  |  |
|                    | Request Parame  | ters          |               |               |             |   |  |  |
|                    | Field Name  | Data<br>Type  | Min<br>Length | Max<br>Length | Opportunity | Notes   |  |  |
|                    | dtrold  | string        | 36            | 36            | Mandatory   | formatted string containing the unique identification of a D-TRO.       |  |  |
| Input data scope   | When invoking this endpoint, the request dtrold parameter must contain a full UUID representation. If the unique identifier matches with one of the existing D-TROs within the D-TRO Service, that D-TRO will be retrieved. |               |               |               |             |   |  |  |
| Output data type   | ☑ JSON ☑ XML ☑ File ☑ Other (please   |               | ·             |               |             |   |  |  |
| Responses          |   |               |               |               |             |   |  |  |

| Reference   | D7  |  |  |  |  |  |  |
|-------------|---|--|--|--|--|--|--|
| Item        | Value   |  |  |  |  |  |  |
| GET         | /v1/dtros/sourceHistory/{dtroId}  |  |  |  |  |  |  |
| Name        | Get the source history of a D-TRO by id   |  |  |  |  |  |  |
| Description | This GET method allows data publishers retrieve the source history of an  |  |  |  |  |  |  |
| ·           | existing D-TRO from the D-TRO Service, based on its unique identification.  |  |  |  |  |  |  |
| 200 OK      | A textual description of the response containing all versions of the referenced D-TRO currently held in the D-TRO Central Service are returned.  {     "source": {         "actionType": "amendment",         "currentTraOwner": 1000,         "provision": {            omitted for brevity (For full example of D-TRO source history response, please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)     }},     "reference": "B2787FE2-AD74-432A-BB32-76FDB065F3E8",     "section": "All sections",         "traAffected": [             1001             ],             "troName": "The Sample County Council (Prohibition of Waiting, Loading and Stopping) and (on-Street Parking Places) (Civil Enforcement Area) Consolidation Order 2019."         }     }},     {         "Source": {         "actionType": "new",         "currentTraOwner": 1000,         "provision": {            omitted for brevity (For full example of D-TRO source history response, please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)         }},         "reference": "B2787FE2-AD74-432A-BB32-76FDB065F3E8",         "section": "All sections",         "traAffected": [             1000             ],             "traCreator": 1000,             "troName": "The Sample County Council (Prohibition of Waiting,             Loading and Stopping) and (on-Street Parking Places) (Civil Enforcement Area) Consolidation Order 2019."         } }  Response Parameters |  |  |  |  |  |  |

| Reference             | D7  |                       |             |            |           |   |  |  |
|-----------------------|---|-----------------------|-------------|------------|-----------|---|--|--|
| Item                  | Value   |                       |             |            |           |   |  |  |
| GET                   | /v1/dtros/sourceHistory/{dtroId}  |                       |             |            |           |   |  |  |
| Name                  | Get the source hist   | ory of a              | D-TRO by    | / id       |           |   |  |  |
| Description           | This GET method a existing D-TRO from   |                       |             |            |           |   |  |  |
| Output data structure | Field Name Data Min Max Opportunity Notes Type Length Length                                |                       |             |            |           |   |  |  |
|                       | Data  | JSON                  | -           | -          | Mandatory | D-TRO<br>retrieved from<br>the D-TRO<br>Service |  |  |
| Responses             |   |                       |             |            |           |   |  |  |
| 500 Internal          | {   |                       |             |            |           |   |  |  |
| Server Error          | "message": "Internal Server Error", "errors": [     "An unexpected error occurred."     ] } |                       |             |            |           |   |  |  |
| Error codes           | HTTP Code   | Error                 | Туре        |            |           |   |  |  |
|                       | 400   | Bad r                 | equest      |            |           |   |  |  |
|                       | 403   | Acces                 | ss denied/  | forbidden/ |           |   |  |  |
|                       | 404   | Not fo                |             |            |           |   |  |  |
|                       | 405   | _                     | od not allo |            |           |   |  |  |
|                       | 429   |                       | nany requ   |            |           |   |  |  |
|                       | 500   | Internal server error |             |            |           |   |  |  |
|                       | 502   | Bad gateway           |             |            |           |   |  |  |
|                       | 503   |                       | ce unavail  |            |           |   |  |  |
|                       | 504   | Gate                  | way timeo   | ut         |           |   |  |  |

| Reference           | D8  |              |               |               |              |  |  |
|---------------------|---|--------------|---------------|---------------|--------------|--|--|
| Item                | Value   |              |               |               |              |  |  |
| GET                 | /v1/dtros/provision   | nHistory,    | /{dtrold}     |               |              |  |  |
| Name                | Get the provision   | s history    | of a D-TF     | RO by id      |              |  |  |
| Description         | existing D-TRO f  |              |               |               |              | sions history of an que identification.                                |  |
| Input data type(s)  | ☑ JSON<br>☑ XML<br>☑ File<br>☑ Other (please  |              |               |               |              |  |  |
| Input               | Header Paramet  |              |               |               |              |  |  |
| Structure           | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity  | Notes  |  |
|                     | X-Correlation- string 36 36 Mandatory UUID formatted string to track the request through the enquiries stack. |              |               |               |              |  |  |
|                     | Request Parame  | ters         |               |               |              |  |  |
|                     | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity  | Notes  |  |
|                     | dtrold  | string       | 36            | 36            | Mandatory    | UUID formatted string containing the unique identification of a D-TRO. |  |
| Input data scope    |   | ition. If th | e unique i    | identifier i  | matches with | ter must contain a full<br>one of the existing D-<br>ved.              |  |
| Output<br>data type | ☑ JSON ☑ XML ☑ File ☑ Other (please specify)  |              |               |               |              |  |  |
| Output              | Response Paran  | neters       |               |               |              |  |  |
| data<br>structure   | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity  | Notes  |  |
|                     | Data  | JSON         | -             | -             | Mandatory    | D-TRO retrieved from the D-TRO Service                                 |  |
| Responses           |   |              |               |               |              |  |  |

```
200 OK
                "actionType": "partialRevoke",
                "orderReportingPoint": "ttroTtmoByNotice",
                "provisionDescription": "Prohibition of Waiting",
                "reference": "A3448229-1DFA-48CD-A785-376ACB9F7C56",
                "regulation": [
                     ...omitted for brevity (For full example of D-TRO provision history response,
             please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File
             Index.docx)
                   "regulatedPlace": [
                     ...omitted for brevity (For full example of D-TRO provision history response,
             please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File
             Index.docx)
                  }
                ],
             },
                "actionType": "fullRevoke",
                "orderReportingPoint": "ttroTtmoByNotice",
                "provisionDescription": "Prohibition of Waiting",
                "reference": "A3448229-1DFA-48CD-A785-376ACB9F7C56",
                "regulation": [
                     ...omitted for brevity (For full example of D-TRO provision history response,
             please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File
             Index.docx)
                   "regulatedPlace": [
                     ...omitted for brevity (For full example of D-TRO provision history response,
             please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File
             Index.docx)
                  }
                ],
             },
                "actionType": "new",
                "orderReportingPoint": "ttroTtmoByNotice",
                "provisionDescription": "Prohibition of Waiting",
                "reference": "A3448229-1DFA-48CD-A785-376ACB9F7C56",
                "regulation": [
                     ...omitted for brevity (For full example of D-TRO provision history response,
             please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File
             Index.docx)
                  "regulatedPlace": [
                     ...omitted for brevity (For full example of D-TRO provision history response,
             please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File
             Index.docx)
                  }
                ],
```

| Reference                          | D8  |  |  |  |  |  |
|------------------------------------|---|--|--|--|--|--|
| Item                               | Value   |  |  |  |  |  |
| GET                                | /v1/dtros/provision   | History/{dtroId}   |  |  |  |  |
| Name                               | Get the provisions  | history of a D-TRO by id   |  |  |  |  |
| Description                        |   | allows data publishers retrieve the provisions history of an om the D-TRO Service, based on its unique identification. |  |  |  |  |
| 500<br>Internal<br>Server<br>Error | {   "message": "Internal Server Error",   "errors": [   "An unexpected error occurred."   ]   ] |  |  |  |  |  |
| Error codes                        | HTTP Code   | Error Type   |  |  |  |  |
|                                    | 400   | Bad request  |  |  |  |  |
|                                    | 403   | Access denied/forbidden  |  |  |  |  |
|                                    | 404   | Not found  |  |  |  |  |
|                                    | 405   | Method not allowed   |  |  |  |  |
|                                    | 429   | Too many requests  |  |  |  |  |
|                                    | 500   | Internal server error  |  |  |  |  |
|                                    | 502   | Bad gateway  |  |  |  |  |
|                                    | 503   | Service unavailable  |  |  |  |  |
|                                    | 504   | Gateway timeout  |  |  |  |  |

| Reference           | D9  |                         |                       |                      |                 |   |  |
|---------------------|---|-------------------------|-----------------------|----------------------|-----------------|---|--|
| Item                | Value   |                         |                       |                      |                 |   |  |
| POST                | /v1/dtros/Ownership/{id}/{assignToTraId}  |                         |                       |                      |                 |   |  |
| Name                | Assign an existin   |                         |                       |                      | bv its unique   | identifier  |  |
| Description         | This POST meth current owner TF identification.   | od allows               | s data pul            | olishers to          | o reassign an e | existing D-TRO from the ce, based on its unique   |  |
| Input data type(s)  | ☑ JSON ☑ XML ☑ File ☑ Other (please   |                         |                       |                      |                 |   |  |
| Input               | Header Paramet  | ers                     |                       |                      |                 |   |  |
| Structure           | Field Name  | Data<br>Type            | Min<br>Length         | Max<br>Length        | Opportunity     | Notes   |  |
|                     | X-Correlation-<br>ID  | string                  | 36                    | 36                   | Mandatory       | UUID formatted string to track the request through the enquiries stack.                                   |  |
|                     | Request Parame  | ters                    |                       |                      |                 |   |  |
|                     | Field Name  | Data<br>Type            | Min<br>Length         | Max<br>Length        | Opportunity     | Notes   |  |
|                     | id  | string                  | 36                    | 36                   | Mandatory       | UUID formatted string containing the unique identification of a D-TRO.                                    |  |
|                     | assignToTraId   | string                  | 36                    | 36                   | Mandatory       | UUID formatted string containing the unique identification that will take ownership to the current D-TRO. |  |
| Input data scope    | representation of representation of   | f the D-TI<br>f the new | RO and th<br>TRA autl | ne assign<br>nority. | ToTrald must    | nust contain a full UUID<br>contain a full UUID   |  |
| Output<br>data type | <ul> <li>"/9829ff03-56f3-429d-9fff-a4819861515c/4f568e66-0ced-4f58-9c8e-5fce21773bb4"</li> <li>☑ JSON</li> <li>☑ XML</li> <li>☑ File</li> <li>☑ Other (please specify)</li> </ul> |                         |                       |                      |                 |   |  |
| Output              | Response Paran  |                         |                       |                      |                 |   |  |
| data<br>structure   | Field Name  | Data<br>Type            | Min<br>Length         | Max<br>Length        | Opportunity     | Notes   |  |
|                     | Data  | JSON                    | -                     | -                    | Mandatory       | D-TRO retrieved from the D-TRO Service.   |  |
| Responses           |   |                         |                       |                      |                 |   |  |
| 200 OK              | Successfully ass  | igned the               | D-TRO.                |                      |                 |   |  |
| 404 Not<br>Found    | Successfully assigned the D-TRO.  {     "message": "Not found",     "errors": [         "D-TRO not found."       ]     }  |                         |                       |                      |                 |   |  |

| Reference   | D9  |   |  |  |  |
|-------------|---|---|--|--|--|
| Item        | Value   |   |  |  |  |
| POST        | /v1/dtros/Ownersh   | ip/{id}/{assignToTraId}                           |  |  |  |
| Name        | Assign an existing  | D-TRO to a different TRA by its unique identifier |  |  |  |
| Description | This POST method allows data publishers to reassign an existing D-TRO from the current owner TRA to another one within the D-TRO Service, based on its unique identification. |   |  |  |  |
| Error codes | HTTP Code   | Error Type  |  |  |  |
|             | 400   | Bad request                                       |  |  |  |
|             | 403   | Access denied/forbidden                           |  |  |  |
|             | 404   | Not found   |  |  |  |
|             | 405   | Method not allowed                                |  |  |  |
|             | 429   | Too many requests                                 |  |  |  |
|             | 500   | Internal server error                             |  |  |  |
|             | 502   | Bad gateway                                       |  |  |  |
|             | 503   | Service unavailable                               |  |  |  |
|             | 504   | Gateway timeout                                   |  |  |  |

## 10.2Events and Search

| Ref. | Endpoints  | Name  |
|------|------------|---|
| ES1  | /v1/events | Query D-TRO Service data for stored events            |
| ES2  | /v1/search | Find existing D-TROs that matches requested criteria. |

| Reference   | ES1                              |              |               |               |                |   |  |  |
|-------------|----------------------------------|--------------|---------------|---------------|----------------|---|--|--|
| Item        | Value                            | Value        |               |               |                |   |  |  |
| POST        | /v1/events                       |              |               |               |                |   |  |  |
| Name        | Query D-TRO So or deleted).      | ervice dat   | ta for stor   | ed events     | s (e.g., D-TRO | s being created, updated,   |  |  |
| Description | This POST meth deleted) on exist |              |               |               |                | (created, updated or  |  |  |
| Input data  | ☑ JSON                           |              |               |               |                |   |  |  |
| type(s)     | ⊠ XML                            |              |               |               |                |   |  |  |
|             | ⊠ File                           |              |               |               |                |   |  |  |
|             | ☑ Other (please                  |              |               |               |                |   |  |  |
| Input       | Header Paramet                   | ers          |               |               |                |   |  |  |
| Structure   | Field Name                       | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity    | Notes   |  |  |
|             | X-Correlation-<br>ID             | string       | 36            | 36            | Mandatory      | UUID formatted string to track the request through the enquiries stack.             |  |  |
|             | Request Parame                   | eters        |               |               |                |   |  |  |
|             | Field Name                       | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity    | Notes   |  |  |
|             | data                             | object       | 1KB           | 10MB          | Mandatory      | A JSON payload containing a D-TRO events to search. Payload should be UTF8 encoded. |  |  |

| Reference           | ES1   |              |               |               |                |   |  |  |
|---------------------|---|--------------|---------------|---------------|----------------|---|--|--|
| Item                | Value   |              |               |               |                |   |  |  |
| POST                | /v1/events  | /v1/events   |               |               |                |   |  |  |
| Name                | Query D-TRO Service data for stored events (e.g., D-TROs being created, updated, or deleted).   |              |               |               |                |   |  |  |
| Description         |   | od allow     | /s data pu    | blishers t    | o query events | s (created, updated or  |  |  |
|                     |   |              |               |               |                |   |  |  |
| Input data scope    | deleted) on existing D-TROs within the D-TRO Service.  When invoking this endpoint, the request payload must contain a search query object 'page', 'pageSize' and 'since' as mandatory fields and at least one other property of your choice (e.g. traCreator)  {     "page": 1,     "pageSize": 50,     "since": "2020-10-07T08:14:41",     "traCreator": 0,     "currentTraOwner": 0,     "troName": "string",     "regulationType": "string",     "vehicleType": "string",     "orderReportingPoint": "string",     "regulationStart": {         "operator": "=",         "value": "2024-10-07T08:14:41"       },     "regulationEnd": {         "operator": "=",         "value": "2024-10-07T08:14:41"     } |              |               |               |                |   |  |  |
| Output<br>data type | ☑ JSON ☑ XML ☑ File ☑ Other (please   | specify)     |               |               |                |   |  |  |
| Output              | Response Param  | eters        |               |               |                |   |  |  |
| data<br>structure   | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity    | Notes   |  |  |
|                     | id  | string       | 36            | 36            | Mandatory      | UUID formatted string containing a D-TRO Service identifier for the newly created D-TRO record. |  |  |
| Responses           |   |              |               |               |                |   |  |  |
| 200 OK              | {     "events": [],     "page": 1,     "pageSize": 0,     "totalCount": 0 }   |              |               |               |                |   |  |  |
| 404 Not<br>Found    | {     "message": "No<br>"errors": [<br>"Schema versi<br>]<br>}  |              |               |               |                |   |  |  |

| Reference          | ES1   |                         |  |  |  |  |
|--------------------|---|-------------------------|--|--|--|--|
| Item               | Value   |                         |  |  |  |  |
| POST               | /v1/events  |                         |  |  |  |  |
| Name               | Query D-TRO Service data for stored events (e.g., D-TROs being created, updated, or deleted).   |                         |  |  |  |  |
| Description        | This POST method allows data publishers to query events (created, updated or deleted) on existing D-TROs within the D-TRO Service.  |                         |  |  |  |  |
| 400 Bad<br>Request | <pre>{     "errors": {         property: [             "Unexpected end when deserializing object. Path property."         ]     },     "type": "https://tools.ietf.org/html/rfc7231#section-6.5.1",     "title": "One or more validation errors occurred.",     "status": 400,     "traceld": "00-9f4aa677608b15827106b63502eb806f-ca691cf133c8871d-00" }</pre> |                         |  |  |  |  |
| Error codes        | HTTP Code   | Error Type              |  |  |  |  |
|                    | 400   | Bad request             |  |  |  |  |
|                    | 403   | Access denied/forbidden |  |  |  |  |
|                    | 404   | Not found               |  |  |  |  |
|                    | 405   | Method not allowed      |  |  |  |  |
|                    | 429   | Too many requests       |  |  |  |  |
|                    | 500   | Internal server error   |  |  |  |  |
|                    | 502   | Bad gateway             |  |  |  |  |
|                    | 503   | Service unavailable     |  |  |  |  |
|                    | 504   | Gateway timeout         |  |  |  |  |

| Reference          | ES2   |              |               |               |             |  |  |  |  |
|--------------------|---|--------------|---------------|---------------|-------------|--|--|--|--|
| Item               | Value   |              |               |               |             |  |  |  |  |
| POST               | /v1/search  |              |               |               |             |  |  |  |  |
| Name               | Find existing D-TROs that matches requested criteria.   |              |               |               |             |  |  |  |  |
| Description        | This POST method allows data publishers to query D-TROs that matches certain criteria within the D-TRO Service. |              |               |               |             |  |  |  |  |
| Input data         | ☑ JSON  |              |               |               |             |  |  |  |  |
| type(s)            |   |              |               |               |             |  |  |  |  |
| Input              | ☑ Other (please specify)  |              |               |               |             |  |  |  |  |
| Input<br>Structure | Header Parameters  Field Name Data Min Max Opportunity Notes  |              |               |               |             |  |  |  |  |
|                    | rieiu ivairie   | Type         | Length        | Length        | Opportunity | Notes  |  |  |  |
|                    | X-Correlation-<br>ID  | string       | 36            | 36            | Mandatory   | UUID formatted<br>string to track the<br>request through the<br>enquiries stack. |  |  |  |
|                    | Request Parameters  |              |               |               |             |  |  |  |  |
|                    | Field Name  | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity | Notes  |  |  |  |
|                    | data  | object       | 1KB           | 10MB          | Mandatory   | A JSON payload containing query search. Payload should be UTF8 encoded.          |  |  |  |

| Reference                | ES2   |               |           |           |             |                      |  |
|--------------------------|---|---------------|-----------|-----------|-------------|----------------------|--|
| Item                     | Value   |               |           |           |             |                      |  |
| POST                     | /v1/search  |               |           |           |             |                      |  |
| Name                     | Find existing D-T   | ROs that      | t matches | requested | l criteria. |                      |  |
| Description              |   |               |           | •         |             | that matches certain |  |
| •                        | criteria within the   |               | •         |           | ' '         |                      |  |
| Input data scope  Output | When invoking this endpoint, the request payload must contain a search query object 'page' and 'pageSize' as mandatory fields and at least one other property of your choice withing the queries array (e.g. troName)  {     "queries": [ |               |           |           |             |                      |  |
| data type                | ☑ JSON<br>☑ XML   |               |           |           |             |                      |  |
|                          | ☑ File  |               |           |           |             |                      |  |
|                          | ☑ Other (please   | specify)      |           |           |             |                      |  |
|                          |   | - /           |           |           |             |                      |  |
|                          |   |               |           |           |             |                      |  |
| Output                   | Response Param  | eters         |           |           |             |                      |  |
| data                     | Field Name  | Data          | Min       | Max       | Opportunity | Notes                |  |
| structure                |   | Туре          | Length    | Length    |             |                      |  |
|                          | data  | JSON<br>array | -         | -         | Mandatory   | Result array         |  |
| Responses                |   | , ,           | ı         | 1         | I           | 1                    |  |

| Reference                       | ES2  |   |  |  |  |  |
|---------------------------------|--|---|--|--|--|--|
| Item                            | Value  |   |  |  |  |  |
| POST                            | /v1/search   |   |  |  |  |  |
| Name                            | Find existing D-TR   | Find existing D-TROs that matches requested criteria.         |  |  |  |  |
| Description                     | _  | I allows data publishers to query D-TROs that matches certain |  |  |  |  |
| ·                               | criteria within the D  |   |  |  |  |  |
| 200 OK<br>(with<br>content)     | <pre>"results": [     {     For an example of a D-TRO search, please refer to GitHub File Index document at:     <u>Beta-01-DfT-D-TRO-001-GitHub File Index.docx</u>)     "vehicleType": [         "taxi"     ], For an example of a D-TRO search, please refer to GitHub File Index document at:     <u>Beta-01-DfT-D-TRO-001-GitHub File Index.docx</u>)     "page": 1,     "pageSize": 1,</pre> |   |  |  |  |  |
| 200 OK<br>(with null<br>result) | "totalCount": 1 }  {     "results": [],     "page": 1,     "pageSize": 0,     "totalCount": 0 }  |   |  |  |  |  |
| 400 Bad<br>Request              | {     "message": "Bad request",     "errors": [  |   |  |  |  |  |
| Error                           | HTTP Code  | Error Type  |  |  |  |  |
| Codes                           | 400  | Bad request   |  |  |  |  |
|                                 | 403  | Access denied/forbidden                                       |  |  |  |  |
|                                 | 404  | Not found   |  |  |  |  |
|                                 | 405  | Method not allowed  |  |  |  |  |
|                                 | 429  | Too many requests   |  |  |  |  |
|                                 | 500  | Internal server error   |  |  |  |  |
|                                 | 502  | Bad gateway   |  |  |  |  |
|                                 | 503  | Service unavailable   |  |  |  |  |
|                                 | 504  | Gateway timeout   |  |  |  |  |

## 10.3Rules

| Ref. | Endpoints            | Name                             |
|------|----------------------|----------------------------------|
| R1   | /v1/rules/versions   | Retrieve available rule versions |
| R2   | /v1/rules            | Retrieve available rules         |
| R3   | /v1/rules/{versions} | Retrieve rule by version         |
| R4   | /v1/rules/{id}       | Retrieve rule by id              |

| Reference           | R1   |                      |               |               |                   |   |  |
|---------------------|--|----------------------|---------------|---------------|-------------------|---|--|
| Item                | Value  |                      |               |               |                   |   |  |
| GET                 | /v1/rules/versions                           |                      |               |               |                   |   |  |
| Name                | Get available rule ve                        | ersions <sup>1</sup> |               |               |                   |   |  |
| Description         | This GET method al Service.                  | lows dat             | a publishe    | ers to retri  | ieve rule version | ons from the D-TRO  |  |
| Input data type(s)  | 国 XML<br>国 File<br>国 Other (please spe       |                      |               |               |                   |   |  |
| Input<br>Structure  | Header Parameters                            |                      | 1             |               | 1                 |   |  |
| Structure           | Field Name                                   | Data<br>Type         | Min<br>Length | Max<br>Length | Opportunity       | Notes   |  |
|                     | X-Correlation-ID                             | string               | 36            | 36            | Mandatory         | UUID formatted string to track the request through the enquiries stack. |  |
|                     | Request Parameters                           | 3                    |               |               |                   |   |  |
|                     | Field Name                                   | Data<br>Type         | Min<br>Length | Max<br>Length | Opportunity       | Notes   |  |
|                     | -  | -                    | -             | -             | -                 | -   |  |
| Input data scope    | -  |                      |               |               |                   |   |  |
| Output<br>data type | ☑ JSON ☑ XML ☑ File ☑ Other (please specify) |                      |               |               |                   |   |  |
| Output              | Response Parameters                          |                      |               |               |                   |   |  |
| data<br>structure   | Field Name                                   | Data<br>Type         | Min<br>Length | Max<br>Length | Opportunity       | Notes   |  |
|                     | Data   | JSON                 | -             | -             | Mandatory         | Array containing JSON objects   |  |
| Responses           |  |                      |               |               |                   | _   |  |

<sup>&</sup>lt;sup>1</sup> **Rules**: Defines logical conditions (rule) that data must satisfy within specific paths (path) of the DTRO. It is used to enforce business rules, validation criteria, or complex data relationships.

| Reference   | R1                            |  |  |  |  |  |  |
|-------------|-------------------------------|--|--|--|--|--|--|
| Item        | Value                         |  |  |  |  |  |  |
| GET         | /v1/rules/versions            |  |  |  |  |  |  |
| Name        | Get available rule ver        | sions <sup>1</sup>   |  |  |  |  |  |
| Description | This GET method allo Service. | This GET method allows data publishers to retrieve rule versions from the D-TRO Service. |  |  |  |  |  |
| 200 OK      | [                             |  |  |  |  |  |  |
| 500         | {                             |  |  |  |  |  |  |
| Internal    | "message": "Internal          | "message": "Internal Server Error",  |  |  |  |  |  |
| Server      | "errors": [                   |  |  |  |  |  |  |
| Error       | "An unexpected en             | ror occurred."   |  |  |  |  |  |
|             | ]                             |  |  |  |  |  |  |
| Error       | HTTP Code                     | Error Type   |  |  |  |  |  |
| Codes       | 400                           | Bad request  |  |  |  |  |  |
|             | 403                           | Access denied/forbidden  |  |  |  |  |  |
|             | 404                           | Not found  |  |  |  |  |  |
|             | 405                           | Method not allowed   |  |  |  |  |  |
|             | 429                           | Too many requests  |  |  |  |  |  |
|             | 500                           | Internal server error  |  |  |  |  |  |
|             | 502                           | Bad gateway  |  |  |  |  |  |
|             | 503                           | Service unavailable  |  |  |  |  |  |
|             | 504                           | Gateway timeout  |  |  |  |  |  |

| Reference             | R2                                   |                     |                 |                  |                 |  |  |  |  |
|-----------------------|--------------------------------------|---------------------|-----------------|------------------|-----------------|--|--|--|--|
| Item                  | Value                                |                     |                 |                  |                 |  |  |  |  |
| GET                   | /v1/rules                            | /v1/rules           |                 |                  |                 |  |  |  |  |
| Name                  | Get avail                            | Get available rules |                 |                  |                 |  |  |  |  |
| Description           | This GET                             | Γ method allows o   | data publishers | to retrieve rule | s from the D-TR | O Service.   |  |  |  |
| Input data<br>type(s) |                                      |                     |                 |                  |                 |  |  |  |  |
| Input                 | Header F                             | Parameters          |                 |                  |                 |  |  |  |  |
| Structure             | Field<br>Name                        | Data Type           | Min Length      | Max Length       | Opportunity     | Notes  |  |  |  |
|                       | X-<br>Correla<br>tion-ID             | string              | 36              | 36               | Mandatory       | formatted string to track the request through the enquiries stack. |  |  |  |
|                       | Request                              | Parameters          | 1               | 1                | 1               |  |  |  |  |
|                       | Field<br>Name                        | Data Type           | Min Length      | Max Length       | Opportunity     | Notes  |  |  |  |
|                       | -                                    | -                   | -               | -                | -               | _  |  |  |  |
| Input data scope      | -                                    |                     |                 |                  |                 |  |  |  |  |
| Output data type      | ☑ JSON<br>☑ XML<br>☑ File<br>☑ Other | (please specify)    |                 |                  |                 |  |  |  |  |
| Output data           |                                      | e Parameters        |                 |                  |                 |  |  |  |  |
| structure             | Field<br>Name                        | Data Type           | Min Length      | Max Length       | Opportunity     | Notes  |  |  |  |
|                       | Data                                 | JSON                | -               | -                | Mandatory       | Array<br>containin<br>g JSON<br>objects                            |  |  |  |
| Responses             |                                      |                     |                 |                  |                 |  |  |  |  |

| Reference                       | R2  |  |  |  |  |  |
|---------------------------------|---|--|--|--|--|--|
| Item                            | Value   |  |  |  |  |  |
| GET                             | /v1/rules   |  |  |  |  |  |
| Name                            | Get available rules   |  |  |  |  |  |
| Description                     | This GET method allows data publishers to retrieve rules from the D-TRO Service.  |  |  |  |  |  |
| •                               | _   |  |  |  |  |  |
| 200 OK                          | o GitHub File }, {     "scher     "templ     {         "ic         "n         "ExceptionI         "p "Source.pro Period.appl         "ru        o GitHub File },        o | "schemaVersion": "3.2.1",omitted for brevity (For an example of Rule response, please refer to bitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)  },  {     "schemaVersion": "3.2.4",     "template": [ |  |  |  |  |
| 500 1 1 1                       | 1   |  |  |  |  |  |
| 500 Internal<br>Server<br>Error | {   "message": "Internal Server Error",   "errors": [   "An unexpected error occurred."   ] }   |  |  |  |  |  |
| Error Codes                     | HTTP  | Error Type   |  |  |  |  |
|                                 | Code  |  |  |  |  |  |
|                                 | 400   | Bad request  |  |  |  |  |
|                                 | 403   | Access denied/forbidden  |  |  |  |  |
|                                 | 404   | Not found  |  |  |  |  |
|                                 | 405   | Method not allowed   |  |  |  |  |
|                                 | 429   | Too many requests  |  |  |  |  |
|                                 | 500   | Internal server error  |  |  |  |  |
|                                 | 502   | Bad gateway  |  |  |  |  |
|                                 | 503   | Service unavailable  |  |  |  |  |
|                                 | 504   | Gateway timeout  |  |  |  |  |

| Reference             | R3   | R3                  |              |          |               |       |               |       |                 |                   |   |
|-----------------------|--|---------------------|--------------|----------|---------------|-------|---------------|-------|-----------------|-------------------|---|
| Item                  | Value  | Value               |              |          |               |       |               |       |                 |                   |   |
| GET                   | /v1/rule   | /v1/rules/{version} |              |          |               |       |               |       |                 |                   |   |
| Name                  | Get ava  | ailab               | ole rule by  | vers     | sion          |       |               |       |                 |                   |   |
| Description           | This GI<br>D-TRO   |                     |              | ws       | data pul      | olisl | ners to re    | etrie | eve a rule by v | ersi              | on from the   |
| Input data<br>type(s) |  | er (p               | lease spec   | ify)     |               |       |               |       |                 |                   |   |
| Input                 | Heade  | <sup>-</sup> Pa     | rameters     |          |               |       |               |       |                 |                   |   |
| Structure             | Field<br>Name  | Da                  | ta Type      |          | Min<br>Length |       | Max<br>Length |       | Opportunity     | No                | otes  |
|                       | X-<br>Corre<br>lation<br>-ID   | string              |              |          | 36 36         |       | 36            |       | Mandatory       | str<br>the<br>thr | JID formatted ring to track request rough the equiries stack. |
|                       | Reques   | st Pa               | arameters    |          |               |       |               |       |                 |                   |   |
|                       | Field<br>Name  | Da                  | ta Type      |          | Min<br>Length |       | Max<br>Length |       | Opportunity     | No                | otes  |
|                       | versio<br>n  | str                 | ing          |          | 5             |       | 5             |       | Mandatory       | re                | ring<br>presentation<br>rule version                          |
| Input data scope      |  |                     |              |          |               | req   | uest par      | ame   | eter must be s  |                   |   |
| Output data type      | format: {Major}.{Minor}.{Patch}.  ☑ JSON ☑ XML ☑ File ☑ Other (please specify) |                     |              |          |               |       |               |       |                 |                   |   |
| Output data           | Response Parameters  |                     |              |          |               |       |               |       |                 |                   |   |
| structure             | Field<br>Name  |                     | Data<br>Type | Mi<br>Le | in<br>ength   |       | ax<br>ength   | O     | pportunity      |                   | Notes   |
|                       | Data   |                     | JSON         | -        |               | -     |               | M     | andatory        |                   | Array<br>containing<br>JSON<br>objects                        |
| Responses             |  |                     |              |          |               |       |               |       |                 |                   |   |

| Reference                       | R3  |  |  |  |  |  |  |
|---------------------------------|---|--|--|--|--|--|--|
| Item                            | Value   |  |  |  |  |  |  |
| GET                             | /v1/rules/{version}   | 1/rules/{version}  |  |  |  |  |  |
| Name                            | Get available rule  | vailable rule by version   |  |  |  |  |  |
| Description                     | This GET method D-TRO Service.  | his GET method allows data publishers to retrieve a rule by version from the   |  |  |  |  |  |
| 200 OK                          | {     "schemaVersion"     "template": [   | "weekInMonth instances must be unique.",  ApplicableInstanceDayWithinMonthInstancesUnique"  regulation.timeValidity.exceptionPeriod.recurringDayWeekMooleInstanceOfDayWithinMonth"  for brevity (For an example of Rule response, please refer to document at: Beta-01-DfT-D-TRO-001-GitHub File  for brevity (For an example of Rule response, please refer to document at: Beta-01-DfT-D-TRO-001-GitHub File |  |  |  |  |  |
| 500 Internal<br>Server<br>Error | {     "message": "Internal Server Error",     "errors": [     "An unexpected error occurred."     ] |  |  |  |  |  |  |
| Error Codes                     | HTTP Code   | Error Type   |  |  |  |  |  |
|                                 | 400   | Bad request  |  |  |  |  |  |
|                                 | 403   | Access denied/forbidden  |  |  |  |  |  |
|                                 | 404   | Not found  |  |  |  |  |  |
|                                 | 405   | Method not allowed   |  |  |  |  |  |
|                                 | 429   | Too many requests  |  |  |  |  |  |
|                                 | 500   | Internal server error  |  |  |  |  |  |
|                                 | 502   | Bad gateway  |  |  |  |  |  |
|                                 | 503   | Service unavailable  |  |  |  |  |  |
|                                 | 504   | Gateway timeout  |  |  |  |  |  |

| Reference        | R4       | R4                                     |                 |               |                     |                               |  |  |
|------------------|----------|--|-----------------|---------------|---------------------|-------------------------------|--|--|
| Item             | Value    |  |                 |               |                     |                               |  |  |
| GET              | /v1/rule | /v1/rules/{id}                         |                 |               |                     |                               |  |  |
| Name             | Get ava  | ailable rule by                        | unique identif  | fier          |                     |                               |  |  |
| Description      | This GE  | ET method allo                         | ws data publ    | ishers retrie | eve a rule from th  | e D-TRO Service.              |  |  |
| Input data       | ☑ JSOI   |  |                 |               |                     |                               |  |  |
| type(s)          | ⊠ XML    |  |                 |               |                     |                               |  |  |
|                  | ☑ File   | r (please spec                         | sify)           |               |                     |                               |  |  |
| Input            |          | Parameters                             | лгу <i>)</i>    |               |                     |                               |  |  |
| Structure        | Field    | Data Type                              | Min             | Max           | Opportunity         | Notes                         |  |  |
|                  | Name     | Data Type                              | Length          | Length        | opportunity         | 110100                        |  |  |
|                  | X-       | string                                 | 36              | 36            | Mandatory           | UUID                          |  |  |
|                  | Correl   |  |                 |               |                     | formatted                     |  |  |
|                  | ation-   |  |                 |               |                     | string to track               |  |  |
|                  | ID       |  |                 |               |                     | the request through the       |  |  |
|                  |          |  |                 |               |                     | enquiries                     |  |  |
|                  |          |  |                 |               |                     | stack.                        |  |  |
|                  | Reques   | t Parameters                           | •               |               |                     | ·                             |  |  |
|                  | Field    | Data Type                              | Min             | Max           | Opportunity         | Notes                         |  |  |
|                  | Name     |  | Length          | Length        | NA 1 1              | LUUD                          |  |  |
|                  | id       | string                                 | 36              | 36            | Mandatory           | UUID<br>formatted             |  |  |
|                  |          |  |                 |               |                     | string                        |  |  |
|                  |          |  |                 |               |                     | representing                  |  |  |
|                  |          |  |                 |               |                     | the rule to be                |  |  |
|                  |          |  |                 |               |                     | retrieved.                    |  |  |
| Input data scope | When in  | nvoking this er                        | ndpoint, the id | d parameter   | r must be string in | n UUID format.                |  |  |
| Output data      | ☑ JSOI   | N                                      |                 |               |                     |                               |  |  |
| type             | ⊠ XML    |  |                 |               |                     |                               |  |  |
|                  | ☑ File   |  |                 |               |                     |                               |  |  |
| Output data      |          | <u>r (please spec</u><br>ise Parameter |                 |               |                     |                               |  |  |
| structure        | Field    | Data                                   | Min Length      | Max           | Opportunity         | Notes                         |  |  |
| ou dotaro        | Name     | Type                                   | Will Length     | Length        | Оррогили            | Notes                         |  |  |
|                  | Data     | JSON                                   | -               | -             | Mandatory           | Array containing JSON objects |  |  |
| Responses        |          |  |                 |               |                     | _                             |  |  |

| Reference    | R4   |   |  |  |  |  |
|--------------|--|---|--|--|--|--|
| Item         | Value  |   |  |  |  |  |
| GET          | /v1/rules/{id}   |   |  |  |  |  |
| Name         | Get available rule by unique identifier                |   |  |  |  |  |
| Description  | ,  | lows data publishers retrieve a rule from the D-TRO Service.  |  |  |  |  |
|              |  | ione data publichere regionere a rais mem ane B 1110 con mee. |  |  |  |  |
| 200 OK       | <pre>"schemaVersion": "3.2.4",     "template": [</pre> |   |  |  |  |  |
| 500 Internal | {  | 10 5 1  |  |  |  |  |
| Server       | "message": "Interna                                    | ai Server Error",   |  |  |  |  |
| Error        | "errors": [ "An unexpected e                           | rror occurred "   |  |  |  |  |
|              |  | itoi occuiteu.  |  |  |  |  |
|              | } 1  |   |  |  |  |  |
| Error        | HTTP Code  | Error Type  |  |  |  |  |
| Codes        | 400  | Bad request   |  |  |  |  |
|              | 403  | Access denied/forbidden                                       |  |  |  |  |
|              | 404  | Not found   |  |  |  |  |
|              | 405 Method not allowed                                 |   |  |  |  |  |
|              | 429  | Too many requests   |  |  |  |  |
|              | 500  | Internal server error   |  |  |  |  |
|              | 502  | Bad gateway   |  |  |  |  |
|              | 503  | Service unavailable   |  |  |  |  |
|              | 504  | Gateway timeout   |  |  |  |  |

# 10.4Schemas

| Ref. | Endpoints              | Name                               |
|------|------------------------|------------------------------------|
| S1   | /v1/schemas/versions   | Retrieve available schema versions |
| S2   | /v1/schemas            | Retrieve available schema          |
| S3   | /v1/schemas/{versions} | Retrieve schema by version         |
| S4   | /v1/schemas/{id}       | Retrieve schema by id              |

| Reference          | S1   |              |               |               |             |   |  |
|--------------------|--|--------------|---------------|---------------|-------------|---|--|
| Item               | Value  |              |               |               |             |   |  |
| GET                | /v1/schemas/versions   |              |               |               |             |   |  |
| Name               | Get available schema versions <sup>2</sup>   |              |               |               |             |   |  |
| Description        | This GET method allows data publishers to retrieve schema versions from the D-TRO Service. |              |               |               |             |   |  |
| Input data type(s) | ☑ JSON ☑ XML ☑ File ☑ Other (please specify)   |              |               |               |             |   |  |
| Input Structure    | Header Para  | meters       |               |               |             |   |  |
|                    | Field Name   | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity | Notes   |  |
|                    | X-<br>Correlation-<br>ID   | string       | 36            | 36            | Mandatory   | UUID formatted string to track the request through the enquiries stack. |  |
|                    | Request Parameters   |              |               |               |             |   |  |
|                    | Field Name   | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity | Notes   |  |
|                    | -  | -            | -             | -             | -           | -   |  |
| Input data scope   | -  |              |               |               |             |   |  |
| Output data type   | ☑ JSON ☑ XML ☑ File ☑ Other (please specify)   |              |               |               |             |   |  |
| Output data        | Response Pa  | arameters    | 3             |               |             |   |  |
| structure          | Field Name   | Data<br>Type | Min<br>Length | Max<br>Length | Opportunity | Notes   |  |
|                    | Data   | JSON         | -             | -             | Mandatory   | Array containing<br>JSON objects  |  |
| Responses          |  |              |               | •             |             | -   |  |

<sup>&</sup>lt;sup>2</sup> **Schema**: Specifies the expected structure, data types, and constraints (type, minimum, maximum, etc.) for each field within the DTRO. It ensures consistency, integrity, and compatibility of data across systems or processes.

| Reference    | S1  |                         |  |  |  |
|--------------|---|-------------------------|--|--|--|
| Item         | Value   |                         |  |  |  |
| GET          | /v1/schemas/versions  |                         |  |  |  |
| Name         | Get available schema versions <sup>2</sup>  |                         |  |  |  |
| Description  | This GET method allows data publishers to retrieve schema versions from the           |                         |  |  |  |
| Description  | D-TRO Service.  |                         |  |  |  |
| 200 OK       | [   |                         |  |  |  |
| 500 Internal | {   |                         |  |  |  |
| Server Error | "message": "Internal Server Error", "errors": [     "An unexpected error occurred." ] |                         |  |  |  |
| Error Codes  | HTTP Code   | Error Type              |  |  |  |
|              | 400   | Bad request             |  |  |  |
|              | 403   | Access denied/forbidden |  |  |  |
|              | 404   | Not found               |  |  |  |
|              | 405   | Method not allowed      |  |  |  |
|              | 429   | Too many requests       |  |  |  |
|              | 500   | Internal server error   |  |  |  |
|              | 502   | Bad gateway             |  |  |  |
|              | 503   | Service unavailable     |  |  |  |
|              | 504   | Gateway timeout         |  |  |  |

| Reference         | S2  |   |                                   |                                 |                       |   |  |  |
|-------------------|---|---|-----------------------------------|---------------------------------|-----------------------|---|--|--|
| Item              | Value   |   |                                   |                                 |                       |   |  |  |
| GET               | /v1/schemas   |   |                                   |                                 |                       |   |  |  |
| Name              | Get available schemas   |   |                                   |                                 |                       |   |  |  |
|                   | This GET method allows data publishers to retrieve schemas from the D-TRO   |   |                                   |                                 |                       |   |  |  |
| Description       |   | Service.  |                                   |                                 |                       |   |  |  |
| Input data        | ☑ JSON  |   |                                   |                                 |                       |   |  |  |
| type(s)           | ⊠ XML   |   |                                   |                                 |                       |   |  |  |
| - <b>5</b>  - (-) | ĭ File  |   |                                   |                                 |                       |   |  |  |
|                   | ☑ Other (plea   | ase speci   | ify)                              |                                 |                       |   |  |  |
| Input Structure   | Header Parameters   |   |                                   |                                 |                       |   |  |  |
|                   | Field Name  | Data  | Min                               | Max                             | Opportunity           | Notes                                       |  |  |
|                   |   | Type  | Length                            | Length                          |                       |   |  |  |
|                   | X-  | string  | 36                                | 36                              | Mandatory             | UUID formatted string                       |  |  |
|                   | Correlation-  |   |                                   |                                 |                       | to track the request                        |  |  |
|                   | ID  |   |                                   |                                 |                       | through the enquiries                       |  |  |
| ,                 |   |   |                                   |                                 |                       | stack.                                      |  |  |
|                   | Request Para  |   |                                   |                                 |                       | 1   |  |  |
|                   | Field Name  | Data  | Min                               | Max                             | Opportunity           | Notes                                       |  |  |
|                   |   | Type  | Length                            | Length                          |                       |   |  |  |
|                   | -   | -   | -                                 | -                               | -                     | -   |  |  |
| Input data        | -   |   |                                   |                                 |                       |   |  |  |
| Scope Output data | ☑ JSON  |   |                                   |                                 |                       |   |  |  |
| type              | ⊠ XML   |   |                                   |                                 |                       |   |  |  |
| type              | ⊠ File  |   |                                   |                                 |                       |   |  |  |
|                   | ☑ Other (please specify)  |   |                                   |                                 |                       |   |  |  |
| Output data       | Response Pa   |   | • /                               |                                 |                       |   |  |  |
| structure         | Field Name  | Data  | Min                               | Max                             | Opportunity           | Notes                                       |  |  |
|                   |   | Type  | Length                            | Length                          | ,                     |   |  |  |
|                   | Data  | JSON  | -                                 | -                               | Mandatory             | Array containing JSON                       |  |  |
| Dosponsos         |   |   |                                   |                                 |                       | objects                                     |  |  |
| Responses         | r   |   |                                   |                                 |                       |   |  |  |
| 200 OK            | L   |   |                                   |                                 |                       |   |  |  |
|                   | {     "schemaVersion": "3.2.4",   |   |                                   |                                 |                       |   |  |  |
|                   |   | a\/ersion"  | ·· "3 2 //"                       |                                 |                       |   |  |  |
|                   | "schema   |   | ': "3.2.4",                       |                                 |                       |   |  |  |
|                   | "schema"<br>"templat  | te": {  | •                                 | or an exar                      | mple of Schem         | na response, please                         |  |  |
|                   | "schema"<br>"templat<br>om  | te": {<br>itted for b   | orevity (Fo                       |                                 |                       | na response, please<br>-TRO-001-GitHub File |  |  |
|                   | "schema"<br>"templat<br>om  | te": {<br>itted for b   | orevity (Fo                       |                                 |                       | na response, please<br>-TRO-001-GitHub File |  |  |
|                   | "schema"<br>"templat<br>om<br>refer to GitHu  | te": {<br>itted for b   | orevity (Fo                       |                                 |                       |   |  |  |
|                   | "schema<br>"templat<br>om<br>refer to GitHu<br>Index.docx)  | te": {<br>itted for b<br>ub File Ind  | orevity (Fo                       |                                 |                       |   |  |  |
|                   | "schema" "templatom refer to GitHu Index.docx) },   | te": {<br>itted for b<br>ub File Ind  | orevity (Fo                       |                                 |                       |   |  |  |
|                   | "schema" "templat"om refer to GitHu Index.docx) }, "isActive }, {   | te": { itted for b ub File Ind e": true   | previty (Fo                       |                                 |                       |   |  |  |
|                   | "schema" "templatom refer to GitHu Index.docx) }, "isActive }, { "schema  | te": { itted for b ub File Ind e": true   | previty (Fo                       |                                 |                       |   |  |  |
|                   | "schema "templatom refer to GitHu Index.docx) }, "isActive }, { "schema "templat                                    | te": { itted for b ub File Ind e": true aVersion" te": {                          | orevity (Fodex docur              | nent at: <u>B</u>               | <u> 3eta-01-DfT-D</u> | -TRO-001-GitHub File                        |  |  |
|                   | "schema" "templat"om refer to GitHu Index.docx) }, "isActive }, { "schema" "templatom                               | te": { itted for b ub File Ind e": true aVersion" te": { itted for b              | revity (Fodex docur<br>: "3.2.0", | nent at: <u>E</u><br>or an exar | Beta-01-DfT-D-        | TRO-001-GitHub File                         |  |  |
|                   | "schema" "templat"om refer to GitHu Index.docx)  }, "isActive }, { "schema" "templatom refer to GitHu               | te": { itted for b ub File Ind e": true aVersion" te": { itted for b              | revity (Fodex docur<br>: "3.2.0", | nent at: <u>E</u><br>or an exar | Beta-01-DfT-D-        | -TRO-001-GitHub File                        |  |  |
|                   | "schema" "templat"om refer to GitHu Index.docx) }, "isActive }, { "schema" "templatom                               | te": { itted for b ub File Ind e": true  aVersion" te": { itted for b             | revity (Fodex docur<br>: "3.2.0", | nent at: <u>E</u><br>or an exar | Beta-01-DfT-D-        | TRO-001-GitHub File                         |  |  |
|                   | "schema" "templat"om refer to GitHu Index.docx)  }, "isActive }, { "schema" "templatom refer to GitHu               | te": { itted for b ub File Ind e": true  aVersion" te": { itted for b ub File Ind | revity (Fodex docur<br>: "3.2.0", | nent at: <u>E</u><br>or an exar | Beta-01-DfT-D-        | TRO-001-GitHub File                         |  |  |
|                   | "schema" "templat"om refer to GitHu Index.docx) }, "isActive }, { "schema" "templatom refer to GitHu Index.docx) }, | te": { itted for b ub File Ind e": true  aVersion" te": { itted for b ub File Ind | revity (Fodex docur<br>: "3.2.0", | nent at: <u>E</u><br>or an exar | Beta-01-DfT-D-        | TRO-001-GitHub File                         |  |  |

| Deference                    | C0  |                         |  |  |  |  |
|------------------------------|---|-------------------------|--|--|--|--|
| Reference                    | S2  |                         |  |  |  |  |
| Item                         | Value   |                         |  |  |  |  |
| GET                          | /v1/schemas   |                         |  |  |  |  |
| Name                         | Get available schemas   |                         |  |  |  |  |
| Description                  | This GET method allows data publishers to retrieve schemas from the D-TRO Service.            |                         |  |  |  |  |
| 500 Internal<br>Server Error | {   "message": "Internal Server Error",   "errors": [     "An unexpected error occurred."   ] |                         |  |  |  |  |
| Error Codes                  | HTTP Code   | Error Type              |  |  |  |  |
|                              | 400   | Bad request             |  |  |  |  |
|                              | 403   | Access denied/forbidden |  |  |  |  |
|                              | 404   | Not found               |  |  |  |  |
|                              | 405   | Method not allowed      |  |  |  |  |
|                              | 429   | Too many requests       |  |  |  |  |
|                              | 500   | Internal server error   |  |  |  |  |
|                              | 502   | Bad gateway             |  |  |  |  |
|                              | 503   | Service unavailable     |  |  |  |  |
|                              | 504   | Gateway timeout         |  |  |  |  |

| Reference  | S3   | S3  |   |                                |                                       |   |  |  |
|--|--|---|---|--------------------------------|---------------------------------------|---|--|--|
| Item   | Value  |   |   |                                |                                       |   |  |  |
| GET  | /v1/schemas/{version}  |   |   |                                |                                       |   |  |  |
| Name   | Get available schema by version  |   |   |                                |                                       |   |  |  |
| Description  | This GET method allows data publishers retrieve a schema by version from the D-  |   |   |                                |                                       |   |  |  |
| Description  | TRO Service.   |   |   |                                |                                       |   |  |  |
| Input data   | ☑ JSON   |   |   |                                |                                       |   |  |  |
| type(s)  | ⊠ XML  |   |   |                                |                                       |   |  |  |
|  |  | ☑ File  |   |                                |                                       |   |  |  |
| lmm.it   | ☑ Other (please specify) Header Parameters   |   |   |                                |                                       |   |  |  |
| Input<br>Structure   |  |   | Min   | Max                            | Opportunity                           | Notes   |  |  |
| Structure  | Field Name   | Data<br>Type                                      | Min<br>Length                                 | Max<br>Length                  | Opportunity                           | Notes   |  |  |
|  | X-Correlation-   | string  | 36  | 36                             | Mandatory                             | UUID formatted string                               |  |  |
|  | ID   | String  |   |                                | Wandatory                             | to track the request                                |  |  |
|  |  |   |   |                                |                                       | through the enquiries                               |  |  |
|  |  |   |   |                                |                                       | stack.  |  |  |
|  | Request Parame   | eters   |   |                                |                                       |   |  |  |
|  | Field Name   | Data  | Min   | Max                            | Opportunity                           | Notes   |  |  |
|  |  | Туре  | Length  | Length                         |                                       |   |  |  |
|  | version  | string  | 5   | 5                              | Mandatory                             | String representation of                            |  |  |
| Input data   | When invoking t  | hic andne   | pint the re                                   | valuest pai                    | rameter must                          | schema version be string in this format:            |  |  |
| scope  | {Major}.{Minor}.{  |   | אוווג, נוופ ופ                                | quest par                      | iametei must                          | be stillig in this format.                          |  |  |
| Output   | ☑ JSON   | r atorij.   |   |                                |                                       |   |  |  |
| data type  | ⊠ XML  |   |   |                                |                                       |   |  |  |
|  | <b>⊠</b> File  |   |   |                                |                                       |   |  |  |
|  |  | ☑ Other (please specify)                          |   |                                |                                       |   |  |  |
| Output   | Response Parar   |   |   |                                |                                       |   |  |  |
| data<br>structure  | Field Name   | Data  | Min   | Max                            | Opportunity                           | Notes   |  |  |
| Siructure  | Doto   | Type<br>JSON                                      | Length -                                      | Length -                       | Mandatory                             | Array containing ISON                               |  |  |
|  | Data   | JOON  | -   | -                              | Mandatory                             | Array containing JSON objects                       |  |  |
| 200 OK   | {  |   |   |                                |                                       | Objects   |  |  |
|  | "schemaVers  | on": "3.2.  | .4",  |                                |                                       |   |  |  |
|  | "template": {  |   | •   |                                |                                       |   |  |  |
|  | "type": "obj   | ect",   |   |                                |                                       |   |  |  |
|  | "\$defs": {  |   |   |                                |                                       |   |  |  |
|  | omitted for brevity (For an example of Schema response, please refer to GitHub File Index document at: <u>Beta-01-DfT-D-TRO-001-GitHub File Index.docx</u> ) |   |   |                                |                                       |   |  |  |
|  |  | x docum   | ent at: <u>Bei</u>                            | (a-01-Df1                      | -D-TRO-001-0                          | SITHUD FIIE INGEX.GOCX)                             |  |  |
|  | },<br>"anaOf": [   |   |   |                                |                                       |   |  |  |
| "oneOf": [omitted for brevity (For an example of Schema response, please |  |   |   |                                |                                       |   |  |  |
|  | _  | d for brev  | itv (For ar                                   | n example                      | e of Schema re                        | esponse, please refer to                            |  |  |
|  | omitte   |   | • `   | •                              |                                       | esponse, please refer to<br>GitHub File Index.docx) |  |  |
|  | omitte<br>GitHub File Inde<br>],   | x docum   | ent at: <u>Bet</u>                            | ta-01-DfT                      | <u>-D-TRO-001-0</u>                   | GitHub File Index.docx)                             |  |  |
|  | omitte<br>GitHub File Inde<br>],<br>"\$schema":  | x docume<br>https://j"                            | ent at: <u>Bet</u><br>son-scher               | t <u>a-01-DfT</u><br>ma.org/dr | <u>-D-TRO-001-0</u><br>aft/2020-12/so | GitHub File Index.docx) chema",                     |  |  |
|  | omitte<br>GitHub File Inde<br>],<br>"\$schema":<br>"descriptior  | x documo<br>"https://j<br>n": "DTRC               | ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | t <u>a-01-DfT</u><br>ma.org/dr | <u>-D-TRO-001-0</u>                   | GitHub File Index.docx) chema",                     |  |  |
|  | omitte<br>GitHub File Inde<br>],<br>"\$schema":<br>"descriptior<br>"additionalF  | x documo<br>"https://j<br>n": "DTRC               | ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | t <u>a-01-DfT</u><br>ma.org/dr | <u>-D-TRO-001-0</u><br>aft/2020-12/so | GitHub File Index.docx) chema",                     |  |  |
|  | omitte<br>GitHub File Inde<br>],<br>"\$schema":<br>"descriptior<br>"additionalf<br>},  | x docume<br>"https://j<br>n": "DTRC<br>Properties | ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | t <u>a-01-DfT</u><br>ma.org/dr | <u>-D-TRO-001-0</u><br>aft/2020-12/so | GitHub File Index.docx) chema",                     |  |  |
|  | omitte<br>GitHub File Inde<br>],<br>"\$schema":<br>"descriptior<br>"additionalF  | x docume<br>"https://j<br>n": "DTRC<br>Properties | ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | t <u>a-01-DfT</u><br>ma.org/dr | <u>-D-TRO-001-0</u><br>aft/2020-12/so | GitHub File Index.docx) chema",                     |  |  |
| Responses  | omitte<br>GitHub File Inde<br>],<br>"\$schema":<br>"descriptior<br>"additionalf<br>},  | x docume<br>"https://j<br>n": "DTRC<br>Properties | ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | t <u>a-01-DfT</u><br>ma.org/dr | <u>-D-TRO-001-0</u><br>aft/2020-12/so | GitHub File Index.docx) chema",                     |  |  |

| Reference                          | S3  |                         |  |  |  |
|------------------------------------|---|-------------------------|--|--|--|
| Item                               | Value   |                         |  |  |  |
| GET                                | /v1/schemas/{version}   |                         |  |  |  |
| Name                               | Get available schema by version   |                         |  |  |  |
| Description                        | This GET method allows data publishers retrieve a schema by version from the D-TRO Service. |                         |  |  |  |
| 500<br>Internal<br>Server<br>Error | {   "message": "Internal Server Error",   "errors": [   "An unexpected error occurred."   ] |                         |  |  |  |
| Error                              | HTTP Code   | Error Type              |  |  |  |
| Codes                              | 400   | Bad request             |  |  |  |
|                                    | 403   | Access denied/forbidden |  |  |  |
|                                    | 404 Not found   |                         |  |  |  |
|                                    | 405 Method not allowed  |                         |  |  |  |
|                                    | 429   | Too many requests       |  |  |  |
|                                    | 500   | Internal server error   |  |  |  |
|                                    | 502   | Bad gateway             |  |  |  |
|                                    | 503   | Service unavailable     |  |  |  |
|                                    | 504   | Gateway timeout         |  |  |  |

| Reference   | S4   |   |   |                                     |  |  |  |
|-------------|--|---|---|-------------------------------------|--|--|--|
| Item        | Value  |   |   |                                     |  |  |  |
| GET         | /v1/schemas/{id}   |   |   |                                     |  |  |  |
| Name        | Get available schema by unique identifier.   |   |   |                                     |  |  |  |
| Description | This GET method allows data publishers retrieve a schema from the D-TRO  |   |   |                                     |  |  |  |
| Description | Service.   |   |   |                                     |  |  |  |
| Input data  | ☑ JSON   |   |   |                                     |  |  |  |
| type(s)     | ĭ XML  |   |   |                                     |  |  |  |
|             | ☑ File   |   |   |                                     |  |  |  |
|             | ☑ Other (please specify)   |   |   |                                     |  |  |  |
| Input       | Header Paramet   | ers   |   |                                     |  | ,  |  |
| Structure   | Field Name   | Data  | Min   | Max                                 | Opportunity  | Notes  |  |
|             | V O letie -  | Туре  | Length  | Length                              | N4   | LILUD forms attack at a taking or  |  |
|             | X-Correlation-<br>ID   | string  | 36  | 36                                  | Mandatory  | UUID formatted string to track the request   |  |
|             | טו   |   |   |                                     |  | through the enquiries  |  |
|             |  |   |   |                                     |  | stack.   |  |
|             | Request Parame   | eters   |   | 1                                   |  |  |  |
|             | Field Name   | Data  | Min   | Max                                 | Opportunity  | Notes  |  |
|             |  | Type  | Length  | Length                              |  |  |  |
|             | id   | string  | 36  | 36                                  | Mandatory  | UUID formatted string  |  |
|             |  |   |   |                                     |  | representation of schema unique  |  |
|             |  |   |   |                                     |  | identifier.  |  |
| Input data  | When invoking t  | nis endpo   | int the id  | paramet                             | ⊥<br>er must be stri   | ing in UUID format.  |  |
| scope       | Trinon mironang a  | по опарс  | , a.e.  | paramet                             | or made so dur   | mg m 0012 formati  |  |
| Output      | ☑ JSON   |   |   |                                     |  |  |  |
| data type   | ⊠ XML  |   |   |                                     |  |  |  |
|             | ĭ File   | : <b>c</b> .\   |   |                                     |  |  |  |
| Output      | ☑ Other (please Response Parar)  |   |   |                                     |  |  |  |
| data        | Field Name   | Data  | Min   | Max                                 | Opportunity  | Notes  |  |
| structure   | rieiu ivailie  | Type  | Length  | Length                              | Opportunity  | Notes  |  |
|             | Data   | JSON  | -   | -                                   | Mandatory  | Array containing JSON  |  |
|             |  | 000.1   |   |                                     |  |  |  |
| 200 OK      |  |   |   |                                     | -  | objects  |  |
| 1 200 010   | {  |   |   |                                     |  |  |  |
| 200 010     | {     "schemaVersi   | on": "3.2.  | .4",  |                                     |  |  |  |
| 200 010     | "template": {  |   | .4",  |                                     | · ·  |  |  |
| 200 010     | "template": {<br>"type": "obj  |   | .4",  |                                     | · · ·  |  |  |
| 200 011     | "template": {<br>"type": "objo<br>"\$defs": {  | ect",   |   | n example                           | e of Schema r  | objects  |  |
| 200 011     | "template": {<br>"type": "objo<br>"\$defs": {<br>omitted   | ect",<br>d for brev   | rity (For ar  |                                     |  | objects esponse, please refer to   |  |
| 200 011     | "template": {<br>"type": "objo<br>"\$defs": {<br>omitted   | ect",<br>d for brev   | rity (For ar  |                                     |  | objects  |  |
| 200 011     | "template": {     "type": "objections": {  | ect",<br>d for brev<br>x docume                                   | rity (For ar<br>ent at: <u>Bet</u>  | <u>:a-01-DfT</u>                    | <u>-D-TRO-001-0</u>  | objects esponse, please refer to GitHub File Index.docx)   |  |
|             | "template": {     "type": "obje     "\$defs": {  | ect",<br>d for brev<br>x documo<br>d for brev                     | rity (For ar<br>ent at: <u>Bet</u><br>rity (For ar  | ta-01-DfT                           | e of Schema re   | esponse, please refer to GitHub File Index.docx)   |  |
|             | "template": {     "type": "obje     "\$defs": {  | ect",<br>d for brev<br>x documo<br>d for brev                     | rity (For ar<br>ent at: <u>Bet</u><br>rity (For ar  | ta-01-DfT                           | e of Schema re   | objects esponse, please refer to GitHub File Index.docx)   |  |
|             | "template": {     "type": "obje     "\$defs": {        omittee     GitHub File Inde     },     "oneOf": [        omittee GitHub File Inde ],                         | ect",  d for brev  x docume  d for brev  x docume                 | rity (For ar<br>ent at: <u>Bet</u><br>rity (For ar<br>ent at: <u>Bet</u>                            | n example                           | e of Schema re   | esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx)  |  |
|             | "template": {     "type": "obje     "\$defs": {        omittee     GitHub File Inde     },     "oneOf": [        omittee     GitHub File Inde     ],     "\$schema": | ect", d for brev x docume d for brev x docume "https://j          | rity (For ar<br>ent at: <u>Bet</u><br>rity (For ar<br>ent at: <u>Bet</u><br>son-scher               | n example<br>ta-01-DfT<br>ma.org/dr | e of Schema re<br>-D-TRO-001-0<br>-D-TRO-001-0<br>aft/2020-12/sc | esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) |  |
|             | "template": {     "type": "obje     "\$defs": {        omittee     GitHub File Inde     },     "oneOf": [        omittee     GitHub File Inde     ],     "\$schema": | ect", d for brev x docume d for brev x docume "https://j": "DTRO  | rity (For ar<br>ent at: <u>Bet</u><br>rity (For ar<br>ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | n example<br>ta-01-DfT<br>ma.org/dr | e of Schema re   | esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) |  |
|             | "template": {     "type": "obje     "\$defs": {  | ect", d for brev x docume t for brev x docume "https://j ": "DTRO | rity (For ar<br>ent at: <u>Bet</u><br>rity (For ar<br>ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | n example<br>ta-01-DfT<br>ma.org/dr | e of Schema re<br>-D-TRO-001-0<br>-D-TRO-001-0<br>aft/2020-12/sc | esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) |  |
|             | "template": {     "type": "obje     "\$defs": {  | ect", d for brev x docume t for brev x docume "https://j ": "DTRO | rity (For ar<br>ent at: <u>Bet</u><br>rity (For ar<br>ent at: <u>Bet</u><br>son-scher<br>) v3.2.4 d | n example<br>ta-01-DfT<br>ma.org/dr | e of Schema re<br>-D-TRO-001-0<br>-D-TRO-001-0<br>aft/2020-12/sc | esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) esponse, please refer to GitHub File Index.docx) |  |

| Reference                          | S4   |   |  |  |  |
|------------------------------------|--|---|--|--|--|
| Item                               | Value  |   |  |  |  |
| GET                                | /v1/schemas/{id}   |   |  |  |  |
| Name                               | Get available schema by unique identifier.                                       |   |  |  |  |
| Description                        | This GET method allows data publishers retrieve a schema from the D-TRO Service. |   |  |  |  |
| Responses                          |  |   |  |  |  |
| 500<br>Internal<br>Server<br>Error | "errors": [  | rnal Server Error",<br>error occurred." |  |  |  |
| Error                              | HTTP Code  | Error Type                              |  |  |  |
| Codes                              | 400  | Bad request                             |  |  |  |
|                                    | 403  | Access denied/forbidden                 |  |  |  |
|                                    | 404  | Not found                               |  |  |  |
|                                    | 405  | Method not allowed                      |  |  |  |
|                                    | 429  | Too many requests                       |  |  |  |
|                                    | 500  | Internal server error                   |  |  |  |
|                                    | 502  | Bad gateway                             |  |  |  |
|                                    | 503  | Service unavailable                     |  |  |  |
|                                    | 504  | Gateway timeout                         |  |  |  |