

EUDAMED Services Definition DTX for Economic Operators

Production v 2.14.1 2024

DTX for Economic Operators - Services Definitions

M2M Data Exchange available services for accessing MDR EUDAMED data

1. Introduction

1.1 Supported services operation

The services exposed by EUDAMED DTX are built around well known http standard commands:

- **GET** The GET method requests transfer of a current selected representation for the target resource. GET is the primary mechanism of information retrieval and the focus of almost all performance optimisations. Hence, when people speak of retrieving some identifiable information via HTTP, they are generally referring to making a GET request.
- **POST** The POST method requests that the target resource process the representation enclosed in the request according to the resource's own specific semantics.
- PUT The PUT method requests that the state of the target resource be created or replaced with the state defined by the representation
 enclosed in the request message payload. A successful PUT of a given representation would suggest that a subsequent GET on that same target
 resource will result in an equivalent representation being sent in a 200 (OK) response. However, there is no guarantee that such a state change
 will be observable, since the target resource might be acted upon by other user agents in parallel, or might be subject to dynamic processing by
 the origin server, before any subsequent GET is received. Thus, a PUT request always contains a full resource. This is necessary because, a
 necessary quality of PUT requests is idempotence the quality of producing the same result even if the same request is made multiple times.
- **PATCH** The PATCH method requests that a set of changes described in the request entity be applied to the resource identified by the Request. With PATCH, however, the enclosed entity contains a set of instructions describing how a resource currently residing on the origin server should be modified to produce a new version. The PATCH method affects the resource identified by the Request-URI, and it also *may* have side effects on other resources; i.e., new resources may be created, or existing ones modified, by the application of a PATCH. To ensure an idempotent behaviour, clients using this kind of patch application SHOULD use a conditional request such that the request will fail if the resource has been updated since the client last accessed the resource.

1.2 Data exchange generic service overview

The service definition must contain the information about types of messages (from the data exchange messaging patterns) compatible, available operations at service level (each operation will represent a specific functionality), means to query / filter (criteria) the request, security rules that may apply depending on the actor that perform it and finally the information available as response, eventually number of provided entities, pagination and versioning capabilities.

In EUDAMED DTX, most of the entities exchanged (through the exposed services) are related (i.e. have dependencies between them). To model this, a concept of link has been introduced. In this way, a service is able to isolate the information related to the main entity and only to reference the other related entities (if those entities are covered by additional services).

Table 1 briefly describes a template to define the service and available operations.

Table 1. Service definition and main operations.

Data Entity Exchanged	Service Type	Operation	Description	Communication Patterns Supported
Main: [Entity] Related: [Entities directly related to the main one]		Download (GET)	This operation is invoked to request information using a criteria mechanism.	Pull
	[Entity] Service	Upload (Create) (POST) Update (PUT / PATCH)	This operation is invoked to upload / update / patch information to EUDAMED.	Push

The parameters and the return values for each operation are described in Table 2.

Table 2. Parameters and return values of the service operations.

Opera tion	Payload	Return Value
Downl oad	[Criteria] template (empty / query criteria)	A PullResponse type message containing a list of [Entity] + [Entities directly related (linked) to the main one] (optional)
Upload	A list of [Entity] + [Entities directly related (linked) to the main one] (optional)	Acknowledgement

2. Device service

2.1 Service definition

Info	Parameters	Payload
Service Name	Query Entity:	Entity:
 DeviceSer vice 	[DIDownloadServiceCriteriaType::*]	 [IVDRDevice:: *] [MDRDevice:: *]
Service ID	Criteria details:	 [IVDEUDevice:: *] [MDEUDevice:: *] [DPDevice:: *]
DEVICE	MFActorCode/PRActorCode Device.BasicUDI::MFCode/PRCode (When the Actor calling the service is a MF or PR - the filter is required to be provided and to have the	• [PRDevice:: *]
Message Type	SRN of the Actor initiating the request. A MF/PR can only download their own Devices)	Entity Related:
• Pull	(Only full SRN is taken in consideration, no wildcards)	[Certificate::CertificateIdentifier] -> BasicUDI.certificateLinks.certificate
Operation	ARActorCode Device.BasicUDI::ARCode (When the Actor calling the service is an AR	
 Download 	- the filter is required to be provided and to have the SRN of the Actor initiating the request. An AR can only download the Devices to which they are associated)	[ClinicalInvestigation:: clinicalInvestigationId] -> BasicUDI. clinicalInvestigationLinks.
Operation Type	(Only full SRN is taken in consideration, no wildcards)	clinicalInvestigationId
• GET	BasicUDIDICode Device.BasicUDI::identifier.DICode	Versioning:
Functional requirement	Basic UDI-DI Version Date Device.BasicUDI::entity.versionDate (returns all Basic UDI- DIs which have been updated after the mentioned date - together with the UDI-DIs linked to them (latest version)).	default latest version will be returned for the Basic UDI-DI, UDI-DI and associated entities
 FS-UDID- 008.03 	UDIDICode UDIDIData::identifier.DICode	
Actors • NB (M2M	UDI-DI Version Date Device.UDIDIData::entity.versionDate (returns all UDI-DIs which have been updated after the mentioned date - together with the last version of Basic UDI-DI version linked to them.)	Pagination: max 300 items per response
 NB Profile) CA (M2M CA Profile) 	RiskClass Device.BasicUDI::riskClass (Only in combination with <i>MFActorCode or ARActorCode</i>)	
 MF, Non EU MF (M2M MF 	Country Device.UDIDIData.MarketInfos::MarketInfo.Country (returns all UDI-DIs which are placed on the market in the selected Country)	
Profile)PR (M2M	Applicable Legislation Device Applicable Legislation;	
PR Profile)AR (M2M AR Profile)	State Device {BasicUDIDIType UDIDIType}.state (Only CAs and NBs can download Submitted Devices - can apply the state filter to SUBMITTED);	
	Applied Default Criteria:	
	Device {BasicUDIDIType UDIDIType}.state ="REGISTRED / SUBMITTED"	
	General Criteria rules:	
	At least one search criteria provided	
	"AND" condition between provided criteria	
	only one value for a given criteria (exact match)	

Service Name	Criteria:	Entity:
 DeviceSer vice 	N/A	 [IVDRDevice:: *] [MDRDevice:: *] [IVDEUDevice:: *]
Service ID	Default Security Validation:	 [MDEUDevice:: *]
DEVICE	DeviceBasicUDIType.MFActorCode == Push::NodeType.nodeActorCode	• [PRDevice:: *]
Message Type	PRBasicUDIType.PRActorCode == Push::NodeType.nodeActorCode	Entity Related:
• Push		[Certificate::CertificateIdentifier] -> BasicUDIType.certificateLinks. certificateLink
Operation • Upload New B- UDIs and UDIDIS		[ClinicalInvestigation:: clinicalInvestigationId] -> DeviceBasicUDIType.deviceData. clinicalInvestigationLinks. clinicalInvestigLink
Operation Type		Versioning:
POST		Implicit a new incremented version will be created
Functional requirement		Pagination:
 FS-UDID- 008.01 (System or Procedure Pack) FS-UDID- 008.02 (Device) 		N/A
Actors		
 MF (M2M MF Profile) PR (M2M PR Profile) 		

3. BasicUDI service

3.1 Service definition

	Info	Parameters	Payload
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Service Name	Criteria: N/A	Entity:
BasicUDIService		[IVDRBasicUDI:: *]
Service ID	Default Validation:	[MDRBasicUDI:: *]
 Basic_UDI 	DeviceBasicUDI.MFActorCode == Push::NodeType.nodeActorCode	[IVDEUDI:: *]
Message Type	PRBasicUDI.PRActorCode == Push::NodeType.nodeActorCode	[MDEUDI:: *]
• Push	DeviceBasicUDI.identifier must be already registered in EUDAMED	[PRBasicUDI:: *]
Operation		
Update	Version validation will be performed by the following pseudo code:	
Operation Type	If the BasicUDIType.version $= 0$ then	Entity Related: N/A
• PATCH	EUDAMED will increment with 1 the Basic UDI-DI version without validation against the current version in EUDAMED.	
Functional requirement	else if the BasicUDIType.version > 1 then	Versioning: new incrementer version will be created
 FS-UDID-008.01 (System or Procedure Pack) 	Eudamed will verify if the version provided in the payload is the next incremented version stored currently in Eudamed, otherwise an error will be returned	
 FS-UDID-008.02 (Device) 	BasicUDIType.version = = Current Eudamed Version +1	Pagination: N/A
Actors		
 MF, NonEU MF (M2M MF Profile) PR (M2M PR Profile) 	 Updatable fields for Basic UDI/ EUDAMED DI are mentioned in the Data Dictionary; Consistency validations between values of the property stored in EUDAMED and the ones supplied in the new version are performed for the following fields: Is it a System which is a Device in itself, Procedure pack which is a Device in itself (MDRBasicUDIType.type) Is it a Kit (IVDApplicablePropertiesGroup. KIT) Special Device Type (MDRBasicUDIType/IVDRBasicUDIType.specialDevice) Risk Class (BasicUDIType.riskClass) Active Device (MDRApplicablePropertiesGroup.active) Device Intended to administer and/or Remove medicinal product (MDApplicablePropertiesGroup.administeringMedicine) Implantable (MDApplicablePropertiesGroup.measuringFunction) Reusable Surgical Instruments (MDApplicablePropertiesGroup.reusable) Companion Diagnostic (IVDApplicablePropertiesGroup. nearPatientTesting) Patient Testing (IVDApplicablePropertiesGroup. nearPatientTesting) Patient Self Testing (IVDApplicablePropertiesGroup. selfTesting) Reagent (IVDApplicablePropertiesGroup. instrument) Tissues and cells - Presence of numan tissues or cells, or their derivates (DeviceBasicUDIType.numanTissuesCells) Tissues and cells - Presence of cells or substances of microbial origin (IVDRBasicUDIType.numanTissuesCells) Presence of a substance which, if used separately, may be considered to be a medicinal product derived from human blood or plasma (MedicalHumanProductSubstanceType.type) 	

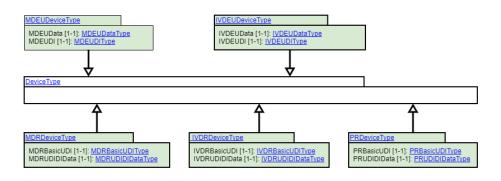
4. UDI-DI service

4.1 Service definition

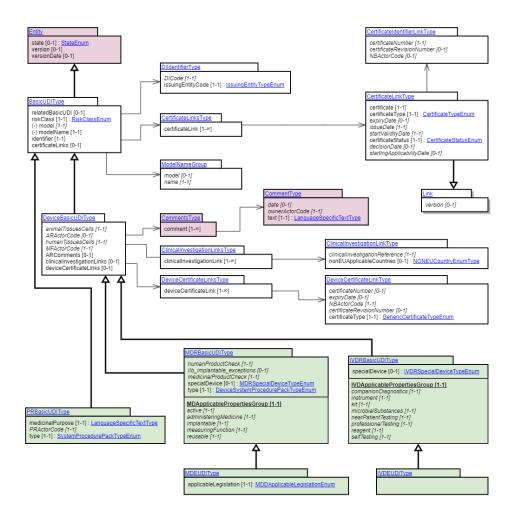
N/A alidation Criteria: sicUDIType.MFActorCode == Push::NodeType.nodeActor IDIType.PRActorCode == Push::NodeType.nodeActorCod	le Entity Related: N/A Versioning: Implicit a new incremented version will be
sicUDIType.MFActorCode == Push::NodeType.nodeActor	[MDRUDIDIData::*] Code [PRUDIDIData::*] le Entity Related: N/A Versioning: Implicit a new incremented version will be
sicUDIType.MFActorCode == Push::NodeType.nodeActor	Code [PRUDIDIData::*] le Entity Related: N/A Versioning: Implicit a new incremented version will be
	le Entity Related: N/A Versioning: Implicit a new incremented version will be
IDIType.PRActorCode == Push::NodeType.nodeActorCod	Entity Related: N/A Versioning: Implicit a new incremented version will be
	Versioning: Implicit a new incremented version will be
	incremented version will be
	incremented version will be
	created
	Pagination: N/A

Service Name	Criteria: N/A	Entity:
UDIDIService		[IVDRUDIDIData:: *]
Service ID	Default Validation Criteria:	[MDRUDIDIData:: *]
• UDI_DI	UDIDIDataType.basicUDIIdentifier (DeviceBasicUDI).MFActorCode == Push::	[IVDEUData:: *]
Message Type	NodeType.nodeActorCode UDIDIDataType.basicUDIIdentifier (PRBasicUDI).PRActorCode == Push::NodeType.	[MDEUData:: *]
Push	nodeActorCode	[PRUDIDIData:: *]
Operation	UDIDDIDataType.identifier and BasicUDIType.identifier must be already registered in EUDAMED	
Upload		
Operation Type	Version validation will be performed by the following pseudo code:	Entity Related: N/A
• PATCH	If the UDIDIDataType.version == 0 then	
Functional requirement	EUDAMED will increment with 1 the UDI-DI version without validation against the current version in EUDAMED.	Versioning: new incremented
• FS-UDID-008.01	else if the UDIDIDataType.version > 1 then	version will be created
(System or Procedure Pack) • FS-UDID-008.02 (Device)	Eudamed will verify if the version provided in the payload is the next incremented version stored currently in Eudamed, otherwise an error will be returned	Pagination: N/A
Actors	UDIDIDataType.version = = Current Eudamed Version +1	
 MF, NonEU MF (M2M MF Profile) PR (M2M PR Profile) 	Updatable fields for UDI-DI/ EUDAMED ID are mentioned in the Data Dictionary; Consistency validations between values of the property stored in EUDAMED and the ones supplied in the new version are performed for the following fields: • Quantity of Device • Type of UDI-PI • Containing latex • Labelled as single use • Maximum number of reuses • Device labelled sterile • Need for sterilisation before use • Reprocesseed single use device • Intended purpose other than medical (Annex XVI) • New Device	

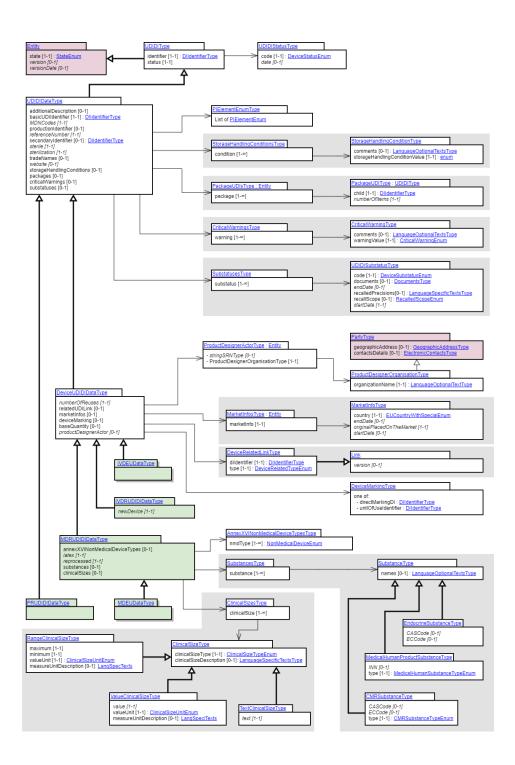
4.1.1 Entity structure overview



4.1.2 Basic UDI-DI/ EUDAMED DI entity structure overview



4.1.3 UDI-DI/ EUDAMED ID entity structure overview

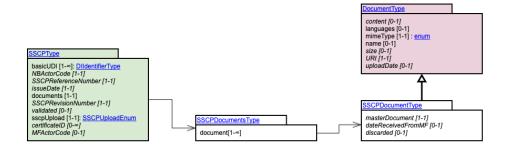


5. SSCP service

5.1 SSCP Service definition

Info	Parameters	Payload
Service Name	Criteria Entity:	Entity:
 SSCPDow nloadServi 	[SSCPDownloadServiceCriteriaType::*]	[SSCPType::*]
ce	Criteria details:	Entity Related:
Service ID	IssueDate (Start)	[SSCPDocumentType::*]
 SSCP 	SSCPType.issueDate	[DocumentType::*]
Message Type	IssueDate (End) SSCPType.issueDate	Versioning:
Pull	SSCPReferenceNumber	Latest SSCP version will be returned if no
Operations	SSCPType.SSCPReferenceNumber	SSCPRevisionNumber is provided.
 Download 	SSCPRevisionNumber SSCPType.SSCPRevisionNumber	Pagination:
Operation Type	Basic UDI-DI SSCPType.basicUDI	max 300 items per page, multiple pull request / response correlated messages / size of message
• GET	Certificate ID SSCPType.certificateID	contenated messages / size of message
	MFActorCode SSCPType.MFActorCode	
Actors	NBActorCode SSCPType.NBActorCode	
• M2M CA	Default Applied Security Criteria:	
 Profile M2M NB Profile 	MFActorCode is not available for the MF.	
 M2M MF Profile 	General Criteria rules:	
 M2M AR Profile 	At least one search criteria provided (except SSCPRevisionNumber, in this case SSCPReferenceNumber must be provided)	
	"AND" condition between provided criteria	
	only one value for a given criteria (exact match)	

5.1.1 SSCP service structure overview

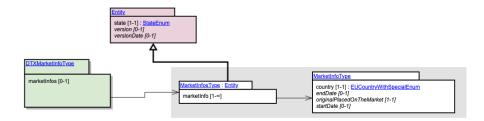


6. MarketInfo service

6.1 MarketInfo Service definition

Info	Parameters	Payload
Service Name	Criteria: N/A	Entity:
 Update of Market 		[DTXMarketInfo::*]
information	Default Validation Criteria:	Entity Related:
Service ID	UDIDIDataType.basicUDIIdentifier (DeviceBasicUDI).MFActorCode == Push::NodeType. nodeActorCode	[MarketInfotype::*] [Entity::*]
 MARKET_INFO 	UDIDDIDataType.identifier must be already registered in EUDAMED	
Message Type	Version validation will be performed by the following pseudo code:	Versioning:
Push	If the UDIDIDataType.version $= 0$ then	New incremented version will be created
Operations	EUDAMED will increment with 1 the market information version	
 Upload 		Pagination:
Operation Type	without validation against the current version in EUDAMED.	N/A
• PUT	else if the UDIDIDataType.version > 1 then	
	Eudamed will verify if the version provided in the payload is	
Actors	the next incremented version stored currently in Eudamed, otherwise an error will be returned	
• M2M MF	UDIDIDataType.version = = Current Eudamed Version +1	
Profile	else if the UDIDIDataType.version == 1 then UDIDIDataType.version will be assigned to Eudamed version	
	Updatable fields for the MarketInfo are mentioned in the Data Dictionary;	
	Consistency validations between values of the property stored in EUDAMED and the ones supplied in the new version are performed for the following fields:	
	 Country validated against ENUM_MDR_COUNTRY There cannot be two (2) identical countries provided (ERR-BR-DTX-UDID-098.01-01: A Country can be specified only once in a Market information for a UDI-DI) When country value is not within the ENUM the system will throw: ERR-BR-DTX-UDI-100: Not a EU country - The country code provided is not an EU country. originalPlacedOnTheMarket There must be no 2 siblings that have their value set to True. Only one marketInfo entity shall have originalPlacedOnTheMarket set to True. Otherwise the system will throw the following error: 	
	 ERR-BR-DTX-UDID-096.01-01: Only one country can be set as a member state where the device is to or has been first placed on the EU market The country for which the flag originalPlacedOnTheMarket == true must be the same country as the current stored value of the device in EUDAMED. Otherwise the system will throw: BR-DTX-UDI-101 : The country where the device has been first placed on the EU market cannot be changed during MarketInfo updates. Please use the UDI-DI update service in order to update the first country where the device has been placed on the EU market. StartDate and EndDate Date format will be validated against the XSD Schema. 	

6.1.1 Market Information service structure overview

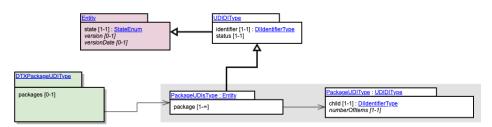


7. Container Package service

7.1 Container Package Service definition

Info	Parameters	Payload
Service Name	Criteria: N/A	Entity:
 Update of Container 		[DTXPackageUDI::*]
Package	Default Validation Criteria:	
Service ID	UDIDIDataType.basicUDIIdentifier (DeviceBasicUDI).MFActorCode == Push::NodeType. nodeActorCode	Entity Related:
 PACKAGE_UDI 	UDIDIDataType.basicUDIIdentifier (PRBasicUDI).PRActorCode == Push::NodeType.	[PackageUDI::*] [UDIDIType::*]
Message Type	nodeActorCode	[Entity::*]
Push	UDIDDIDataType.identifier must be already registered in EUDAMED	
Operations	Version validation will be performed by the following pseudo code:	Versioning:
Upload	If the UDIDIDataType.version == 0 then	New incremented version will be created
Operation Type	EUDAMED will increment with 1 the container package version without validation against the current version in EUDAMED.	
• PUT	else if the UDIDIDataType.version > 1 then	Pagination:
Actors	Eudamed will verify if the version provided in the payload is the next incremented version stored currently in Eudamed, otherwise an error will be returned	N/A
M2M MF Profile	UDIDIDataType.version = = Current Eudamed Version +1	
	else if the UDIDIDataType.version == 1 then UDIDIDataType.version will be assigned to Eudamed version	
	Updatable fields for the Container Package are mentioned in the Data Dictionary;	
	Consistency validations between values of the property stored in EUDAMED and the ones supplied in the new version are performed for the following fields:	
	 The last child element in the XML payload (top/down order) will be the root UDI-DI of the container package structure. It will indicate the link between a container package to another and thus creates the hierarchy of the packages. status is validated against ENUM_UDID_ContainedItemStatus numberOfItems is a positive integer and is validated against the XSD Schema 	

7.1.1 Container Package service structure overview



- 7. Product original manufacturer service
- 7.1 Product original manufacturer service definition

Info	Parameters	Payload
Service Name	Criteria: N/A	Entity:
 Update of Product original manufacturer 	Default Validation Criteria:	[DTXProductDe signer::*]
Service ID	UDIDIDataType.basicUDIIdentifier (DeviceBasicUDI).MFActorCode == Push::NodeType.nodeActorCode	Entity Related:
Message Type	UDIDDIDataType.identifier must be already registered in EUDAMED Version validation will be performed by the following pseudo code:	[DIIdentifierType :*]
Push Operations	If the UDIDIDataType.version $= 0$ then	[ProductDesigne rActorType::*]
Upload	EUDAMED will increment with 1 the container package version without validation against the current version in EUDAMED.	[ProductDesigne
Operation Type	else if the UDIDIDataType.version > 1 then	rOrganisationTy pe::*]
• PUT	Eudamed will verify if the version provided in the payload is the next incremented version stored currently in Eudamed, otherwise an error will be returned	[PartyType::*]
Actoro	UDIDIDataType.version = = Current Eudamed Version +1	[UDIDDIType::*]
• M2M MF	else if the UDIDIDataType.version = 1 then UDIDIDataType.version will be assigned to Eudamed version	Versioning:
Profile	 Updatable fields for the product original manufacturer are mentioned in the Data Dictionary; UDIDDIDateType.identifier mjst be registsred in Eudamed otherwise the system will respond with BR-DTX-UDI-099 : No device found - No UDI-DI/EUDAMED ID has been found for the given issuing agency. UDIDIDataType.state must be in Registered state otherwise the system will respond with ERR-BR-DTX-UDI-106.05-01: Product original manufacturer information can be updated for an existing UDI-DI /EUDAMED ID being in state Registered only. ProductDesignerOrganisationType must be registered in Eudamed otherwise the system will respond with ERR-BR-DTX-UDID-629.05-01: No product original manufacturer entity found linked to this device. ProductDesignerorganisationType.organizationName must be unique. otherwise the system will respond with ERR-BR-DTX-UDID-629.05-04: Cannot uniquely identify the entity to update. 	New incremented version will be created Pagination: N/A

10.1.1 Product original manufacturer service structure overview

