

Digital Traffic Regulation Orders: D-TRO Publication API Interface Control Document for Publis (Traffic Regulation Authority and/or Digital Solution Provider)	
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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

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

1.3 Approved Versions

Version	n Approver(s)	
2.0	Department for Transport	01/07/2024
2.1	Department for Transport	10/10/2024

2 Terms and Abbreviation

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.

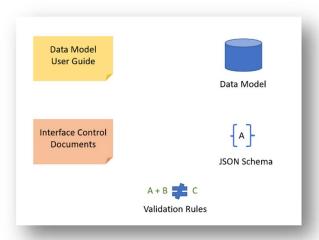
The new regulatory framework will, subject to necessary secondary legislation coming into force, mandate that Traffic Regulation Authorities (TRAs) in England and Wales publish TROs as open data in a standardised and digital format that anyone can access, use and share.

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:

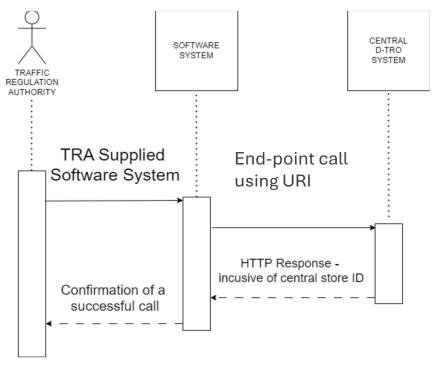
 Traffic Regulation Authorities (TRAs) and or their Digital Solution Providers (DSPs) that currently manage the IT contracts within the authority.

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 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 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).
- 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 Service by pro			oublishers to record as a file	d a new D-TR	O to the D-TRO			
Input data type(s)	☑ JSON ☑ XML ☑ File ☑ Other (pleas	☑ JSON ☑ XML							
Input	Header Param	neters							
Structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	X- Correlation- ID	string	36	36	Mandatory	UUID formatted string to track the request through the enquiries stack.			

	T								
Reference	D1								
Item	Value								
POST	/v1/dtros/createFromFile								
Name	Create a new D-TRO								
Description	This POST method allows data publishers to record a new D-TRO to the D-TRO								
	Service by providing the D-TRO as a file								
	Request Parameters Field Name Data Min May another Opportunity Nata								
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	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.			
Input data scope	representation activated in scrules endpoint.	. Payloadhemas es) for val	ds will be indpoints) idity agai TRO file,	e supplied file must assessed agains s, semantic JSON nst the D-TRO da please refer to G o File Index.docx)	t the schema (or rules and custon ta model.	created and om rules (created in			
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (pleas			7 110 11140X.4400X)					
Output	Response Par		,						
data structure	Field Name	Data Type	Min Length	Max 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									
201 Created	"id": "3fa85f6	4-5717-4	1562-b3fc	-2c963f66afa6"					
404 Not Found	{ "message": "I "errors": ["Schema ve] }								

Reference	D1	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: ["Unexpected] }, "type": "https:// "title": "One or "status": 400,	d end when deserializing object. Path <i>property</i> ." tools.ietf.org/html/rfc7231#section-6.5.1", more validation errors occurred.", preserved by the content of the content						
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	☑ File								
	☑ Other (plea	☑ File ☑ Other (please specify)								
Input	Header Parameters									
Structure	Field Name Data Min Max Length Opportunity Notes									
	V	Type	Length	20	Manadatami	LILID forms off od				
	X- 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	a this en	dpoint th	e supplied file mus	⊥ 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 (place)		f . ()							
Responses	☑ Other (plead	se speci	ıy <i>)</i>							
200 OK	ı									
200 010	\ "id" [,] "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	This PUT method allows data publishers to update an existing D-TRO to the D-TRO							
•	Service.							
404 Not	{							
Found	`message": "No	t found",						
	"errors": [
	"Schema versi	on not found."						
]							
	}							
400 Bad	{							
Request	"errors": {							
	property: [and other description object. Deth. one out 2						
	Unexpected	end when deserializing object. Path property."						
	١							
	}, "tyne"· "httns://to	ools.ietf.org/html/rfc7231#section-6.5.1",						
	, ,,	nore validation errors occurred.",						
	"status": 400,	ioro validation onoro obbarroa.						
	,	4aa677608b15827106b63502eb806f-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	D3								
Item	Value								
POST	/v1/dtros/create	eFromBo	ndv						
Name	Create a new D-TRO								
Description	This POST method allows data publishers to record a new D-TRO to the D-TRO								
Description		Service.							
Input data	☑ JSON								
type(s)	XML File								
	☑ File☑ Other (please specify)								
1	☑ Other (please specify) Header Parameters								
Input Structure	Field Name Data Min Max Length Opportunity Notes								
Structure	Field Name	Type	Length	iviax Length	Opportunity	Notes			
	X-	string	36	36	Mandatory	UUID formatted			
	Correlation-	oung			Wandatory	string to track the			
	ID					request through			
						the enquiries			
	D 1 D	<u> </u>				stack.			
	Request Parar		B 4:	NA 1 (1	0 1 1	N. C			
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
•	data	object	1KB	10MB	Mandatory	A JSON payload			
		,				describing a D-			
						TRO. Payload			
						should be UTF8			
Input data	For example of	f D TDO	povlood r	logge refer to C	itHub File Index	encoded.			
scope	•			File Index.docx	iiti iub File iiiuex	document at.			
Output	☑ JSON	1110 00	· · Oiti ius	· no mackingox					
data type	⋈ XML								
	☑ File								
	☑ Other (please specify)								
Output			y)						
Output	Response Para	ameters		May Longth	Opportunity	Notos			
Output data structure		ameters Data	Min	Max Length	Opportunity	Notes			
data	Response Para	ameters		Max Length	Opportunity Mandatory	Notes UUID formatted			
data	Response Para Field Name	ameters Data Type	Min Length			UUID formatted string containing			
data	Response Para Field Name	ameters Data Type	Min Length			UUID formatted string containing a D-TRO Service			
data	Response Para Field Name	ameters Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the			
data	Response Para Field Name	ameters Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the newly created D-			
data structure	Response Para Field Name	ameters Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the			
data structure	Response Para Field Name id	ameters Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the newly created D-			
data structure	Response Para Field Name id	Data Type string	Min Length 36			UUID formatted string containing a D-TRO Service identifier for the newly created D-			
Responses 201 Created	Response Para Field Name id	Data Type string	Min Length 36	36		UUID formatted string containing a D-TRO Service identifier for the newly created D-			
Responses 201 Created 404 Not	Response Para Field Name id id ["id": "3fa85f64]	ameters Data Type string	Min Length 36	36		UUID formatted string containing a D-TRO Service identifier for the newly created D-			
Responses 201 Created	Response Para Field Name id { "id": "3fa85f64 } { "message": "Name	ameters Data Type string	Min Length 36	36		UUID formatted string containing a D-TRO Service identifier for the newly created D-			
Responses 201 Created 404 Not	Response Para Field Name id id { "id": "3fa85f64 } { "message": "N "errors": [Data Type string 4-5717-4	Min Length 36	36		UUID formatted string containing a D-TRO Service identifier for the newly created D-			
Responses 201 Created 404 Not	Response Para Field Name id { "id": "3fa85f64 } { "message": "Name	Data Type string 4-5717-4	Min Length 36	36		UUID formatted string containing a D-TRO Service identifier for the newly created D-			

Reference	D3	D3						
Item	Value							
POST	/v1/dtros/createFromBody							
Name	Create a new D-	TRO						
Description	This POST meth Service.	nod allows data publishers to record a new D-TRO to the D-TRO						
400 Bad Request] }, "type": "https://t "title": "One or r "status": 400,	I 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	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 Type	Min Length	Max 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 Type	Min Length	Max 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 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 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 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, ba							
Input data	☑JSON							
type(s)	☑ XML							
	☑ File	anacifu)						
Input	☑ Other (please Header Paramet)							
Structure	Field Name	Data	Min	Max	Opportunity	Notes		
	Ticia Ivallic	Type	Length	Length	Opportunity	140103		
	X-Correlation- ID String 36 36 Mandatory UUID formatted string to track the request through the enquiries stack.							
	Request Parame	ters						
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes		
	id	string	36	36	Mandatory	UUID formatted string containing the unique identification of a D-TRO.		
Input data						contain a full UUID		
scope						the existing D-TROs		
O store t	within the D-TRC ☑ JSON) Service	, that D-I	RO will be	e retrieved.			
Output data type	⊠ XML							
data type	☑ XIVIL ☑ File							
	☑ Other (please	specify)						
Output	Response Paran							
data	Field Name	Data	Min	Max	Opportunity	Notes		
structure		Туре	Length	Length				
	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 ic	, ,						
Description	This GET method	s GET method allows data publishers retrieve an existing D-TRO from the D- O Service, based on its unique identification.						
200 OK	{ "schemaVersion" "data": { "Source": { "actionTypeta	e": "new", aOwner": 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) ': "B2787FE2-AD74-432A-BB32-76FDB065F3E8", All sections", d": ["": 1000, "The Sample County Council (Prohibition of Waiting, Loading (on-Street Parking Places) (Civil Enforcement Area)						
404 Not 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						

Reference	D6								
Item	Value								
DELETE	/v1/dtros/{id}								
Name		Delete a D-TRO by id							
Description			llows data	nuhlishe	ers soft delete	an existing D-TRO from			
Description	the D-TRO Se					an existing D-TNO nom			
Input data	☑ JSON	11100, 540	ou on no	arriquo iu	orianoanori.				
type(s)	⊠ XML								
• • • • • • • • • • • • • • • • • • •	坚 File								
	☑ Other (please		<u>'</u>)						
Input	Header Param								
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 stack.			
	Request Parar	neters				Stack.			
	Field Name	Data	Min	Max	Opportunity	Notes			
	Tiola Hamo	Type	Length	Length	Opportunity	110100			
	id	string	36	36	Mandatory	UUID formatted string			
						containing the unique			
						identification of a D-			
						TRO.			
Input data	"a30b3a58-44	3c-485e-a	ab81-4d12	2e/40/6f	1"				
Scope Output data	☑ JSON								
type	⊠ XML								
31-	ĭ File								
	☑ Other (pleas	se specify	')						
Responses									
204 No									
Content									
404 Not	\								
Found	"message": "l	Not found	,						
	"errors": [id 2fa05	f6/ 5717	4560 h2f	c-2c963f66afa	6 not found "			
	D-TRO WILL	i iu siaos	104-57 17-	4302-031	C-20903100ala	io not iouna.			
	}								
	,								
Error codes	HTTP Code	Error 7	Гуре						
	400	Bad re							
	403		s denied/	<u>forbidden</u>					
	404	Not fo							
	405		d not allo						
	500		al server e	error					
	502		ateway	able					
	503		e unavail						
	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)	☑ XML ☑ File ☑ Other (please								
Input Structure	Header Paramet	_			T = -				
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	X-Correlation- ID	string	36	36	Mandatory	OUID formatted string to track the request through the enquiries stack.			
	Request Parame	ters							
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	dtrold	string	36	36	Mandatory	OUID 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									

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 reference D-TRO currently held in the D-TRO Central Service are returned. [Potoronco	D7						
Name Get the source history of a D-TRO by id	Reference							
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. A textual description of the response containing all versions of the reference 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-TR 001-GitHub File Index.docx) }], "reference": "B2787FE2-AD74-432A-BB32-76FDB065F3E8", "section": "All sections", "traAffected": [
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. A textual description of the response containing all versions of the reference 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-TR 001-GitHub File Index.docx)]], "reference": "B2787FE2-AD74-432A-BB32-76FDB065F3E8", "section": "All sections", "traAffected": [* * * * * * * * * * * * * * * * * * * *						
existing D-TRO from the D-TRO Service, based on its unique identification. A textual description of the response containing all versions of the reference 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-TR 001-GitHub File Index.docx) }], "reference": "B2787FE2-AD74-432A-BB32-76FDB065F3E8", "section": "All sections", "traAffected": [, ,						
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-TR 001-GitHub File Index.docx) }], "reference": "B2787FE2-AD74-432A-BB32-76FDB065F3E8", "section": "All sections", "traAffected": [existing D-TRO from the D-TRO Service, based on its unique identification.						
"traCreator": 1000, "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": [{	•	existing D-TRO from the D-TRO Service, based on its unique identification. A textual description of the response containing all versions of the referenced D-TRO currently held in the D-TRO Central Service are returned. [
Response Parameters		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 allows data publishers retrieve the source history of an existing D-TRO from the D-TRO Service, based on its unique identification.							
Output data structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	Data	JSON	-	-	Mandatory	D-TRO retrieved from the D-TRO 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 found							
	405	_	od not allo						
	429		nany requ						
	500		al server	error					
	502		gateway						
	503		ce unavail						
	504	Gate	way timeo	ut					

Reference	D8							
Item	Value							
GET	/v1/dtros/provisionHistory/{dtroId}							
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 ☑ XML ☑ File ☑ Other (please specify)							
Input	Header Paramet							
Structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes		
X-Correlation- string 36 36 Mandatory UUID formatt to track the retained through the estack.								
	Request Parame	ters						
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes		
	dtrold	string	36	36	Mandatory	UUID formatted string containing the unique identification of a D-TRO.		
Input data scope	When invoking this endpoint, the requested 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 specify)							
Output	Response Paran	neters						
data structure	Field Name	Data Type	Min Length	Max 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)
                  }
                ],
```

D-f	D0							
Reference	D8							
Item	Value	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 omega the D-TRO Service, based on its unique identification.						
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	429 Too many requests						
	500							
	502	Bad gateway						
	503	Service unavailable						
	504	Gateway timeout						

Reference	D9								
Item	Value	Value							
POST	/v1/dtros/Ownership/{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.								
Input data type(s)	☑ JSON ☑ XML ☑ File ☑ Other (please								
Input	Header Paramet	ers							
Structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	X-Correlation- ID	string	36	36	Mandatory	UUID formatted string to track the request through the enquiries stack.			
	Request Parame	eters							
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	id	string	36	36	Mandatory	UUID formatted string containing the unique identification of a D-TRO.			
	assignToTrald	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	When invoking this endpoint, the requested id parameter must contain a full UUID representation of the D-TRO and the assignToTrald must contain a full UUID representation of the new TRA authority.							
Output data type	 "/9829ff03-56f3-429d-9fff-a4819861515c/4f568e66-0ced-4f58-9c8e-5fce21773bb4" ☑ JSON ☑ XML ☑ File ☑ Other (please specify) 								
Output	Response Paran								
data structure	Field Name	Data Type	Min Length	Max 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 Found	"errors": ["D-TRO not found."							

Reference	D9						
Item	Value						
POST	/v1/dtros/Ownersh	ip/{id}/{assignToTrald}					
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							
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 type(s)	☑ JSON ☑ XML ☑ File	☑ JSON ☑ XML						
	☑ The ID ☑ Other (please	specify)						
Input	Header Paramet							
Structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes		
	X-Correlation- ID	string	36	36	Mandatory	UUID formatted string to track the request through the enquiries stack.		
	Request Parame	eters						
	Field Name	Data Type	Min Length	Max 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							
Name	Query D-TRO Service data for stored events (e.g., D-TROs being created, updated, or deleted).								
Description	This POST metho	This POST method allows data publishers to query events (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 (i.e. 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 data type	☑ JSON ☑ XML ☑ File ☑ Other (please	specify)							
Output	Response Param	eters							
data structure	Field Name	Data Type	Min Length	Max 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 Found	{ "message": "No "errors": ["Schema versi]								

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 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, "traceId": "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)	XML File Other ()								
Input	☑ Other (please specify)								
Input Structure	Header Parameters Field Name Data Min Max Opportunity Notes								
	rieiu Nairie	Type	Length	Length	Opportunity	Notes			
	X-Correlation- ID	string	36	36	Mandatory	UUID formatted string to track the request through the enquiries stack.			
	Request Parameters								
	Field Name	Data Type	Min Length	Max 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-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 scope Output	criteria within the D-TRO Service. 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 (i.e. troName) { "queries": [
data type	☑ JSON ☑ XML								
uata type	ĭ ∧ivi∟ ĭ File								
	☑ Other (please s	specify)							
	V	. 3,							
Output	Response Param	eters							
data	Field Name	Data	Min	Max	Opportunity	Notes			
structure		Туре	Length	Length					
	data	JSON array	-	-	Mandatory	Result array			
Responses									

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						
200 OK (with content)	{ "results": [{ For an example of Beta-01-DfT-D-TResize "vehicleType": "taxi"], For an example of Beta-01-DfT-D-TResize "page": 1, "pageSize": 1,	a D-TRO search, please refer to GitHub File Index document at: 0-001-GitHub File Index.docx)					
200 OK (with null result)	"totalCount": 1 } { "results": [], "page": 1, "pageSize": 0, "totalCount": 0 }						
400 Bad Request	{ "message": "Bade "errors": [d request", has been raised that is likely due to a transient failure."					
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 ¹							
Description	This GET method al Service.	lows data	a publishe	ers to retri	eve rule version	ons from the D-TRO			
Input data type(s)	☑ JSON ☑ XML ☑ File ☑ Other (please specify)								
Input	Header Parameters		1		1				
Structure	Field Name	Data Type	Min Length	Max 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 Type	Min Length	Max Length	Opportunity	Notes			
	-	-	-	-	-	-			
Input data scope	-								
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (please specify)								
Output	Response Paramete	ers							
data structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	Data	JSON	-	-	Mandatory	Array containing JSON objects			
Responses						-			

¹ **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 ¹				
Description	This GET method allo Service.	ows data publishers to retrieve rule versions from the D-TRO				
200 OK	[{ "schemaVersion": "3.2.3" }					
500	{					
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									
Name	Get avail	able rules								
Description	This GET	This GET method allows data publishers to retrieve rules from the D-TRO Service.								
Input data type(s)										
Input	Header F	Parameters								
Structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes				
	X- Correla tion-ID	string	36	36	Mandatory	formatted string to track the request through the enquiries stack.				
	Request	Parameters	1	1	1					
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes				
	-	-	-	-	-	_				
Input data scope	-									
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (please specify)									
Output data		e Parameters								
structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes				
	Data	JSON	-	-	Mandatory	Array containin g JSON 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	[
	{ "aabar	ma\/araian", "2 2 4"					
		maVersion": "3.2.1", mitted for brevity (For an example of Rule response, please refer to					
		Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)					
	1	sindex document at. <u>Deta-01-D11-D-11(O-001-GitHub File Index.docx)</u>					
	}, }						
	"scher	maVersion": "3.2.3",					
		late": [
	{ '						
	io "io	d": 1,					
		nessage": "weekInMonth instances must be unique.",					
		name":					
		PeriodApplicableInstanceDayWithinMonthInstancesUnique" path":					
	"Source.pro	ovision.regulation.timeValidity.exceptionPeriod.recurringDayWeekMonth					
		licableInstanceOfDayWithinMonth"					
		lle": {					
		mitted for brevity (For an example of Rule response, please refer to					
	1	Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)					
	},	mitted for brevity (For an example of Rule response, please refer to					
		Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)					
	}						
]						
	}						
]						
500 Internal	{						
Server		": "Internal Server Error",					
Error	"errors": [vacated array acquired "					
	An une	spected error occurred."					
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \						
Error Codes	HTTP	Error Type					
21101 00000	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	Get available rule by version									
Description	This GI D-TRO			ws	data pul	olisl	ners to re	etrie	eve a rule by v	ersi	on from the
Input data type(s)		er (p	lease spec	ify)							
Input	Heade	⁻ Pa	rameters								
Structure	Field Name	Da	ta Type		Min Length		Max Length		Opportunity	No	otes
	X- Corre lation -ID	stri	ing		36		36		Mandatory	str the thr	JID formatted ring to track request rough the equipment of the equipment o
	Reques	st Pa	arameters								
	Field Name	Da	ta Type		Min Length		Max Length		Opportunity	No	otes
	versio n	str	ing		5		5		Mandatory	re	ring presentation 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	Respor	nse	Parameter	S							
structure	Field Name		Data Type	Mi Le	in ength		ax ength	O	pportunity		Notes
	Data		JSON	-		-		M	andatory		Array containing JSON objects
Responses											

Reference	R3							
Item	Value							
GET	/v1/rules/{version}							
Name	Get available rule	available rule by version						
Description		This 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 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	R4								
Item	Value								
GET	/v1/rules/{id}								
Name	Get available rule by unique identifier								
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 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> 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}	/v1/rules/{id}						
Name	Get available rule by unique identifier							
Description	This GET method allows data publishers retrieve a rule from the D-TRO Service.							
•		one data publicities sources a rais from alle 2 1110 contribut						
200 OK	"schemaVersion": "3.2.3", "template": [
500 Internal	{	10 5 11						
Server	"message": "Interna	ai Server Error",						
Error	"errors": ["An unexpected e	rror occurred "						
		noi 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						

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 ²						
Description	This GET me D-TRO Servi		ws data p	ublishers	to retrieve sch	nema versions from the			
Input data type(s)	☑ JSON ☑ XML ☑ File ☑ Other (plea	☑ JSON ☑ XML							
Input Structure	Header Para	meters							
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	X- Correlation- ID	string	36	36	Mandatory	UUID formatted string to track the request through the enquiries stack.			
	Request Para	ameters							
	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	-	-	-	-	-	-			
Input data scope	-			•					
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (please specify)								
Output data	Response Pa	arameters							
structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	Data	JSON	-	-	Mandatory	Array containing JSON objects			
Responses				•		-			

² **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 s	Get available schema versions ²				
Description	This GET method allows data publishers to retrieve schema versions from the 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				

	S2						
Reference 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	Service. ☑ JSON						
type(s)	⊠ XML						
1,00(0)	⊠ File						
	☑ Other (please specify)						
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					l	
	Field Name	Data	Min	Max	Opportunity	Notes	
		Type	Length	Length			
	-	-	-	-	-	-	
Input data	-						
Scope Output data	☑ JSON						
type	⊠ XML						
type	⊠ ⊼ivi∟ ⊠ File						
	☑ Other (please specify)						
Output data	Response Pa		• /				
structure	Field Name	Data	Min	Max	Opportunity	Notes	
		Туре	Length	Length	,		
	Data	JSON	-	-	Mandatory	Array containing JSON	
Responses						objects	
	r						
200 OK	L						
	{ "schemaVersion": "3.2.3",						
1		a\/ersion"	ı. "3 <i>2</i> 3"				
	"schema		': "3.2.3",				
	"schema" "templat	te": {		or an exar	mple of Schem	a response, please	
	"schema" "templat om	te": { itted for b	orevity (Fo			a response, please TRO-001-GitHub File	
	"schema" "templat om	te": { itted for b	orevity (Fo			na response, please -TRO-001-GitHub File	
	"schema" "templatom refer to GitHu Index.docx) },	te": { itted for b ub File Ind	orevity (Fo				
	"schema "templat om refer to GitHu Index.docx)	te": { itted for b ub File Ind	orevity (Fo				
	"schema" "templatom refer to GitHu Index.docx) },	te": { itted for b 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" "templat"om refer to GitHu Index.docx) }, "isActive }, { "schema	te": { itted for b ub File Ind e": true aVersion"	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	orevity (Fodex docur :: "3.2.0", orevity (Fo	nent at: <u>E</u> 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	orevity (Fodex docur :: "3.2.0", orevity (Fo	nent at: <u>E</u> 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	orevity (Fodex docur :: "3.2.0", orevity (Fo	nent at: <u>E</u> 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	orevity (Fodex docur :: "3.2.0", orevity (Fo	nent at: <u>E</u> 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	orevity (Fodex docur :: "3.2.0", orevity (Fo	nent at: <u>E</u> or an exar	Beta-01-DfT-D-	TRO-001-GitHub File	

5.	00					
Reference	S2					
Item	Value					
GET	/v1/schemas	/v1/schemas				
Name	Get available	Get available schemas				
Description	This GET met	This GET method allows data publishers to retrieve schemas from the D-TRO Service.				
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	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.							
Input data	☑ JSON							
type(s)	XML							
		☑ File ☑ Other (please specify)						
Input	Header Parameters							
Structure	Field Name	Data	Min	Max	Opportunity	Notes		
		Туре	Length	Length	'''			
	X-Correlation-	string	36	36	Mandatory	UUID formatted string		
	ID					to track the request		
						through the enquiries		
	Request Parame	otore				stack.		
	Field Name	Data	Min	Max	Opportunity	Notes		
	Tield Name	Type	Length	Length	Оррогини	Notes		
	version	string	5	5	Mandatory	String representation of		
		_				schema version		
Input data scope	When invoking t {Major}.{Minor}.{		oint, the re	equest pa	rameter must	be string in this format:		
Output	√wajory.\www.si.\ ☑ JSON	i atorij.						
data type	⊠ XML							
	☑ File							
Output	☑ Other (please							
Output data	Response Parar Field Name	Data	Min	Max	Opportunity	Notes		
structure	rieiu ivailie	Type	Length	Length	Opportunity	Notes		
	Data	JSON	-	-	Mandatory	Array containing JSON		
						objects		
200 OK	{							
	"schemaVersi	on": "3.2	.3",					
	"template": {	ect"						
	"\$defs": {	"type": "object", "\$defs": {						
	omitted for brevity (For an example of Schema response, please refer to							
	GitHub File Inde	GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)						
	},							
	"oneOf": [omitted for brevity (For an example of Schema response, please refer to							
						GitHub File Index.docx)		
],					,		
					aft/2020-12/sc			
				ata mode	I JSON schem	na",		
	"additionalF },	roperties	s . irue					
	"isActive": true	9						
	}							
Responses								

Reference	S3					
_						
Item	Value					
GET	/v1/schemas/{vers	/v1/schemas/{version}				
Name	Get available sche	ema by version				
Description	This GET method allows data publishers retrieve a schema by version from the D-TRO Service.					
500 Internal Server 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)							
	☑ File						
	☑ Other (please specify)						
Input	Header Parameters					I	
Structure	Field Name	Data	Min	Max	Opportunity	Notes	
	X-Correlation-	Type	Length 36	Length	Mandatory	LILUD formatted string	
	ID	string	30	36	Mandatory	UUID formatted string to track the request	
						through the enquiries	
						stack.	
	Request Parame	eters				'	
	Field Name	Data	Min	Max	Opportunity	Notes	
		Туре	Length	Length			
	id	string	36	36	Mandatory	UUID formatted string	
						representation of schema unique	
						identifier.	
Input data	When invoking t	nis endpo	oint, the id	paramet	er must be stri	ng in UUID format.	
scope	3	•	,	•		<u> </u>	
Output	☑ JSON						
data type	⊠ XML						
	☑ File	anaoifu)					
Output	☑ Other (please Response Parar)						
data	Field Name	Data	Min	Max	Opportunity	Notes	
structure	Ticia Name	Type	Length	Length	Opportunity	110103	
	Data	JSON	-	-	Mandatory	Array containing JSON	
					,	objects	
200 OK	{						
	"schemaVersion": "3.2.3",						
	"template": {						
1		- et"					
	"type": "obj	ect",					
	"type": "obje "\$defs": {	•	rity (For ar	n example	e of Schema re	esponse, please refer to	
	"type": "obje "\$defs": { omitted	d for brev				esponse, please refer to GitHub File Index.docx)	
	"type": "obje "\$defs": { omitted GitHub File Inde },	d for brev					
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [d for brev x docume	ent at: <u>Bet</u>	:a-01-DfT	<u>-D-TRO-001-C</u>	GitHub File Index.docx)	
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [omitted	d for brev x docume	ent at: <u>Bet</u> rity (For ar	a-01-DfT n example	-D-TRO-001-0	esponse, please refer to	
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [omitted	d for brev x docume	ent at: <u>Bet</u> rity (For ar	a-01-DfT n example	-D-TRO-001-0	GitHub File Index.docx)	
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [omitted GitHub File Inde	d for brev x docume d for brev x docume	ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u>	a-01-DfT n example a-01-DfT	-D-TRO-001-0 e of Schema re -D-TRO-001-0	esponse, please refer to GitHub File Index.docx)	
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [omitted GitHub File Inde], "\$schema":	d for brev x docume d for brev x docume "https://j	ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher	n example a-01-DfT na.org/dr	-D-TRO-001-0 e of Schema re -D-TRO-001-0 aft/2020-12/sc	esponse, please refer to GitHub File Index.docx) hema",	
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [omitted GitHub File Inde], "\$schema":	d for brev x docume d for brev x docume "https://j ": "DTRO	ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher) v3.2.3 da	n example a-01-DfT na.org/dr	-D-TRO-001-0 e of Schema re -D-TRO-001-0	esponse, please refer to GitHub File Index.docx) hema",	
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [omitted GitHub File Inde], "\$schema": "description "additionalF },	d for brev x docume d for brev x docume "https://j ": "DTRO Properties	ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher) v3.2.3 da	n example a-01-DfT na.org/dr	-D-TRO-001-0 e of Schema re -D-TRO-001-0 aft/2020-12/sc	esponse, please refer to GitHub File Index.docx) hema",	
	"type": "objo "\$defs": { omitted GitHub File Inde }, "oneOf": [omitted GitHub File Inde], "\$schema": "description "additionalF	d for brev x docume d for brev x docume "https://j ": "DTRO Properties	ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher) v3.2.3 da	n example a-01-DfT na.org/dr	-D-TRO-001-0 e of Schema re -D-TRO-001-0 aft/2020-12/sc	esponse, please refer to GitHub File Index.docx) hema",	

Deference	S4					
Reference						
Item	Value					
GET	/v1/schemas/{id}	/v1/schemas/{id}				
Name	Get available sche	ema by unique identifier.				
Description	This GET method allows data publishers retrieve a schema from the D-TRO Service.					
Responses						
500 Internal Server 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				