

Title	Digital Traffic Regulation Orders: D-TRO Publication API Interface Control Document for Publishers (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	
2.2	PA Consulting	Adjust the Date Time format to match ISO 8601	28/10/2024
2.3 PA Consulting Remove mention of 'dtros/Ownership' API endpoint Adjust the 200 OK Response payload for the EVENTS endpoint		21/11/2024	

1.2 Document Review

Version	Reviewer(s)	Date
2.3	John Cooper (Department for Transport, Product Owner)	22/11/2024

1.3 Approved Version

Version	Approver(s)	Date
2.3	Department for Transport	22/11/2024

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.

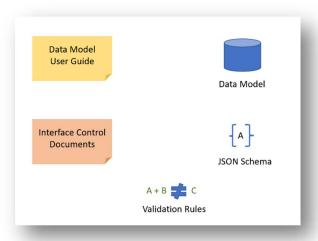
The new regulatory framework will, subject to necessary secondary legislation coming into force, mandate that Traffic Regulation Authorities (TRAs) in England and Wales publish TROs as open data in a standardised and digital format that anyone can access, use and share.

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:

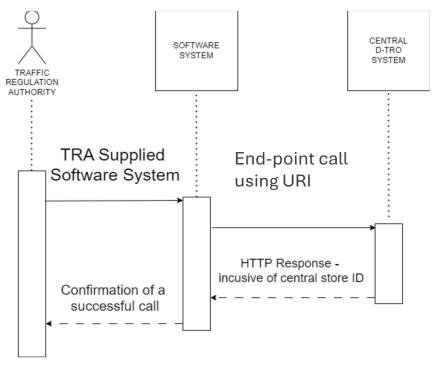
• Traffic Regulation Authorities (TRAs) and or their Digital Solution Providers (DSPs) that currently manage the IT contracts within the authority.

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 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/{id}	Get D-TRO source history by ID		
D8	GET	/v1/dtros/provisionHistory/{id}	Get D-TRO provisions history by 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	https://dtro-ui-test.dft.gov.uk/
Pre-Production URL	https://dtro-ui-integration.dft.gov.uk/
Production URL	https://dtro-ui.dft.gov.uk/
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:

- 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). Some specific exceptions to this rule do exist – eventTime and publicationTime, which are both metadata attributes are specified using the ISO 8601-1:2019 extended format for UTC datetimes (e.g., YYYY-MM-DDTHH:MI:SSZ).
- 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/{id}	Get D-TRO source history by ID
D8	/v1/dtros/provisionHistory/{id}	Get D-TRO provisions history by ID

Reference	D1					
Item	Value					
POST	/v1/dtros/createFromFile					
Name	Create a new D-TRO					
Description	This POST me	thod allo	ws data p	oublishers to record	d a new D-TR	O to the D-TRO
	Service by pro	Service by providing the D-TRO as a file				
Input data	⊠ JSON					
type(s)						
	☑ File					
	☑ Other (please)	se specify	/)			
Input	Header Param	eters				
Structure	Field Name	Data	Min	Max Length	Opportunity	Notes
		Type	Length			

Reference	D1						
Item	Value						
POST	/v1/dtros/creat	eFromFil	le				
Name	Create a new	D-TRO					
Description	This POST me	ethod allo	ws data p	oublishers to reco	rd a new D-TR	O to the D-TRO	
	Service by pro						
	X- Correlation- ID	string	36	36	Mandatory	UUID formatted string to track the request through the enquiries stack.	
	Request Parai	neters					
	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 so rules endpoint	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 rules endpoints) for validity against the D-TRO data model. For an example of a D-TRO file, please refer to GitHub File Index document at: Beta-01-DfT-D-TRO-001-GitHub File Index.docx)					
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (pleas	se specif	v)				
Output	Response Par						
data	Field Name	Data	Min	Max Length	Opportunity	Notes	
structure		Туре	Length				
	ld	string	36	36	Mandatory	UUID formatted string containing a D-TRO Service identifier for the newly created D-TRO record.	
Responses							

Reference	D1							
Item	Value							
POST	/v1/dtros/create	FromFile						
Name	Create a new D	-TRO						
Description		hod allows data publishers to record a new D-TRO to the D-TRO iding the D-TRO as a file						
201 Created	{ "id": "3fa85f64- }	{ "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6" }						
404 Not Found	{ "message": "N "errors": ["Schema vers]	ot found", sion not found."						
400 Bad Request] }, "type": "https:// "title": "One or "status": 400,	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.",						
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/upd	ateFromFile	{id}					
Name	Updates an e		• •					
Description	•			ers to update	an existing D-TF	RO to the D-TRO		
	Service.	Service.						
Input data type(s)		▼ XML						
Input		meters						
Structure	Field Name	Data	Min	Max	Opportunity	Notes		
	X- Correlation- ID	string	36	Length 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		
	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.		
	Id	string	36	36	Mandatory	UUID formatted string representing the D-TRO to be updated.		
Input data scope	representatio activated in s rules endpoin	n. Payloads chemas end its) for validi ble of a D-TF	will be assest the against the RO file, pleas	ssed against antic JSON r D-TRO data e refer to Git	t contain a full D- the schema (creatules and custom a model. tHub File Index d	ated and rules (created in		
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (plea							

Reference	D2						
Item	Value						
PUT	/v1/dtros/upd	ateFromFile	e{id}				
Name	Updates an e						
Description	· ·			ners to updat	e an existing D-T	RO to the D-TRO	
Output	Response Pa	rameters					
data structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes	
	id	string	36	36	Mandatory	UUID formatted string representing the D-TRO to be updated.	
Responses							
200 OK	{ "id": "3fa85f }	64-5717-45	62-b3fc-2c9	63f66afa6"			
404 Not Found	{ "message": "errors": ["Schema v	"Not found' ersion not					
400 Bad Request] }, "type": "http: "title": "One "status": 400	·					
Error	HTTP Code	E	rror Type				
Codes	400		ad request				
	403		ccess denie	d/forbidden			
	404		lot found				
	405		lethod not a	llowed			
	429		oo many red				
	500		nternal serve	•			
	500						
	502		ad gateway Service unav				
	504	(Sateway time	ะบนเ			

Reference	D3					
Item	Value					
POST	/v1/dtros/creat	eFromBo	ody			
Name	Create a new I					
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					
	▼ File Other (release)	: c	۸			
Input	☑ Other (pleas Header Param		<u>/)</u>			
Structure	Field Name	Data	Min	Max Length	Opportunity	Notes
Structure	I leiu Ivaille	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 Field Name		Min	May Langth	Opportunity	Notes
	rieid ivairie	Data 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	⊥ 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)	se specili				
O di tp di t	Response Par		y)			
data	Response Para	ameters		Max Length	Opportunity	Notes
		ameters	Min Length	Max Length	Opportunity	Notes
data		ameters Data	Min	Max Length	Opportunity Mandatory	UUID formatted
data	Field Name	Data Type	Min Length			UUID formatted string containing
data	Field Name	Data Type	Min Length			UUID formatted string containing a D-TRO Service
data	Field Name	Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the
data	Field Name	Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the newly created D-
data	Field Name	Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the
data structure	Field Name	Data Type	Min Length			UUID formatted string containing a D-TRO Service identifier for the newly created D-
data structure	Field Name id	ameters Data Type string	Min Length 36			UUID formatted string containing a D-TRO Service identifier for the newly created D-
Responses 201 Created	Field Name id	ameters Data Type string	Min Length 36	36		UUID formatted string containing a D-TRO Service identifier for the newly created D-
data structure Responses 201	Field Name id { "id": "3fa85f6- } {	ameters 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	Field Name id { "id": "3fa85f6- } { "message": "I" "errors": [ameters 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	Field Name id { "id": "3fa85f64 } { "message": "N	ameters 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	Field Name id { "id": "3fa85f6- } { "message": "I" "errors": [ameters 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						
Item	Value	Value					
POST	/v1/dtros/createl	/v1/dtros/createFromBody					
Name	Create a new D-TRO						
Description	This POST meth	This POST method allows data publishers to record a new D-TRO to the D-TRO					
Booonpaon	Service.						
400 Bad 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									
Item	Value									
PUT	/v1/dtros/updateF	romBoo	ly{id}							
Name	Updates an exist		, , ,							
Description	•			ishers to	update an exi	sting D-TRO to the D-				
2 000p	TRO Service.		p		5.p 5.0.10 5 57	gg				
Input data	☑ JSON									
type(s)	⊠ XML									
		☑ File								
	☑ Other (please									
Input	Header Paramet									
Structure	Field Name	Data	Min	Max	Opportunity	Notes				
	X-Correlation-	Type string	Length 36	Length 36	Mandatory	UUID formatted string to				
	ID	Sung	30	30	ivialidatory	track the request				
						through the enquiries				
						stack.				
	Request Parame	ters								
	Field Name	Data	Min	Max	Opportunity	Notes				
		Туре	Length	Length						
	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				
	l IG	Julia			Wandatory	representing the D-TRO				
						to be updated.				
Input data						e Index document at:				
scope	Beta-01-DfT-D-T	RO-001-	-GitHub F	<u>ile Index.</u>	<u>docx</u>					
Output data	☑ JSON									
type	⊠ XML ⊠ File									
	☑ Other (please	specify)								
Output data	Response Param									
structure			I		<u> </u>	T				
	Field Name	Data	Min	Max	Opportunity	Notes				
		Туре	Length	Length						
	id	string	36	36	Mandatory	UUID formatted string				
						containing a D-TRO				
						Service identifier for the				
						newly created D-TRO record.				
Responses		l	I	<u> </u>	I	1.00014.				
200 OK	{									
	"id": "3fa85f64-5	5717-456	62-b3fc-2	c963f66a	fa6"					
	}									
404 Not	{									
Found	"message": "No	t tound",								
	"errors": ["Schema versi	on not f	ound "							
	1 30 lema versi	OH HOUR	Juliu.							
	}									

Reference	D4						
Item	Value						
PUT	/v1/dtros/updateFi	/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-						
Boothplion	TRO Service.						
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	,		data publi	shers reti	rieve an existiı	ng D-TRO from the D-	
	TRO Service, based on its unique identification.						
Input data	☑ JSON		•				
type(s)	⋈ XML						
	☑ File						
Innut	☑ Other (please specify) Header Parameters						
Input Structure	Field Name	_	Min	Max	Opportunity	Notes	
Structure	Field Name	Data Type	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.	
Input data	When invoking the	nis endpo	int, the re	quest pa	rameter must	contain a full UUID	
scope	representation. I within the D-TRO	f the uniq			es with one of	the existing D-TROs	
Output data type	representation. I	f the uniq) Service			es with one of		
Output data type Output	representation. In within the D-TRO ISON IS XML IS File	f the uniq) Service specify)			es with one of		
Output data type	representation. In within the D-TRO ID JSON IN XML IN File IN Other (please	f the uniq) Service specify)			es with one of		
Output data type Output data	representation. I within the D-TRO ☑ JSON ☑ XML ☑ File ☑ Other (please Response Paran	specify) neters	, that D-T	RO will b	es with one of e retrieved.	the existing D-TROs	

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.					
200 OK	<pre>"schemaVersion": "3.2.4", "data": { "Source": { "actionType": "new",</pre>					
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							
		This DELETE method allows data publishers soft delete an existing D-TRO from						
Description						an existing D-TRO from		
Input data	the D-TRO Se ☑ JSON	ivice, bas	eu on its	unique iu	enuncation.			
type(s)	⊠ XML							
type(3)	⊠ Kille							
	☑ Other (pleas	se specify	()					
Input	Header Param		/					
Structure	Field Name	Data	Min	Max	Opportunity	Notes		
	1 loid Hairio	Type	Length	Length	Opportunity	110100		
	X-	string	36	36	Mandatory	UUID formatted string		
	Correlation-	9				to track the request		
	ID					through the enquiries		
						stack.		
	Request Parar	neters						
	Field Name	Data	Min	Max	Opportunity	Notes		
		Туре	Length	Length				
	id	string	36	36	Mandatory	UUID formatted string		
						containing the unique		
						identification of a D- TRO.		
Input data	"a30b3a58-44	20 1950 c	 h01 /d1'	 	<u> </u> 1"	TRO.		
scope	a30b3a30-44	30 -4 03 6- 6	100 1-4u 12	26740701	1			
Output data	⊠ JSON							
type	⊠ XML							
"	ĭ File							
	☑ Other (pleas	se specify	')					
Responses								
204 No	A successful s	oft delete	of the D-	TRO reco	ord.			
Content								
404 Not	{							
Found	"message": "l	Not found	",					
	"errors": [
	"D-TRO with	n id 3fa85	f64-5717-	-4562-b3f	c-2c963f66afa	16 not found."		
	}							
Error codes	HTTP Code	Error	Гуре					
	400	Bad re						
	403		s denied/i	forbidden				
•	404 Not found							
	405		d not allo	wed				
	500 Internal server error							
	502		ateway					
	503	Servic	e unavail	able				
	504	Gatew	/ay timeοι	ut				

Reference	D7								
Item	Value								
GET	/v1/dtros/sourceHistory/{id}								
Name	Get the source h	istory of a	D-TRO by	id					
Description	This GET method existing D-TRO f								
Input data type(s)	☑ JSON ☑ XML ☑ File ☑ Other (please								
Input Structure	Header Paramet	ers							
	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								
	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 scope	When invoking the UUID represental D-TROs within the	tion. If the	unique ide	entifier ma	atches with one	ust contain a full e of the existing			
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (please specify)								
Output data	Responses Para	meters							
structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes			
	Data	JSON	-	-	Mandatory	D-TRO retrieved from the D-TRO Service.			
Responses			,						

Reference	D7
Item	Value
GET	/v1/dtros/sourceHistory/{id}
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. [

Reference	D7						
Item	Value						
GET	/v1/dtros/sourceHis	story/{id}					
Name	Get the source hist	ory of a	D-TRO by	/ id			
Description	This GET method a existing D-TRO fro						
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		equest				
	403	Acces	ss denied	forbidden/			
	404	Not found					
	405 Method not allowed						
	429	Too r	nany requ	ests			
	500	Interr	nal server	error			
	502	Bad	gateway				
	503	Servi	ce unavai	lable			
	504	Gate	way timeo	ut			

Reference	D8							
Item	Value							
GET	/v1/dtros/provisionHistory/{id}							
Name	Get the provision		<u> </u>	RO by id				
Description					rieve the provi	sions history of an		
		rom the I	D-TRO Se	ervice, ba	sed on its unio	que identification.		
Input data	☑ JSON							
type(s)	⊠ XML							
	▼ File ▼ Other (please)	cnocify)						
Input	☑ Other (please Header Paramet)							
Structure	Field Name	Data	Min	Max	Opportunity	Notes		
	Tiola ramo	Type	Length	Length	Opportunity	140100		
	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		
	id	string	36	36	Mandatory	UUID formatted string containing the unique identification of a D-TRO.		
Input data						ter must contain a full		
scope						one of the existing D-		
Output	TROs within the ☑ JSON	D-TROS	service, th	at D-TRC) will be retriev	/ed.		
Output data type	⊠ XML							
data type	⊠ File							
	☑ Other (please specify)							
Output	Response Paran	neters						
data	Field Name	Data	Min	Max	Opportunity	Notes		
structure		Type	Length	Length		D 700 11 11		
	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/provisionHistory/{id}						
Name	•	history of a D-TRO by id						
Description	This GET method	This GET method allows data publishers retrieve the provisions history of an existing D-TRO from 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 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 S or deleted).	Service data	a for stored	d events (e	e.g., D-TROs be	eing created, updated,		
Description	deleted) on exis					eated, updated or		
Input data type(s)		⊠ XML						
Input	Header Parame	eters						
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 Param	eters	1	1		•		
	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	Value				
POST	/v1/events					
Name	Query D-TRO Se or deleted).	rvice da	ta for store	ed events	(e.g., D-TROs	being created, updated,
Description	This POST methodeleted) on existing		•		•	created, updated or
Input data scope	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 data type	☑ JSON ☑ XML ☑ File ☑ Other (please s					
Output	Response Param		B 41			N
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						

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.
200 OK	"events": [{ "publicationTime": "2024-11-22T11:20:15Z", "traCreator": 8888, "currentTraOwner": 8888, "troName": "DfT Example - Shared TRA ID with 2 DSPs, second, NOV. 2024", "regulationType": [], "vehicleType": [], "vehicleType": [], "regulationStart": ["2024-11-21T08:00:00+00:00"], "regulationEnd": ["2024-11-21T20:00:00+00:00"], "eventType": "create", "eventTime": "2024-11-22T11:20:15Z", "_links": { "self": "/dtros/89de20f1-a4e9-4aa4-b2a0-ef378c04c4c4" } }], "page": 1, "pageSize": 50, "totalCount": 83 } Note: Dates and times – all date and time records shall be expressed in local time, except publicationTime and eventTime – see earlier notes.
404 Not Found	{ "message": "Not found", "errors": ["Schema version not found."] }

Reference	ES1						
Item	Value						
POST	/v1/events	/v1/events					
Name	Query D-TRO Serv or deleted).	rice data for stored events (e.g., D-TROs being created, updated,					
Description		l allows data publishers to query events (created, updated or g 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, "traceld": "00-9f4aa677608b15827106b63502eb806f-ca691cf133c8871d-00"</pre>						
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	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						
Input Structure	☑ Other (please specify) Header Parameters						
	Field Name Data Min Max Opportunity Notes						
	i leid Name	Type	Length	Length	Оррогили	140163	
	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	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": [
Output	☑ JSON						
data type	☑ XML ☑ File						
	☑ Other (please specify)						
_							
Output	Response Parameters						
data structure	Field Name Data Min Max Opportunity Notes						
	Type Length Length Mandatary Regult array						
	data JSON Mandatory Result array 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-TRO Service.
200 OK (with content) 200 OK (with null result)	rrieria within the D-TRO Service. { "results": [{
400 Bad Request	{ "message": "Bad request", "errors": ["An exception has been raised that is likely due to a transient failure."] }

Reference	ES2	ES2					
Item	Value						
POST	/v1/search						
Name	Find existing D-TR	Os that matches requested criteria.					
Description		This POST method allows data publishers to query D-TROs that matches certain criteria within the D-TRO Service.					
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 dat	a publishe	ers to retri	ieve rule version	ons from the D-TRO		
Input data type(s)	☑ JSON ☑ XML ☑ File ☑ Other (please spe	ecify)						
Input Structure	Header Parameters		1		1			
Structure	Field Name	Data Type	Min Length	Max Length	Opportunity	Notes		
	X-Correlation-ID	UUID formatted string to track the request through the enquiries stack.						
	Request Parameters	3						
	Field Name Data Min Max Opportunity Notes Type Length Length							
	-	-	-	-	-	-		
Input data scope	-							
Output data type	☑ JSON ☑ XML ☑ File ☑ Other (please specify)							
Output	Response Parameters							
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": ' }]	[
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	Value						
GET	/v1/rules	/v1/rules						
Name	Get avail	able rules						
Description	This GET	Γ method allows o	data publishers	to retrieve rule	s from the D-TR	O Service.		
Input data type(s)		(please specify)						
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	/v1/rules					
Name	Get available rules						
Description		nethod allows data publishers to retrieve rules from the D-TRO Service.					
•	_	iction allows data publishers to retrieve rules from the B. Tree cervice.					
200 OK	o GitHub File }, { "scher "templ { "ic "n "ExceptionI "p "Source.pro Period.appl "ru o GitHub File }, o	<pre>"schemaVersion": "3.2.1",</pre>					
500 1 1 1	1						
500 Internal Server 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 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	string			36 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	☑ JSO ☑ XML ☑ File ☑ Othe	format: {Major}.{Minor}.{Patch}. ☑ JSON ☑ XML ☑ File ☑ Other (please specify)									
Output data	Response Parameters										
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}	es/{version}						
Name	Get available rule	lable rule by version						
Description	This GET method D-TRO Service.	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	"errors": [{ "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	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 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}						
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	"name": "ExceptionPeriodApp "path": "Source.provision.re nthPeriod.applicable "rule": {	"3.2.4", reekInMonth instances must be unique.", policableInstanceDayWithinMonthInstancesUnique" gulation.timeValidity.exceptionPeriod.recurringDayWeekMo InstanceOfDayWithinMonth" rebrevity (For an example of Rule response, please refer to be be be recurred at: Beta-01-DfT-D-TRO-001-GitHub File rebrevity (For an example of Rule response, please refer to be be response, please refer to be recurred at: Beta-01-DfT-D-TRO-001-GitHub File					
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 ²						
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 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						
	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	3				
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 schema versions ²				
Description					
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			

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							
- 5 - (-)	ĭ 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					1		
	Field Name	Data	Min	Max	Opportunity	Notes		
		Type	Length	Length				
	-	-	-	-	-	-		
Input data	-							
Scope Output data	☑ JSON							
type	⊠ XML							
type	⊠ Kille							
	☑ 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							
	{							
		a\/ersion"	·· "3 2 //"					
	"schema	aVersion"	': "3.2.4",					
	"schema" "templat	te": {	•	or an exar	mple of Schem	na response, please		
	"schema" "templat om	te": { itted for b	orevity (Fo			na response, please -TRO-001-GitHub File		
	"schema" "templat om	te": { itted for b	orevity (Fo			na response, please -TRO-001-GitHub File		
	"schema" "templat om refer to GitHu	te": { itted for b	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" "templatom 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	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	revity (Fodex docur : "3.2.0",	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	revity (Fodex docur : "3.2.0",	nent at: <u>E</u> or an exar	Beta-01-DfT-D-	TRO-001-GitHub File		

D (00					
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 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						
	区 File						
lmm i t	☑ Other (please specify) Header Parameters						
Input Structure			Min	Max	Opportunity	Notes	
Structure	Field Name	Data Type	Min Length	Max 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 ondo	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						
	⊠ File						
	☑ Other (please)						
Output	Response Parar						
data structure	Field Name	Data	Min	Max	Opportunity	Notes	
Siructure	Doto	Type 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": {						
						esponse, please refer to	
		x docum	ent at: <u>Bei</u>	(a-01-Df1	-D-TRO-001-0	GitHub File Index.docx)	
	}, "oneOf": [omitted for brevity (For an example of Schema response, please refe						
1							
	_	d for brev	itv (For ar	n example	e of Schema re	esponse, please refer to	
	omitte		• `	•		esponse, please refer to GitHub File Index.docx)	
	omitte GitHub File Inde],	x docum	ent at: <u>Bet</u>	ta-01-DfT	<u>-D-TRO-001-0</u>	GitHub File Index.docx)	
	omitte GitHub File Inde], "\$schema":	x docume https://j"	ent at: <u>Bet</u> son-scher	t <u>a-01-DfT</u> ma.org/dr	<u>-D-TRO-001-0</u> aft/2020-12/so	GitHub File Index.docx) chema",	
	omitte GitHub File Inde], "\$schema": "descriptior	x documo "https://j n": "DTRC	ent at: <u>Bet</u> son-scher) v3.2.4 d	t <u>a-01-DfT</u> ma.org/dr	<u>-D-TRO-001-0</u>	GitHub File Index.docx) chema",	
	omitte GitHub File Inde], "\$schema": "descriptior "additionalF	x documo "https://j n": "DTRC	ent at: <u>Bet</u> son-scher) v3.2.4 d	t <u>a-01-DfT</u> ma.org/dr	<u>-D-TRO-001-0</u> aft/2020-12/so	GitHub File Index.docx) chema",	
	omitte GitHub File Inde], "\$schema": "descriptior "additionalf },	x docume "https://j n": "DTRC Properties	ent at: <u>Bet</u> son-scher) v3.2.4 d	t <u>a-01-DfT</u> ma.org/dr	<u>-D-TRO-001-0</u> aft/2020-12/so	GitHub File Index.docx) chema",	
	omitte GitHub File Inde], "\$schema": "descriptior "additionalF	x docume "https://j n": "DTRC Properties	ent at: <u>Bet</u> son-scher) v3.2.4 d	t <u>a-01-DfT</u> ma.org/dr	<u>-D-TRO-001-0</u> aft/2020-12/so	GitHub File Index.docx) chema",	
Responses	omitte GitHub File Inde], "\$schema": "descriptior "additionalf },	x docume "https://j n": "DTRC Properties	ent at: <u>Bet</u> son-scher) v3.2.4 d	t <u>a-01-DfT</u> ma.org/dr	<u>-D-TRO-001-0</u> 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 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)	☑ XML						
	☑ File						
	☑ Other (please specify)						
Input	Header Parameters				,		
Structure	Field Name	Data	Min	Max	Opportunity	Notes	
	V O letie -	Туре	Length	Length	N4	LILUD forms attack at a taking or	
	X-Correlation- 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	⊥ er must be stri	ing in UUID format.	
scope	Trinon mironang a	по отпара	, a.e.	paramet	or made so day	mg m 0012 formati	
Output	☑ JSON						
data type	⊠ XML						
	ĭ File	: c .\					
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": { "type": "obj		.4",		· · ·		
200 011	"template": { "type": "objo "\$defs": {	ect",		n example	e of Schema r	objects	
200 011	"template": { "type": "objo "\$defs": { omitted	ect", d for brev	rity (For ar			objects esponse, please refer to	
200 011	"template": { "type": "objo "\$defs": { omitted	ect", d for brev	rity (For ar			objects	
200 011	"template": { "type": "objections": {	ect", d for brev x docume	rity (For ar 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", d for brev x documo d for brev	rity (For ar ent at: <u>Bet</u> rity (For ar	ta-01-DfT	e of Schema re	esponse, please refer to GitHub File Index.docx)	
	"template": { "type": "obje "\$defs": {	ect", d for brev x documo d for brev	rity (For ar ent at: <u>Bet</u> 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 ent at: <u>Bet</u> rity (For ar 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 ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher	n example ta-01-DfT ma.org/dr	e of Schema re -D-TRO-001-0 -D-TRO-001-0 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 ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher) v3.2.4 d	n example ta-01-DfT 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 ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher) v3.2.4 d	n example ta-01-DfT ma.org/dr	e of Schema re -D-TRO-001-0 -D-TRO-001-0 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 ent at: <u>Bet</u> rity (For ar ent at: <u>Bet</u> son-scher) v3.2.4 d	n example ta-01-DfT ma.org/dr	e of Schema re -D-TRO-001-0 -D-TRO-001-0 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 Internal Server Error	"errors": [rnal Server Error", d 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			