**EUROPEAN SPACE AGENCY**
DIRECTORATE OF OPERATIONS AND INFRASTRUCTURE
OPS-GI

Directorate of Operations and Infrastructure

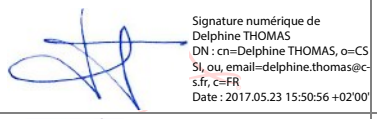
# EXTERNAL USER INTERFACE CONTROL DOCUMENT (EUICD)

## EGOS Data Dissemination System (EDDS)

Reference: EGOS-GEN-EDDS-ICD-1001
Version: 13.0
Date: 2017-05-05

| | | | |
|---|---|---|---|
| **Document Title:** | External User Interface Control Document (EUICD) | | |
| **Document Reference:** | EGOS-GEN-EDDS-ICD-1001 | | |
| **Document Version:** | 13.0 | **Date:** | 2017-05-05 |
| **Abstract** | | | |
| | | | |

**Approval Table:**

| Action | Name | Function | Signature | Date |
|---|---|---|---|---|
| Prepared by: | Rokibul Uddin | EDDS Team |  | 2017-05-05 |
| Verified by: | Delphine Thomas | Application Quality Assurance Engineer (EDDS) |  Signature numérique de Delphine THOMAS DN : cn=Delphine THOMAS, o=CS SI, ou, email=delphine.thomas@c-s.fr, c=FR Date : 2017.05.23 15:50:56 +02'00' | 2017-05-05 |
| Approved by: | Rui Santos | Technical Officer |  Digitally signed by Rui Santos Date: 2017.08.18 14:02:51 +02'00' | 2017-05-05 |

**Authors and Contributors:**

| Name | Contact | Description | Date |
|---|---|---|---|
| M. Hawkshaw | michael.hawkshaw@cgi.com | Author | 2016-10-19 |
| R. Ots | rauno.ots@cgi.com | Contributer | 2016-10-19 |
| K. Panitzek | kamill.panitzek@cgi.com | Contributer | 2016-10-19 |
| Rokibul Uddin | rokibul.uddin@c-ssystems.de | Contributor | 2017-05-05 |

**Distribution List:**



**Document Change Log**

| Issue | Date | Description |
|---|---|---|
| 1.0 | 2007-04-13 | Update in line with PDR outcome. |
| 2.0 | 2010-10-11 | Issue of document for PA delivery |
| 2.1 | 2011-03-29 | Issue for Final Acceptance Delivery |
| 3.0 | 2011-09-09 | Issue for EDDS v1.1.0i1 |
| 3.1 | 2011-10-24 | Issue for EDDS v1.1.0i2 |
| 3.2 | 2011-11-14 | Issue for EDDS v1.1.0i3 |
| 3.3 | 2012-02-29 | Issue for EDDS v1.1.1i1 |
| 3.4 | 2012-04-04 | Issue for EDDS v1.1.1i2 |
| 3.5 | 2012-05-18 | Issue for EDDS v1.1.2i1 |
| 3.6 | 2012-09-17 | Issue for EDDS v1.2.0i1 |
| 3.7 | 2012-09-27 | Issue for EDDS v1.2.0i2 |
| 3.8 | 2012-10-12 | Issue for EDDS v1.2.0i3 |
| 3.9 | 2013-03-21 | Issue for EDDS v1.2.1i1 |
| 3.10 | 2013-04-10 | Issue for EDDS v1.2.1i2 |
| 4.0 | 2013-06-21 | Issue for EDDS v1.2.2i1 |

| Issue | Date | Description |
|---|---|---|
| 5.0 | 2013-12-03 | Issue for EDDS v1.3.0i1 |
| 6.0 | 2014-05-28 | Issue for EDDS v1.4.0i1 |
| 7.0 | 2014-12-17 | Issue for EDDS v1.5.0i1 |
| 8.0 | 2016-02-04 | Issue for EDDS v1.6.0i1 |
| 9.0 | 2016-07-04 | Issue for EDDS v.2.0.0i1 |
| 11.0 | 2016-10-19 | Issue for EDDS v.2.1.0i1 |
| 13.0 | 2017-05-05 | Issue for EDDS v.2.2.0i1 |

**Document Change Record**

| | | | |
|---|---|---|---|
| **DCR No:** | 01 | | |
| **Date:** | 2017-05-05 | | |
| **Document Title:** | External User Interface Control Document (EUICD) | | |
| **Document Reference:** | EGOS-GEN-EDDS-ICD-1001 | | |
| **Page** | **Paragraph** | **Reason for Change** | |
| 4, 93 | 3.1, 10.3, 10.4 | Updated for edds#908 | |
| 30 | 6.2.3.1.1.2 | Updated for edds#924 | |
| 3, 107 | 2.2, 12.4 | Updated for edds 2.2 | |

# TABLE OF CONTENTS



# TABLE OF TABLES



# TABLE OF FIGURES



# 1. Introduction

## 1.1 Purpose

This document defines the service interfaces available to clients of the EGOS Data Dissemination System (EDDS).

Note: In most cases, an XML schema file is associated to the interface. In the case of updates, the XML files shall be the first source of update. Only after the update of the XML schema file, the change can be reported back to the EUD document.

## 1.2 Scope

This document describes the service interfaces between the EDDS and its clients. The following interfaces are described:

- EDDS Web Services Interface
- Stream Web Service Interface

This document is a description of the interfaces detailing the common elements that are to be found for all missions. It is expected that other documentation will be available to describe mission-specific elements of the interfaces described.

The readership is expected to be software developers, ESA technical authorities with interest in the EDDS component and users of the EDDS.

It is expected that mission specific Data Definition Interface Documents (DDID) will be created based on the information given in this document (EUICD).

## 1.3 Document Overview

Section 1 - Introduction (this section) provides the purpose, scope and this document's overview.

Section 2 - References provides the list of reference documents.

Section 3 - Glossary provides a list of acronyms and terms used throughout this document.

Section 4 - Software Overview provides a brief description of the software system and its context.

Section 5 – Describes the data types that are supported by the interface.

Section 6 – Describes the formatting of the data provided through the interface.

Section 8 – Describes the Delivery mechanism provided by the EDDS.

Section 9 - Describes the underlying web service operations that provide service functionality.

Section 10 – Describes the EDDS Email interface

Section 11 – Describes the client hosted File Server interface

Section 12 – Describes the generic client Java API provided by the EDDS

Appendix A – Provides a list of XML schemas, which define the acknowledgement data types, as described in the acknowledgement.xsd.

Appendix B – Provides a list of XML schemas, which define the authentication data types, as described in the authentication.xsd.

Appendix C – Provides a list of XML schemas, which define the batch request data types, as defined in the batchRequest.xsd.

Appendix D – Provides a list of XML schemas, which define the common data types, as defined in the common.xsd.

Appendix E – Provides a list of XML schemas, which define the delivery data types, as defined in the delivery.xsd.

Appendix F – Provides a list of XML schemas, which define the file system data types, as defined in the filesystem.xsd

Appendix G – Provides a list of XML schemas, which define the filter data types, as defined in the filted.xsd.

Appendix H – Provides a list of XML schemas, which define the format data types, as defined in the format.xsd.

Appendix I – Provides a list of XML schemas, which define the report data types, as defined in the report.xsd.

Appendix J – Provides a list of XML schemas, which define the schedule data types, as defined in the schedule.xsd.

Appendix K – Provides a list of XML schemas, which define the user management data types, as defined in the userrequest.xsd.

Appendix L – Provides a list of XML schemas, which define the stream data types, as defined in the streamrequest.xsd.

Appendix M – Provides info about the EDDS Parameter Spreadsheet.

# 2. References

## 2.1 Applicable documents

| Ref. | Document Title | Issue and Revision, Date |
|---|---|---|
| [AD-1] | CCSDS, XML Formatted Data Unit (XFDU) Structure and Construction Rules. | BLUE BOOK 661.0-B.1, Set 2008 |
| [AD-2] | Generic Data Disposition System (GDDS) Generic Data Delivery Interface Document DDID (EGOS-MCS-GDDS-1003) Appendix F | Issue 1.4, 2008-04-11 |

## 2.2 Reference documents

| Ref. | Document Title | Issue and Revision, Date |
|---|---|---|
| [RD-1] | EDDS Client Software User Manual<br>[EGOS-GEN-EDDS-SUM-1001] | Version 12.0 2017-05-05 |
| [RD-2] | Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies [RFC 2045] | November 1996 |
| [RD-3] | Web Services Definition Language (WSDL) 1.1<br>[ http://www.w3.org/TR/wsdl ] | 2001-03-15 |
| [RD-4] | MUST Architectural Design Document [no reference] | Version 1.1, 2006-01-13 |
| [RD-5] | XSL Transforms (XSLT) Version 1.0<br>[ http://www.w3.org/TR/xslt ] | 1999-11-16 |
| [RD-6] | Extensible Markup Language (XML) 1.0 (Fourth Edition)<br>[ http://www.w3.org/TR/xml ] | 2006-09-29 |
| [RD-7] | SOAP Version 1.2 Part 1: Messaging Framework<br>[ http://www.w3.org/TR/soap12-part1/ ] | 2003-06-24 |
| [RD-8] | Deleted | Deleted |
| [RD-9] | Deleted | Deleted |
| [RD-10] | SCOS-2000 Glossary, Definitions and Acronyms [EGOS-MCS-S2K-GLO-0001] | Version 1.7 2007-03-20 |
| [RD-11] | Software Requirements Specification (SRS), EGOS Data Dissemination System (EDDS)<br>[EGOS-GEN-EDDS-SRS-1001] | Version 16.0, 2017-05-05 |
| [RD-12] | Software Design Document (SDD), EGOS Data Dissemination System (EDDS)<br>[EGOS-GEN-EDDS-SDD-1001] | Version 13.0, 2017-05-05 |
| [RD-13] | Generic Data Disposition System (GDDS) Generic Data Delivery Interface Document (DDID) [EGOS-MCS-GDDS-1003] | Version 1.4, 2008-04-11 |
| [RD-14] | TDRS External Interfaces Control Document [EGOS-MCS-S2K-ICD-0017] | Version 5.1, 2008-08-22 |
| [RD-15] | EDDS Configuration and Installation Guide<br>[EGOS-GEN-EDDS-CIG-1001] | Version 12.0, 2017-05-05 |
| [RD-16] | Google Protocol Buffers [ https://developers.google.com/protocol-buffers/ ] | 2012-09-17 |

# 3. Glossary

## 3.1 Acronyms

| Acronyms | Description |
|---|---|
| AES | Advanced Encryption Standard |
| APID | Application Identifier |
| ASCII | American Standard Code for Information Interchange |
| CCSDS | Consultative Committee for Space Data Systems |
| CDR | Critical Design Review |
| CUC | CCSDS Unsegmented Code |
| DARC | Parameter Archive |
| DDID | Data Definition Interface Document |
| DVD | Digital Video Disc (Digital Versatile Disc) |
| EDDS | EGOS Data Dissemination System |
| ESA | European Space Agency |
| EGOS | ESA Ground Operations System |
| ERT | Earth Reception Time (Note: SCOS-2000 uses the SCOS-2000 reception time stamp and not the ground station reception time stamp.) |
| EV | Event (Mission control system event) |
| FARC | File Archive |
| GDDS | Generic Data Disposition System |
| HTTP | Hypertext Transfer Protocol |
| HTTPS | HTTP over Secure socket layer |
| JMS | Java Messaging Service |
| MAS | Mission Automation System |
| MCS | Mission Control System |
| MMI | Man Machine Interface |
| MUST | Mission Utility & Support Tool |
| OBEV | On-board Event |
| OBQ | On-board Queue |
| OBSM | On-board Software Maintenance |
| OBT | On-board Time |
| OOL | Out Of Limit |
| PARC | Packet Archive |
| PID | Process Identifier |
| PUS | Packet Utilisation Standard |
| SCOS | Spacecraft Control and Operations System |
| SMTP | Simple Mail Transfer Protocol |
| SMTPs | Simple Mail Transfer Protocol Secure |
| SOAP | *Originally* - Simple Object Access Protocol - *but since version 1.2 it has no official meaning* |
| SPID | SCOS-2000 Packet Identifier |
| SUM | Software Users Manual |
| TBD | To be decided |
| TBW | To be written |
| TC | Telecommand |
| TM | Telemetry |
| WSDL | Web Services Description Language |
| XFDU | XML Formatted Data Unit |
| XML | Extensible Mark-up Language |

| Acronyms | Description |
|---|---|
| XSL | Extensible Stylesheet Language |
| XSLT | XSL Transformations |

## 3.2 Definition of Terms

| Terms | Description |
|---|---|
| Batch Service | An EDDS service that allows a user or client application to make a request for mission data and receive a (single) response from the EDDS that contains the complete set of data requested. |
| Stream Service | An EDDS service that allows a client application to receive a continuous stream of mission data rather than a finite stored data set. |
| SCOS-2000 | SCOS-2000 is a generic configurable spacecraft control and monitoring system with multi-domain and multi-mission capabilities, which operates in a scalable distributed environment. It is intended to be taken by client missions and customised to meet their specific requirements. At the time of writing this document SCOS-2000 release 5 is expected to be the baseline. |
| Web Services | Web services provide a standard means of interoperating between different software applications, running on a variety of platforms and/or frameworks. Web services are characterized by their great interoperability and extensibility, as well as their machine-processable descriptions thanks to the use of XML. They can be combined in a loosely coupled way in order to achieve complex operations. Programs providing simple services can interact with each other in order to deliver sophisticated added-value services. [ quoted from W3C Web services Activity Statement - http://www.w3.org/2002/ws/Activity ] |
| SCOS-2000 Domain | The controlled or controlling entity whose packet data is stored in a dedicated SCOS-2000 multi-domain archive. For example, a spacecraft or a ground station or a controlling domain such as System Control. Each individual spacecraft will be mapped to a specific domain. Each domain will have its own instance of SCOS-2000. Taken from [RD-10]. |
| SCOS-2000 Packet Identifier (SPID) | The identifier of the history file containing all instances of a SCOS-2000 packet. This is unique for each packet type (TM, TC and EV). In the telemetry processing, the SPID is also used as the unique identifier of the packet content for fixed packets. Taken from [RD10]. |
| SCOS-2000 DataStream | A logical grouping of SCOS-2000 history files used to partition the historical data and to enable the selective retrieval and processing of them. Also refers to a stream of telemetry transfer frame data received by the SCOS-2000 Packetiser. Taken from [RD10]. |
| SCET | Used in this document to indicate the value of the counter from the spacecraft's onboard clock (i.e. an integer value). |
| Onboard Time (OBT) | Used in this document to mean the UTC correlated onboard time corresponding to SCET. It should be noted that duplicate packets with the same SCET can have a different OBT if they are time-stamped using a different time-correlation. |

# 4. Software Overview

The primary purpose of the EDDS is to provide controlled access to mission data for users who do not have access to the mission control system (MCS) monitoring and control facilities. The data includes science and non-science telemetry data, telecommand data, and auxiliary data such as flight dynamics data.

The EDDS offers data services and management services. A user interface is provided to these services through the EDDS Client Application see [RD-1]. This document (EUICD) describes the interfaces available to users and client applications. These external interfaces provide access to the EDDS data services:

- Authentication Services
- Batch Service
- Stream Service
- User Management Service

## *4.1 EDDS Services Overview*

### 4.1.1 Authentication Services

The EDDS User Management Service allows a client application to make request for the log in and log out of the users from the EDDS. It also allows for a sufficiently privileged user to update the LDAP details held on themselves or others.

### 4.1.2 Batch Service

The batch service is intended to allow clients to make requests for mission data and receive a data response that contains a complete set of data that matches the request. In general, a request lists the data types and allows the user to apply a set of filters for each data type. The response data is sent to the client via the delivery method indicated in the request. A batch service request can be viewed as transient in the sense that the EDDS processes the request, builds the data set (by retrieving the relevant data) and then delivers the data set to the user. The request is then considered complete.

A batch request is submitted as an XML document. The data response can take one of these forms:

- A binary or ASCII file (can also be compressed or encrypted);
- An XML file displayed on the MMI.

The format of response content depends on the type of requests as described in Section 6

Each request always has associated acknowledgement data. The acknowledgement data can be return to the user on explicit user request. The acknowledgement data indicates the status of the request and gives details for failures. Acknowledgement data is received as an e-mail or can be downloaded as an XML document.

The Batch request response files can be compressed. The compressed files can be one of a number of file archive formats that are supported by the EDDS. By default, compression is applied to the data. Currently the supported compressed file types are:

- zip – ZIP;
- tar - USTAR format (uncompressed);
- tar.gz - USTAR format compressed with gzip.

On top to the data compression, the EDDS allows to encrypt the data according to the AES algorithm, which is enabled or disabled at mission level.

### 4.1.3 Stream Service

An EDDS stream service allows a client application to receive a continuous stream of mission data rather than a finite stored data set. A client application makes a request for the stream service to the EDDS and then actively requests the streamed data from the EDDS.

A stream request is submitted as an XML document. The data response can be obtained either directly from the ActiveMQ topic or via the client API via CometD. The EDDS MMI uses the client API. Each message on the topic represents one packet or parameter, each associated with the original request by the request ID header field on the message. Currently only streaming of parameters from the DARC is supported.

The payload of each message contains a framed byte array, which represents an encoded parameter using Google Protocol Buffers. The payload can be decoded using the provided helper classes found in the esa.egos.edds.types package. For DARC Parameters, the DarcParamRec class can be used. The proto files describing the data structure are stored in edds-ws-common and are compiled as a part of the build process.

#### *4.1.3.1 DARC Streaming Support*

Receiving streamed data from the DARC only works with compatible versions of DARC for SLES 12 (version 3.0.0 or later). EDDS expects the DARC to put parameters samples onto an ActiveMQ topic owned by the DARC with the following header data:

| Header Field | Type | Description |
|---|---|---|
| ValueType | String | The type of the value field – one of BOOLEAN, INTEGER, STRING, DOUBLE, FLOAT, LONG |
| Value | Variable | Value of the parameter sample. Type can be either Boolean, Short, Integer, String, Double, Float. For Short values, the ValueType should be set to INTEGER. |
| Validity | Integer | One of 0 (Valid), 1 (Invalid), 2 (Unknown), 3 (Expired) |
| SystemElement | String | Any String value |
| Source | String | Any String value |
| State | Short | Any Short value |
| GenericData | String | Any String value |
| GenerationTime | Double | Unix time stamp of the generation time |
| Name | String | Name of the parameter |

When a user requests live parameter samples from the DARC, EDDS will add a listener to this topic with a selector on these header fields based on the filter specified in the request. This improves performance, as only matching messages are delivered by the broker to EDDS for processing. EDDS then creates a new message with two header fields, “RequestId” (with the user’s original request ID) and “MISSION_NAME” for the mission the stream relates to. It then creates a Google Protocol Buffers encoded record (See Appendix N) with the data from the header fields of the original message and adds it to the payload of a new message. These messages are received by the web server (or a 3rd party application – as they are placed on a topic, this doesn’t interfere with the web server) and passed on to any listening clients via CometD.

#### *4.1.3.2 PARC Streaming Support*

Streaming of live packet data is supported only via the Data Provision Services that can be found in SCOS 5.4.21 and 5.5.4 or later. Once a request for live streaming data is submitted (can be for TM, TC, EV (SCOS Event Log) or OOL) and the request becomes ACTIVE, then the data is put onto the ActiveMQ message bus onto a topic for any 3rd party application to listen to directly. Alternatively, if access to the message bus is not possible, then the method “startStreamData(RequestID)” on the WSDL can be executed to start streaming the live data to clients over HTTP(S) via CometD. The client must then listen to the relevant Bayeux channel as specified in the next subsections.

#### *4.1.3.3 Packet TM*

Messages are placed onto the topic “esa.egos.edds.packet.stream.tm” with the following header values:

| Header Field | Type | Description |
|---|---|---|
| RequestID | String | The ID of the request from the client that initiated the live streaming |
| MISSION_NAME | String | The name of the mission that the request relates to |

The body of the message is as defined for binary Packet TM Report response files and can be found in 6.7.3.3.7

Clients must call startStreamData(RequestID) on the EDDS Web Server and then listen on the Bayeux channel NotificationChannel.PKT_TM_STREAM. When finished, clients should call the stopStreamData(RequestId) method.

A code example for streaming live telemetry data can be found under edds-ws-client/src/test/java in packet esa.egos.edds.ws.client.examples.StreamLivePktTmData

#### *4.1.3.4 Packet TC*

Messages are placed onto the topic “esa.egos.edds.packet.stream.tc” with the following header values:

| Header Field | Type | Description |
|---|---|---|
| RequestID | String | The ID of the request from the client that initiated the live streaming |
| MISSION_NAME | String | The name of the mission that the request relates to |

The body of the message is as defined for binary Packet TC Report response files and can be found in 6.7.3.3.6

Clients must call startStreamData(RequestID) on the EDDS Web Server and then listen on the Bayeux channel NotificationChannel.PKT_TC_STREAM. When finished, clients should call the stopStreamData(RequestId) method.

#### *4.1.3.5 Packet EV*

Messages are placed onto the topic “esa.egos.edds.packet.stream.ev” with the following header values:

| Header Field | Type | Description |
|---|---|---|
| RequestID | String | The ID of the request from the client that initiated the live streaming |
| MISSION_NAME | String | The name of the mission that the request relates to |

The body of the message is as defined for binary Event Record Report response files and can be found in 6.7.3.3.4

Clients must call startStreamData(RequestID) on the EDDS Web Server and then listen on the Bayeux channel NotificationChannel.PKT_EV_STREAM. When finished, clients should call the stopStreamData(RequestId) method.

#### *4.1.3.6 Out of Limits*

Messages are placed onto the topic “esa.egos.edds.packet.stream.ool” with the following header values:

| Header Field | Type | Description |
|---|---|---|
| RequestID | String | The ID of the request from the client that initiated the live streaming |
| MISSION_NAME | String | The name of the mission that the request relates to |

The body of the message is as defined for binary Out of Limits Record Report response files and can be found in 6.7.3.3.9

Clients must call startStreamData(RequestID) on the EDDS Web Server and then listen on the Bayeux channel NotificationChannel.PKT_OOL_STREAM. When finished, clients should call the stopStreamData(RequestId) method.

### 4.1.4 User Management Service

An EDDS User Management Service allows a client application to make request for the management of the users, which have access to the EDDS services. Only authorised users can access the User Management services.

A user management request is submitted as an XML document.

## *4.2 EDDS Interface Overview*

The following section describes the interfaces to the EDDS services.

### 4.2.1 EDDS Web Service Interface

Provides the set of operations that can be used by client applications to inject batch requests, user management requests and receive responses. The interface uses Web Services technology [RD-3][RD-7].

### 4.2.2 Stream Web Service Interface

Provides a set of operations that can be used by client applications to make stream requests and receive data in response. The interface uses Web Services technology [RD-3][RD-7].

### 4.2.3 Email Interface

Used by the EDDS components to deliver acknowledgement data to the user.

### 4.2.4 Delivery Manager Interface

The Delivery Manager is used by the EDDS to delivery batch data responses to a client hosted file server.

## *4.3 Client Applications Overview*

A user can interact with the EDDS by use of several client application types:

- EDDS Client Application (via generic APIs)
- Web Services Application
- Email Server
- Delivery Manager
- Request Submitter

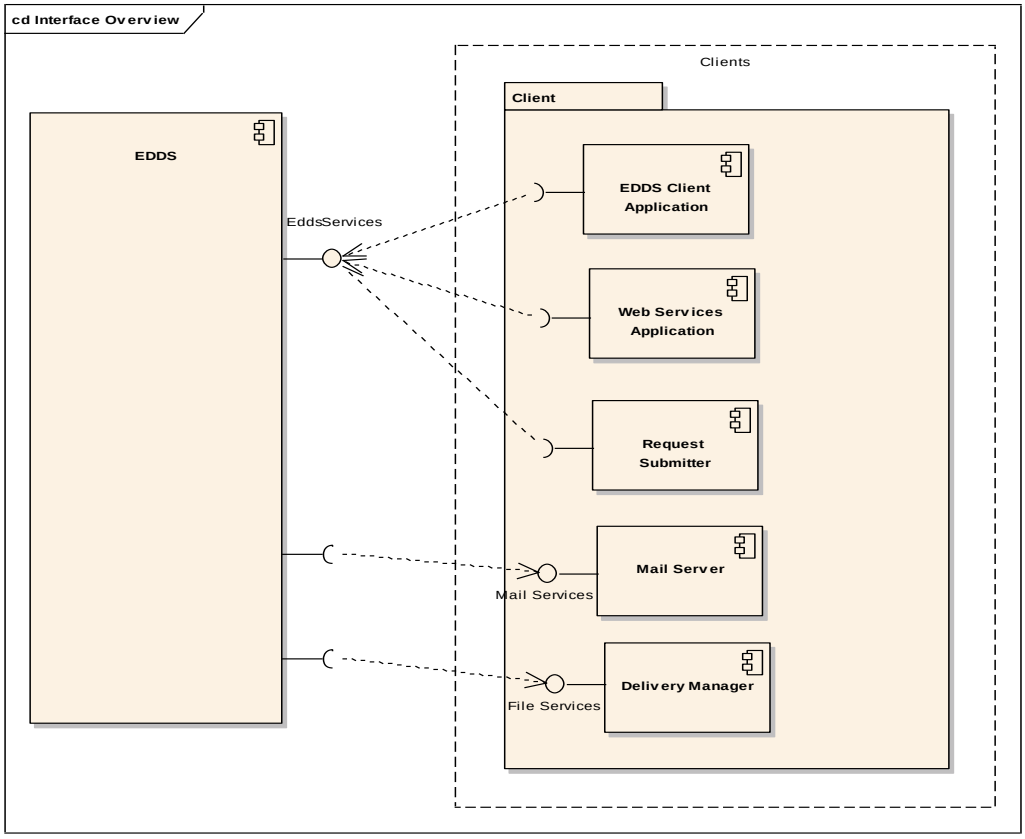



Figure 1 - Interface Overview

### 4.3.1 EDDS Client Application

The user interface to the EDDS is the EDDS Client Application. This application is downloaded from the EDDS web site and is run on the user's machine. See the EDDS Client SUM [RD-1] for more information on installation configuration and usage.

The EDDS Client provides GUI access to all available EDDS services (management and batch and streaming services). This document (EUICD) describes the format of the data that is sent to the Web Services Application.

The EDDS provides access to its management batch and stream services through Web Services technology. Users can write their own client applications that access EDDS batch and stream services through the use of Web Services technology.

### 4.3.2 Email Server

EDDS is capable of delivering batch service acknowledgement messages to a client via email. This document (EUICD) describes the format of the acknowledgement message.

### 4.3.3 Delivery Manager

EDDS is capable of delivering batch service responses to a file server running on the client's site. This document (EUICD) describes the format of batch service requests and the format of the resultant response. This document (EUICD) also describes the format of acknowledgement messages.

### 4.3.4 Request Submitter

The EDDS Request Submitter is a lightweight standalone application that polls a configurable directory for request files. Any valid request files either in EDDS or GDDS format will be processed and submitted to the EDDS Server. Responses are returned as defined in the request.

All valid requests are submitted through the same user account specified in the RS configuration.

The EDDS request file must conform to the schema element RequestMessagePart as defined in [C.60]

#### *4.3.4.1 GDDS Requests*

EDDS Request Submitter also accepts requests in GDDS format [RD-13]. All GDDS request types are supported, but there are additional restrictions, because GDDS requests and EDDS requests are not fully compatible. The GDDS request is transformed into EDDS request via XSL Transformation (XSLT) and submitted for processing via EDDS client API. The mapping of GDDS schema elements is described below.

The response data will be in EDDS format and delivered by EDDS.

XSL transformation can be also performed independently of Request Submitter. On SLES 11 run from the terminal:

xsltproc path/to/transformation.xsl path/to/gddsRequest.xml

For example, to transform one of the test requests and output it to the console, you can run from edds source directory:

xsltproc edds-request-submitter/src/main/resources/gdds/GDDS2EDDS.xsl edds-request-submitter/src/test/resources/GDDSRequests/PktTcReportRequest.xml

##### 4.3.4.1.1 Common request fields

| Element in GDDS request | Is mapped to |
|---|---|
| userRequestId attribute in scheduleRequest and onlineRequest | Not used, but are added to the EDDS request comment |
| schedule/firstStartTime | If set, used as execution time of the first request |
| schedule/interval | Number of days between scheduled requests; GDDS request doesn't have end date in the schema, so 10 requests will always be created for scheduled requests |
| schedule/acknowledgement | Not used |
| general/comment | EDDS request comment field |
| general/userInfo/username and general/userInfo/FTPpassword,<br>general/destInfo/FTP/target | Username and password are used as credentials for target FTP server if latter is provided; otherwise EDDS server delivery is used. |
| general/destInfo/RDM and subelements | Not used |
| general/destInfo/Online and subelements | Not used |
| general/destInfo/FTP/filename | Used as the target filename |
| general/destInfo/FTP/directory | Target directory, if file server delivery is used |
| general/formatInfo/compression | EDDS compression option |
| general/formatInfo/SFDUrequired | Not used |
| general/formatInfo/missionFormat | Not used |
| general/dataInfo/earliestStart | If set, the execution time of the (first) request; schedule/firstStartTime overrides this value |
| item | Exactly one item should be specified, contains the request type and filter elements. The filter tree must not contain any OR binary operation nodes inside AND nodes |

###### *4.3.4.1.1.1 Mission and Domain*

By default, the request is submitted to the default mission and domain as configured in the file poller settings. Different mission and domain can be used for the request by having extra lines in the GDDS

comment field. Keyword Mission or Domain followed by a colon character, and then the EDDS mission or domain name.

Example:

```
...
        <general>
                <comment>
                        Mission:TEST_MISSION
                        Domain:0
                          Example GDDS request comment
                </comment>
                ...
```

#### *4.3.4.1.1.2 MultiTime elements*

All the Multitime elements (i.e. SourcePktsGenTime, ExecutionTime, UplinkTime) should be in absolute time format, not in duration. Except when scheduleRequest is sent, then the required boundaries must be set as duration – start time (lower boundary) as relative time from the execution and end time as the duration after start time. Other MultiTime elements should still be in absolute time.

Example:

The following GDDS request will create scheduled request that will execute 10 requests in 5 days intervals. The packet data is retrieved starting from 3 months before the execution time and ending 21 days after start time. Additonal filter is applied with UplinkTime >= 2002-01-01T12:00:00Z.

The relevant fragments of the request:

```
<scheduleRequest xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation='GDDSScheduleRequest.xsd'
userRequestId="20020101GDDSScheduleRequestExample">
<schedule>
   <firstStartTime>2002-01-01T20:00:00Z</firstStartTime>
   <interval>5</interval>
   <acknowledgement>true</acknowledgement>
</schedule>
<onlineRequest  userRequestId="20020101GDDSRequestExample">
...
        <item>
                <dataType>CMH</dataType>
                <dataSource>CMDH</dataSource>
                <catalogueRequest>false</catalogueRequest>
                <filter>
                        <bin operation="OP_AND">
                                <lhs>
                                        <leaf operation="OP_GTE">
                                                <valuePair>
                                                        <ExecutionTime>
                                                                <a_duration>-P3M</a_duration>
                                                        </ExecutionTime>
                                                </valuePair>
                                        </leaf>
                                </lhs>
                                <rhs>
                                        <bin operation="OP_AND">
                                                <lhs>
                                                        <leaf operation="OP_GTE">
                                                                <valuePair>
                                                                        <UplinkTime>
                                                                <a_dateTime>2002-01-01T12:00:00Z</a_dateTime>
```

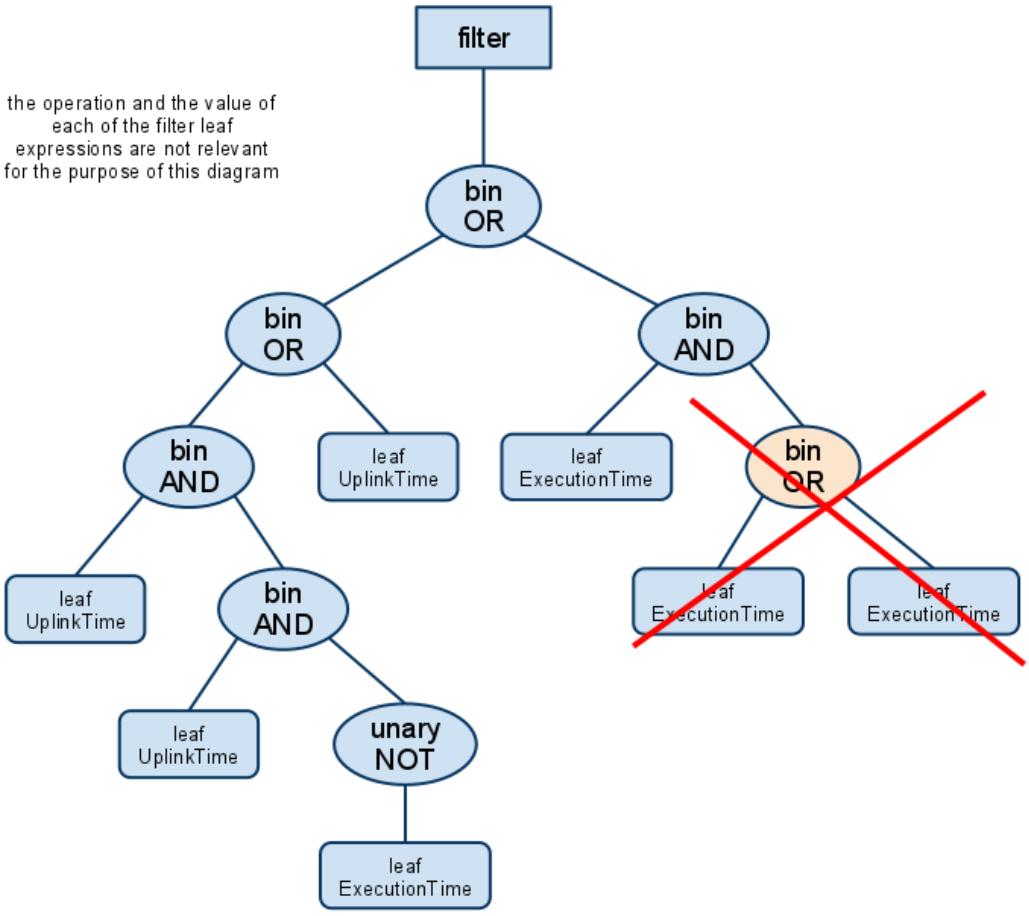
 

```
                                                </UplinkTime>
                                        </valuePair>
                                </leaf>
                        </lhs>
                        <rhs>
                                <leaf operation="OP_LTE">
                                        <valuePair>
                                                <ExecutionTime>
                                        <a_duration>P21D</a_duration>
                                                </ExecutionTime>
                                        </valuePair>
                                </leaf>
                        </rhs>
                </bin>
        </rhs>
    </bin>
  </filter>
 </item>
</onlineRequest>
</scheduleRequest>
```

#### *4.3.4.1.1.3 Filter expressions*

Filter expressions should be simple: there should be no OR operations inside AND operations. So all the OR expressions should be towards the filter root. If there are any of those “illegal” expressions, the whole subtree will be ignored.

Example:



#### 4.3.4.1.2 TM Packet request

This section describes the trypes of data request available in GDDS and how they map to the EDDS schema (where possible to map)

| Item subelements | Description |
|---|---|
| dataType='TLM' | Determines the TM packet request type |
| dataSource | Filter packets by this Apid value |
| catalogueRequest | Not used |
| keyword | Not used |
| onEvent | Not used |
| filter | Required. Must contain a leaf element with operation OP_GTE or OP_GT and with keyword SourcePktsGenTime and another one with operation OP_LTE or OP_LT. These will be the lower and upper bound of the timerange for the query. |

Supported keywords in filter are

| Filter keyword | Mapped to | Allowed operations |
|---|---|---|
| SourcePktsGenTime and S2KpktsGenTime | GenerationTime | All operations |
| VolumeSize | MaxVolumeSize | All operations |
| Type, SubType, P1Val, P2Val | | OP_EQ and negation in unary node with OP_NOT. One keyword can only appear once in a conjunctive clause (leafs separated with only AND expressions). |

#### 4.3.4.1.3 TC Packet History

| Item subelements | Description |
|---|---|
| dataType='CMH' | Determines the TC packet request type |
| dataSource='CMDH' | Determines the raw TC packet request type |
| catalogueRequest | Not used |
| keyword | Not used |
| onEvent | Not used |
| filter | Required. Must contain a leaf element with operation OP_GTE or OP_GT and with keyword ExecutionTime and another one with operation OP_LTE or OP_LT. These will be the lower and upper bound of the timerange for the query. |

Supported keywords in filter are

| Filter keyword | Mapped to | Allowed operations |
|---|---|---|
| ExecutionTime | ExecutionTime | All operations |
| UplinkTime | UplinkTime | All operations |
| VolumeSize | MaxVolumeSize | All operations |

#### 4.3.4.1.4 TC Packet brief and full report

| Item subelements | Description |
|---|---|
| dataType='CMH' | Determines the TC packet request type |
| dataSource='CMDPB' or dataSource='CMDPF' | Whether we want to get the brief report ('CMDPB') or full report with command parameters ('CMDPF'). |
| catalogueRequest | Not used |
| keyword | Not used |
| onEvent | Not used |
| filter | Required. Must contain a leaf element with keyword ExecutionTime and with operation OP_GTE or OP_GT and another one with operation OP_LTE or OP_LT. These will be the lower and upper bound of the timerange for the query. |

Supported keywords in filter are

| Filter keyword | Mapped to | Allowed operations |
|---|---|---|
| ExecutionTime | ExecutionTime | All operations |
| UplinkTime | UplinkTime | All operations |
| VolumeSize | MaxVolumeSize | All operations |

#### 4.3.4.1.5 ArchiveFile request

| Item subelements | Description |
|---|---|
| dataType='AUX' | Determines the request type |
| dataSource | Not used |
| catalogueRequest | Not used |
| keyword | Not used |
| onEvent | Not used |
| filter | Required. |

Supported keywords in filter are

| Filter keyword | Mapped to | Allowed operations |
|---|---|---|
| Name | Name | OP_EQ |
| Release, Issue | Version (Release and Issue are concatenated with a dot '.' character) | OP_EQ |
| CreationTime | CreationTime | Not supported |
| TimeSpan | ValidityTime | Not supported |

# 5. Data Types

This section outlines a user's perspective of the data types that the EDDS supports. Table 1 (below) gives an overview of the data types and the services which provide the data type.

| Data Type \ Delivery | | File Server | EDDS Server | Stream | | Email |
|---|---|---|---|---|---|---|
| | | | | Online | Offline | |
| Packet | TM (EDDS Raw) | ✓ | ✓ | ✓ | ✓ | - |
| | TM (PARC Raw) | ✓ | ✓ | ✓ | ✓ | - |
| | TC (EDDS Raw) | ✓ | ✓ | ✓ | ✓ | - |
| | TC (PARC Raw) | ✓ | ✓ | ✓ | ✓ | - |
| | EV (EDDS Raw) | ✓ | ✓ | ✓ | ✓ | - |
| | EV (PARC Raw) | ✓ | ✓ | ✓ | ✓ | - |
| | Statistics | ✓ | ✓ | - | - | - |
| Parameter | TM | ✓ | ✓ | ✓ | ✓ | - |
| | Statistics | ✓ | ✓ | - | - | - |
| | Preview | ✓ | ✓ | - | - | - |
| | Definition | ✓ | ✓ | - | - | - |
| Report | MCS | ✓ | ✓ | - | - | - |
| | EDDS | ✓ | ✓ | - | - | - |
| Archived Files | File | ✓ | ✓ | - | - | - |
| | Catalogue | ✓ | ✓ | - | - | - |
| File System | File Catalogue | ✓ | ✓ | - | - | - |
| | Folder Catalogue | ✓ | ✓ | - | - | - |
| | File | ✓ | ✓ | - | - | - |
| Acknowledgement | | ✓ | ✓ | - | - | ✓ |

Table 1 - Data Type & Service Overview

## 5.1 Packet

Packet data provided by the EDDS consists of telemetry (TM), telecommand (TC) and MCS event (EV) packets. The packets contain binary data as processed by the MCS in Network endian order. In addition packet statistics data is available that provides statistical information about packets stored in the MCS (e.g. the number of packets that match a given criterion for a given time span). Packets are extracted by using either the PARC Manager interface of a dedicated packet archive (PARC) or the Data Provision Services. The TM/TC/EV Raw format retrieves the packet data from the PARC exactly as it is stored as a hexadecimal string, and wraps each packet in an XML tag so that they can be identified. The data is not decoded, and so cannot be filtered beyond the basics of start time, end time and (for TM and EV) SPID list.

Packet statistics data are available that provides statistical information about stored packets. Packet Reports are available that decode the encoded packet data and store the data in an XML or ASCII formatted file.

## 5.2 Parameter

TM parameter data can be obtained through EDDS services. Parameter data is available from a dedicated parameter archive (DARC or SMON).

The parameter archive is populated as TM source packets are received by the MCS and is tailored to provide fast access to the parameter data stored. Due to the large number of TM parameters defined for a mission and their associated data, it may be impractical to store all parameters in a dedicated parameter archive. The mission will be able to configure which subset of parameters is stored in the dedicated parameter archive.

The ordering of parameter samples is not guaranteed (although usually the data is ordered by sample generation time). EDDS tries to use optimal retrieval mechanisms based on the API provided by backend and does not provide any ordering on its own.

Duplicate entries might exist in special cases where request for all DARC parameter samples is being resumed (after an explicit client request to suspend/resume or after EDDS server has been stopped/killed before processing of the request was finished). To avoid duplicates, split size of the result files can be set to 0, so the entire request will be restarted from the beginning.

Parameter statistics data is available that provides statistical information about stored parameters (e.g. the number of parameters that match a given criterion for a given time span).

Parameter Definition data type is used to provide parameter static definition data (e.g. description, unit, subsystem, etc) which is derived from the spacecraft database.

## 5.3 Report

This data type covers both reports generated by the MCS and those generated by the EDDS. A report is always in XML, ASCII, Binary or spreadsheet format.

MCS reports can be classified into TM, TC, EV and other reports. The availability of such reports is mission dependent and includes:

- TM Packet Report
- TM Packet Gap Report
- TC Packet Report
- OOL Data Report
- Event Record Report

EDDS reports are generated by the EDDS on user request. They are:

- Status Reports (not currently supported in this version)
- Request Summary Reports (not currently supported in this version)
- System Log Reports
- EDDS Usage Report

The content of EDDS reports is given in Section 6.2.3

Reports supported by the EDDS will be in XML format, with missions providing XSLT for transforming the reports into their final delivery format. This also allows missions to specialise reports with full EDDS support.

For Out of Limit Reports, EDDS supports the following packet versions from the PARC:

- 5: For SCOS versions 5.4.19 or 5.5.2 or earlier
- 6: For SCOS versions 5.4.20 or 5.5.3 or later.
- 7: For SCOS versions 5.4.20 or 5.5.3 or later with change request GAIA-SPR-694 applied.

## 5.4 Archived Files

The Archived Files data type contains files stored in the MCS archive including files received from Flight Dynamics, Mission Planning and TT&C stations. Additionally catalogue information is also available in XML format. The file data and catalogue are retrieved from the FARC. For FARC versions that support it, it is possible to register interest in items in the FARC so that when they change, a notification is received by EDDS. EDDS will then automatically retrieve the requested file from the FARC.

## 5.5 Acknowledgement

Acknowledgement data is data generated by EDDS and sent/taken to the user on request. Acknowledgement data contains status information. Acknowledgement data are produced by the EDDS at the different stages of the request processing and execution when the request for data is received by the EDDS or when the request has been completed successfully.

## 5.6 Request and Response Mappings

The table below maps the XML responses to each request so that the expected XML response types can be determined based on the request submitted. Note that not all requests will result in an XML file being returned.

| Request type (BatchRequest/DataRequest) | Response type (ResponsePart/Response) |
|---|---|
| Param | ParamResponse C.40 |
| SMONParam | SMONParamResponse C.68 |
| ParamStatistics | ParamStatisticsResponse C.46 |
| ParamDefinition | ParamDefinitionResponse C.31 |
| ParamPreview | ParamPreviewResponse C.37 |
| PktEv | N/A – binary response format |
| PktTm | N/A – binary response format |
| PktTc | N/A – binary response format |
| PktEvRaw | PktRawResponse C.50 |
| PktTmRaw | PktRawResponse C.50 |
| PktTcRaw | PktRawResponse C.50 |
| PktTmStatistics | PacketStatisticsResponse C.24 |
| PktTcStatistics | PacketStatisticsResponse C.24 |
| PktEvStatistics | PacketStatisticsResponse C.24 |
| PktTmReport | PktTmReportResponse I.24 |
| PktTmGapReport | PktTmGapReportResponse I.29 |
| PktTcReport | PktTcReportResponse I.20 |
| EventRecordReport | EventRecordReportResponse I.9 |
| ArchiveCatalogue | CatalogueResponse C.12 |
| ArchiveFile | N/A – binary response format |
| ArchiveSubscription | N/A – binary response format |
| OolRecordReport | OolDataReportResponse I.11 |
| EddsUsageReport | EddsUsageReportResponse I.5 |
| FileSystemFileCatalogue | FileSystemFileCatalogueResponse F.7 |
| FileSystemFolderCatalogue | FileSystemFolderCatalogueResponse F.10 |
| FileSystemFile | N/A – binary response format |
| FileSystemFileSubscription | N/A – binary response format |

Table 2 – Request and Response Mappings

# 6. Formats

The following section describes the formatting of data. The EDDS supports following formats:

- Binary
- EDDS Binary
- XML (and XML Transform)
- SFDU [AD-2]
- ASCII

Different data types support various formatting. Table 3 provides a summary of the possible formats that are supported by each request type.

| ***Request Type*** \ ***Format*** | | *EDDS Binary* | *Binary* | *SFDU* | *XML (XML Transform)* | *ASCII* | *Others* |
|---|---|---|---|---|---|---|---|
| *Packet (From PARC)* | *TM* | ✓* | | ✓ | | | GDDS_BINARY* |
| | *TM (PARC Raw)* | | ✓* | | ✓* | | |
| | *TM Report* | | ✓* | | ✓* | ✓* | |
| | *TM Gap Report* | | ✓ | | ✓ | | |
| | *TM Statistics* | | | | ✓ | | |
| | *TC* | ✓* | | ✓ | | | GDDS_BINARY* |
| | *TC (PARC Raw)* | | ✓* | | ✓* | | |
| | *TC Report* | | ✓* | | ✓* | ✓* | |
| | *TC Statistics* | | | | ✓ | | |
| | *EV* | ✓* | | | | | |
| | *EV (PARC Raw)* | | ✓* | | ✓* | | |
| | *Event Record Report* | | ✓* | | ✓* | ✓* | |
| | *EV Statistics* | | | | ✓ | | |
| | *OOL Record* | | | | ✓* | ✓* | |
| *Parameter (from SMON)* | *TM* | | ✓* | | ✓* | | TDRS |
| *Parameter (From DARC)* | *TM* | | ✓* | | ✓* | | TDRS |
| | *Statistics* | | | | ✓* | ✓* | |
| | *Preview* | | | | ✓* | ✓* | |
| | *Definition* | | ✓* | | ✓* | | |
| *Report (From EDDS)* | *EddsUsage* | | | | ✓ | | |
| *Archived Files (From FARC)* | *File (and File Subscription)* | | ✓ | | | | |
| | *Catalogue* | | | | ✓ | ✓ | |
| *File System* | *File Catalogue* | | | | ✓ | ✓ | |
| | *Folder Catalogue* | | | | ✓ | ✓ | |
| | *File (and Subscription)* | | ✓ | | | | |
| *Acknowledgement* | | | | | ✓ | | |

Table 3 - Data Type Formatting

The formats marked with * support splitting the response files into smaller chunks. The resulting files are still compliant with the format with appropriate header and tail in the files. To enable splitting, the configuration must be done by EDDS admin.

The following sections detail the formats and the applicable data types.

## *6.1 EDDS Binary*

The format for EDDS raw data is both self-describing and extensible, and allows a mission to choose which of the standard EDDS header fields are included in that file. For a response consisting of *N* elements, the basic structure is as follows:

| EDDS Raw Header |
|---|
| EDDS Header Fields (1) |
| Data Element (1) |
| EDDS Header Fields (2) |
| Data Element (2) |
| … |
| EDDS Header Fields (*N*) |
| Data Element (*N*) |

Table 4 - Structure of EDDS Binary Data

The response data consists of a single EDDS Raw Header (based on what has been selected as the header fields), followed by the data element (this is the case both when the data is stored in a raw (ASCII hexadecimal) file, and when raw data is returned via a streaming service). Each data element is preceded by the EDDS header fields.

### 6.1.1 EDDS Raw Header

The EDDS Raw Header is a variable-size header, which serves the following purpose:

- Allows a user to uniquely identify binary data as being EDDS binary data
- Allows a user to find out which header fields are present in the binary data

The format of the EDDS binary header is as follows:

| Field | Size (octets) | Type | Description |
|---|---|---|---|
| N | 1 | Integer | Total number of header fields defined for this data type. This is the total number of EDDS header fields (can be zero) |
| Size_1 | 1 | Integer | Number of octets used for Header Field 1 |
| Size_2 | 1 | Integer | Number of octets used for Header Field 2 |
| … | … | … | … |
| Size_*N* | 1 | Integer | Number of octets used for Header Field *N* |

Table 5 - Format of the EDDS File Header

If should be underlined that in case one of the fields is a string the Size field of the header will not represent its length (since the size of a string is known only at run time) but will indicate if the field has to be included or not in the generated file.

The actual header fields, which can be present in EDDS binary data, depend on the data type; these will be defined in the following sections of this document.

Note: this section will contain the value “00” if the values of size1, size2, …, size *N* (defined in the EDDS File Header) are all zero.

### 6.1.2 Packet Data

The packet data depends on the data type. This will be defined in the following sections for each data type. The Appendix "Packet Data" in the Configuration and Installation Guide (CIG) [RD-15] contains detailed instruction on the implementation of the header structures for the information files.

#### *6.1.2.1 TM*

The EDDS defines the following fields, which can be included in the header for TM packet data (see section 6.1.1 ):

| Number | Field | Type | Description |
|---|---|---|---|
| 1 | Source Sequence Counter | Unsigned Integer | The sequential binary count of each source packet generated by an application process identified by a unique application process identifier. |
| 2 | APID | Unsigned Integer | The PUS Service Application Process Identifier, uniquely identifies the on board source of the packet. |
| 3 | PID | Unsigned Integer | The Packet ID, calculated from the APID |
| 4 | Category | Unsigned Integer | The Packet Category, calculated from the APID |
| 5 | P1val | Unsigned Integer | SCOS-2000 P1 Value (the meaning is mission-specific) |
| 6 | P2val | Unsigned Integer | SCOS-2000 P2 Value (the meaning is mission-specific) |
| 7 | Data Stream | Unsigned Integer | SCOS-2000 Data Stream |
| 8 | Generation Time | CCSDS CUC | Time-correlated On-Board Generation Time |
| 9 | Reception Time | CCSDS CUC | Time at which the TM packet was extracted from its Transfer Frame on-ground |
| 10 | Packet Length | Unsigned Integer | Length of the packet. Added for backward compatibility with the GDDS |
| 11 | SPID | Unsigned Integer | SCOS-2000 Packet ID |
| 12 | Ground Station | Unsigned Integer | Id of the ground station which downlinked this telemetry packet |
| 13 | Virtual Channel | Unsigned Integer | Virtual Channel number of the on-board data source. |
| 14 | Data Unit type | Unsigned Integer | Identifies the data unit type |
| 15 | Type | Unsigned Integer | PUS Service Type |
| 16 | Subtype | Unsigned Integer | PUS Service Subtype |
| 17 | SleServiceID | Unsigned Integer | An 8-bit integer value that defines the SLE service used. Added for backward compatibility with the GDDS |
| 18 | Time Quality | Unsigned Integer | The value of the time quality flag 0 = GOOD, 1 = INACCURATE, 2 = BAD. |

| Number | Field | Type | Description |
|---|---|---|---|
| 19 | Quality Flag / Time Stamp Type | Unsigned Integer | Indicates the data quality of the TM packet 0 = Packet Reception (PR), 1 = Frame Transmission (FT), 2 = Packet Generation (PG) |
| 20 | Database Version | Unsigned Integer | Version of the SCOS-2000 database used to extract this packet from its transfer frame |
| 21 | Domain | Unsigned Integer | The SCOS-2000 domain in which this TM packet was generated |

Table 6 - TM Packet Raw Header Fields

Note: while the data in some of these header fields may be contained in the raw TM packet data itself, these header fields are still defined by EDDS for the convenience of missions which wish to include this information also in the EDDS header for each TM packet.

For a specific telemetry packet data file, the EDDS file header determines which fields are included in that file, and the corresponding field lengths.

Note any string field will be translated in the packet as follow:

<string length in hexadecimal >+<string represented in hexadecimal >

In the case of the TM packet data type, the data field itself consists of the raw packet as generated by the spacecraft but preceded by an EDDS sequence counter and the packet length:

| Field | Content | Size | Description |
|---|---|---|---|
| Count | EDDS Sequence Count | 1 byte | Data element sequence count applied by EDDS. Client applications can use this to detect missing data. Note that the counter is reset to 0 once 255 is reached. If suspending and resuming a request, the counter is reset on resume. The counter continues when the file is split. |
| Length | Data Length | 4 bytes | Size of the Data field in octets |
| Data | TM packet | Raw | Raw packet in network endian order |

Table 7 - TM Packet Raw Data Element

#### *6.1.2.2 TC*

The EDDS defines the following fields, which may be included in the header for TC packet data (see section 6.1.1 ):

| Number | Field | Type | Description |
|---|---|---|---|
| 1 | Type | Unsigned Integer | PUS Service Type |
| 2 | Source Type | Byte | Type of originating command source |
| 3 | Subtype | Unsigned Integer | PUS Service Subtype |
| 4 | APID | Unsigned Integer | Application Process Identifier |
| 5 | PID | Unsigned Integer | Packet ID, calculated from the APID |

| Number | Field | Type | Description |
|---|---|---|---|
| 6 | Category | Unsigned Integer | Packet Category, calculated from the APID |
| 7 | Virtual Channel | Unsigned Integer | The Virtual Channel ID |
| 8 | Verification Status | Unsigned Integer | Verification Status. This corresponds to the Command Verification Stages defined in field 13. (The meaning of the verification status is mission-specific.) |
| 9 | Uplink Time | CCSDS CUC | Time of command uplink (if any) |
| 10 | Execution Time | CCSDS CUC | Predicted/actual time of command execution |
| 11 | Last Update Time | CCSDS CUC | Time the command was last updated |
| 12 | Release Time | CCSDS CUC | Time the command was released |
| 13 | Sequence Name | String | Name of the top-level parent sequence to which this instance of the command belongs (if any) |
| 14 | Subschedule | Unsigned Integer | On-board Sub Schedule to which this command belongs |
| 15 | Subsystem | String | Associated Sub-system |
| 16 | Command Source | String | The name of the workstation used to release the telecommand |
| 17 | Command Acknowledgement | Unsigned Integer | Four-bit representation of the Service 1 report packets to be generated by the spacecraft |
| 18 | Command Verification Stages | String | The verification stages of the telecommand as supported by infrastructure (R, GTO or AC). |
| 19 | Data Stream | Unsigned Integer | SCOS-2000 Data Stream |
| 20 | Domain | Unsigned Integer | SCOS-2000 Domain |
| 21 | Database Version | String | Version of the SCOS-2000 database used to encode this telecommand |
| 22 | PUS Source Sequence Count | Unsigned Integer | PUS Source Sequence Counter |
| 23 | CUV | Unsigned Integer | Command UV Onboard verification stage |
| 24 | CAV VC0 | Unsigned Integer | Command EV Acceptance verification stage |
| 25 | CEV VC0 | Unsigned Integer | Command EV Execution start verification stage |
| 26 | CAV VC1 | Unsigned Integer | Command EV Acceptance verification stage |
| 27 | CEV VC1 | Unsigned Integer | Command EV Execution start verification stage |
| 28 | Packet Length | Unsigned Integer | Size of the packet |
| 29 | Command Name | String | The name of the command |

Table 8 - Possible TC Packet Raw Header Fields

Note: while the data in some of these header fields may be contained in the raw TC packet data itself, these header fields are still defined by EDDS for the convenience of missions which wish to include this information also in the EDDS header for each TC packet.

For a specific telecommand packet data file, the EDDS file header determines which fields are included in that file, and the corresponding field widths.

Note any string field will be translated in the packet as follow:

<string length in hexadecimal >+<string represented in hexadecimal >

In the case of the TC packet data type, the data field itself consists of the raw telecommand packet sent to the spacecraft:

| Field | Content | Size | Description |
|---|---|---|---|
| Count | EDDS Sequence Count | Unsigned Integer | Data element sequence count applied by EDDS. Client applications can use this to detect missing data. |
| Length | Data Length | Unsigned Integer | Size of the Data field in octets |
| Data | TC packet | Raw | Raw packet in network endian order |

Table 9 - TC Packet raw Data Element

#### *6.1.2.3 EV*

EDDS defines the following fields, which can be included in the header for SCOS-2000 EV packet data (see section 6.1.1 ):

| Number | Field | Type | Description |
|---|---|---|---|
| 1 | Event Type | String | Type of the event |
| 2 | Event Id | String | Event Id |
| 3 | Source | String | The source of the event |
| 4 | Category | String | Category of the event |
| 5 | Generation Time | CCSDS CUC | Generation time of the event |
| 6 | Domain | Unsigned Integer | SCOS-2000 domain |

Table 10 - Possible EV Packet Raw Header Fields

For a specific event packet data file, the EDDS file header determines which fields are included in that file, and the corresponding field widths.

Note any string field will be translated in the packet as follow:

<string length in hexadecimal >+<string represented in hexadecimal >

In the case of the EV packet data type, the data field itself consists of the raw SCOS-2000 event packet:

| Field | Content | Size | Description |
|---|---|---|---|
| Count | EDDS Sequence Count | Unsigned Integer | Data element sequence count applied by EDDS. Client applications can use this to detect missing |

| | | | |
|---|---|---|---|
| | | | data. |
| Length | Data Length | Unsigned Integer | Size of the Data field in octets |
| Data | EV packet | Raw | Raw SCOS-2000 event packet data |

Table 11 - EV Packet Raw Data Element

### 6.1.3 GDDS Binary File Example

#### *6.1.3.1 TM Example*

This section contains an example which shows how a GDDS TM packet binary data file would be represented using the EDDS binary file structure. The structure is based on the information contained in the GDDS ICD [RD-13]. The example provided assumes two TM packets (data elements) are present in the EDDS TM packet binary file.

GDDS telemetry packet header records contain the following fields:

- SCET (8 octets)
- Packet length (4 octets)
- Ground station ID (2 octets)
- Virtual Channel ID (2 octets)
- SLE Service (1 octet)
- Time Quality (1 octet)

These correspond to the following header EDDS header fields:

- Field 8 (Generation Time)
- Field 10 (Packet Length)
- Field 12 (Ground Station ID.)
- Field 13 (Virtual Channel)
- Field 17 (SLE Service ID)
- Field 18 (Time Quality Flag)

The following table illustrates the sequence and contents of each of the sections of the EDDS TM Packet binary file (the values are given in Hexadecimal. Note that two hecadecimal characters represent one octet):

| | | |
|---|---|---|
| Packet Header Fields (packet 1) | Field_1 (Generation Time) | 4E94 46BE A7B8 D000 |
| | Field_2 (Packet Length) | 0000 0050 |
| | Field_3 (Ground Station ID.) | 0000 |
| | Field_4 (Virtual Channel) | 0000 |
| | Field_5 (SLE Service ID) | 00 |
| | Field_6 (Time Quality Flag) | 00 |

| | | |
|---|---|---|
| Packet Data (packet 1) | TM packet | 0000 0000 FFFF FFFF 0000 C800<br>0100 C8C8 0000 0012 5800 0000<br>2100 0000 1BB5 A0A6 42AF 0400<br>0000 0000 0000 0000 0000 0000<br>5000 0000 0000 0000 5900 0000<br>B0E9 9B08 E0B4 9208 FFFF FFFF<br>5550 4441 5445 2025 |
| Packet Header Fields (packet 2) | Field_1 (Generation Time) | 4E94 46BE 6334 3000 |
| | Field_2 (Packet Length) | 0000 0050 |
| | Field_3 (Ground Station ID.) | 0000 |
| | Field_4 (Virtual Channel) | 0000 |
| | Field_5 (SLE Service ID) | 00 |
| | Field_6 (Time Quality Flag) | 00 |
| Packet Data (packet 2) | TM packet | 0000 0000 FFFF FFFF 0000 C800<br>0200 C8C8 0000 0012 5800 0000<br>2100 0000 1B51 D154 B6AF 0400<br>0000 0000 0000 0000 0000 0000<br>5000 0000 0000 0000 5900 0000<br>0000 0000 4E94 5872 0006 BF8B<br>4E94 5872 0006 BF8B |

Table 12 - Example TM Packet Binary Format

Note that the generation time is in two parts. The first part (octets 0-3) is the number of seconds since epoch (1st Jan 1970) and the second part (octets 4-7) is the number of microseconds.

### *6.1.3.2 TC Example*

This section contains an example which shows how a GDDS TC packet binary data file would be represented using the EDDS binary file structure. The structure is based on the information contained in the GDDS ICD [RD-13]. The example provided assumes two TC packets (data elements) are present in the EDDS TC packet binary file.

GDDS telecommand packet header records contain the following fields:

- Uplink Time (8 octets)
- Execution Time (8 octets)
- Command Uplink Stage CUV (2 octets)
- Command Acceptance Stage Real-Time CAV (VC0) (2 octets)
- Command Execution Stage Real-Time CEV (VC0) (2 octets)
- Command Acceptance Stage Playback CAV (VC1) (2 octets)
- Command Execution Stage Playback CEV (VC1) (2 octets)
- Packet Length of the DDS telecommand packet body (4 octets)
- Command ID (8 octets)
- Parent Sequence ID (8 octets)

These correspond to the following header EDDS header fields:

- Field 9 (Uplink Time)
- Field 10 (Execution Time)
- Field 23 (CUV)
- Field 24 (CAV VC0)
- Field 25 (CEV VC0)
- Field 26 (CAV VC1)
- Field 27 (CEV VC1)
- Field 28 (Packet Length)
- Field 29 (Command Name)
- Field 13 (Sequence Name)

The following table illustrates the sequence and contents of each of the sections of the EDDS TC Packet binary file (the values are given in Hexadecimal. Note that two hecadecimal characters represent one octet):

| | | |
|---|---|---|
| Packet Header Fields (packet 1) | Field 6 (Uplink Time) | 4FB6 5AD2 000E 9A94 |
| | Field 7 (Execution Time) | 4FB6 5BE4 0006 9398 |
| | Field 22 (CUV) | 0004 |
| | Field 23 (CAV VC0) | 1000 |
| | Field 24 (CEV VC0) | 0000 |
| | Field 25 (CAV VC1) | 1000 |
| | Field 26 (CEV VC1) | 0000 |
| | Field 27 (Packet Length) | 0000 000D |
| | Field 28 (Command Name) | 5A41 4330 3330 3036 |
| | Field 10 (Sequence Name) | 0000 0000 0000 0000 |
| Packet Data (packet 1) | TC packet | 18BC C1F1 0006 1903 0600 0084 C0 |
| Packet Header Fields (packet 2) | Field 6 (Uplink Time) | 4FB6 5AD2 000E 9A95 |
| | Field 7 (Execution Time) | 4FB6 5AD2 000E 9A95 |
| | Field 22 (CUV) | 0004 |
| | Field 23 (CAV VC0) | 0020 |
| | Field 24 (CEV VC0) | 0000 |
| | Field 25 (CAV VC1) | 0020 |
| | Field 26 (CEV VC1) | 0000 |
| | Field 27 (Packet Length) | 0000 0021 |
| | Field 28 (Command Name) | 5A4D 5431 3130 3034 |
| | Field 10 (Sequence Name) | 0000 0000 0000 0000 |
| Packet Data (packet 2) | TC packet | 18FC C012 001A 190B 0400 0007 4FB6 5BE4 6E56 18BC C1F1 0006 1903 0600 0084 C0B5 39 |

Table 13 - Example TC Packet Binary Format

Note that the generation time is in two parts. The first part (octets 0-3) is the number of seconds since epoch (1st Jan 1970) and the second part (octets 4-7) is the number of microseconds.

## *6.2 XML*

This section identifies the EDDS data types that support XML formatting and provides references to associated schemas (found inAppendix C)

### 6.2.1 Packet

- Statistics - The packet statistics data type supports XML formatting, see the PacketStatistics schema Appendix C
- TC / TM / EV PARC Raw – This data type supports XML formatting only. See the PktRawResponse schema Appendix C
- TC / TM / EV / OOL Reports – These data types supports XML formatting only. See the PktTcReportResponse, PktTmReportResponse, EventRecordReportResponse and OolDataReportResponse schemas in Appendix C respectively.

### 6.2.2 Parameter

- Param – The parameter data type supports XML formatting, see the Param schema Appendix C.
- Statistics - The parameter statistics data type supports XML formatting, see the ParameterStatistics schema Appendix C.
- Definition - The parameter definition data type supports XML formatting, see the ParameterDefinitionType schema Appendix C.
- Preview - The parameter preview data type supports XML formatting, see the ParameterPreview schema Appendix C
- SMON Parameter - The parameter data type supports XML formatting, see the SMONParamResponse schema Appendix C

#### *6.2.2.1 A special note on times shown in the response files*

There are a number of times shown in the output of the DARC Param response file:

- Generation time: for DARC sources, this corresponds to the parameter generation time. For SMON sources, this corresponds to the sample time (i.e. the packet generation time (filing time) plus an offset for supercommutated packets
- Storage time: for DARC sources, this corresponds to the DARC storage time. For SMON sources, this corresponds to the create time (i.e. the PARC storage time)
- Parent generation time: for DARC sources, this corresponds to the packet generation time. For SMON sources, this corresponds to the packet generation time (filing time)

### 6.2.3 Report

The EDDS provides access to EDDS generated reports.

#### 6.2.3.1.1 EDDS Report

EDDS reports are generated by the EDDS on user request. All EDDS reports are in XML format and are packaged within an EDDS XML EddsReport type. The XML schema of the report type can be found in Appendix I. The reports that may be packaged within the EddsReport are as follows:

#### *6.2.3.1.1.1 Request Summary Report*

The XML schema AcknowledgementPart defines the structure and content of an EDDS XML request summary report type.

EDDS provides two views of Request Summary Reports: a brief and a full summary report. The full summary report displays the complete acknowledgement message, while the brief is a subset of info from the acknowledgement message.

The detailed structure of the AcknowledgementPart is defined in the Section A.1

#### *6.2.3.1.1.2 EDDS Usage Report*

The XML schema EddsUsageReport defines the structure and content of an EDDS XML usage report type. See I.2.

A usage report contains information about the usage of the EDDS services over a given period:

| ***Field*** | ***Type*** | ***Description*** |
|---|---|---|
| Total Deleted Requests | Integer | Total number of deleted requests over the period |
| Total Processed Requests | Integer | Total number of processed requests over the period. |
| Total Failed Requests | Integer | Total number of failed requests over the period |
| The following is within the EddsUsageReportList element, within zero or more EddsUsageReportListElement elements. | | |
| RequestId | String | The ID of the request |
| User | String | The username of the user who submitted the request |
| Role | String | The name of the role used for the request |
| Status | String | The final status of the request |
| SizeOfResponseFile | BigInteger | The size of the response file in bytes |
| SubmissionDate | Date | The date the request was submitted to the server |
| ExecutionDate | Date | The date the request was executed |
| CompletionData | Date | The date the request was completed |

Table 14 - EDDS Usage Report

### 6.2.4 Archived Files

The EDDS provides access to catalogues and files of MCS file archives. The catalogue data type supports XML formatting. The corresponding XML schema, Catalogue, defines the structure and content of an EDDS XML catalogue data type. See C.1, C.3 and C.4.

Note: Files from an MCS archive are passed to the end user as retrieved from the MCS file archive. This implies that a file could of course be an XML document. The definition of the content of MCS files is mission-specific and is outside the scope of this ICD.

### 6.2.5 File System

The EDDS provides access to a designated directory on the file system of EDDS Server. The File and Folder Catalogue requests support XML formatting option.

### 6.2.6 Acknowledgement

An EDDS acknowledgement is an XML document. The structure and content is described in the XML schema acknowledgement.xsd. See A.1 for detailed information.

## 6.3 XML Transform

All the requests that support XML format also support XML transformations. Custom stylesheets can be added to the EDDS Server for transforming the XML responses. Available list of transformations can be retrieved through the EddsService.getTransformations() method in the Client API.

## 6.4 XFDU

The XFDU format is a schema that allows existing data to be packaged up with further information such as the original system used, the filename and a checksum. The XFDU schema is an external schema and can be found in the document “CCSDS, XML Formatted Data Unit (XFDU) Structure and Construction Rules” [AD-1]. EDDS supports a post processing option that, when selected, will create an XML file compliant with this schema.

## 6.5 TDRS Spreadsheet

The EDDS supports the formatting of data types (Parameters) into the TDRS spreadsheet format. The format is a text file containing tab delimited fields (columns) with new lines separating rows. See Appendix M for more information.

## 6.6 ASCII

The EDDS supports ASCII representation of data types. The contents of the ASCII files is similar to the equivalent XML files, but without the XML markup.

For the TC Report, the ASCII format is based on the Command History application found in SCOS 5.3/5.4. Full information on this format can be found in the SCOS 2000 Command History Operator User Manual, with the most useful information copied here for convenience.

The following snippet shows an example of this format:

```
Name     Description              S D C G B IL ST Source         FC TC Q R GTO A SS 1122 CC


S2KTC007 TC(3,3)                  E E E     SR MS de-vm140       00 01   S SSS S         S
  S2KCP013 Housekeeping SID         Eng      Dec                   HK_SID_1
```

To save space, the columns “Sequence, Domain, Release Time and Execution Time” have been removed from the output. The first line provides the column headings, and the following line is the values for a TC packet. The final indented line shows the parameters for the TC packet. These can be removed from the output by selecting “Get brief summary only” in the TC Report request.

The following table describes the column headings after “Description”:

| ***Column*** | ***Description*** | |
|---|---|---|
| S | Static PTV Check State (E => Enabled, D => Disabled or O => Overridden) | |
| D | Dynamic PTV Check State (E => Enabled, D => Disabled or O => Overridden) | |
| C | CEV Check State (E => Enabled or D => Disabled) | |
| G | Group flag value (G => in a group, E => last in a group) | |
| B | Block flag value (B => in a block, E => last in a block) | |
| IL | Interlock Status, two characters, the first reports the interlock type and scope, the second, the interlock stage type. | |
| | Interlock Type and Scope | |
| | L | Wait-Fail Local |
| | G | Wait-Fail Global |
| | S | Wait-Fail Subsystem Local |
| | F | Fail-Only Local |

| | | |
|---|---|---|
| | T | Fail-Only Subsystem Local |
| | Interlock Stage Type | |
| | R | 1st UV stage: Ground Stn. Reception |
| | U | 2nd UV stage: Uplink |
| | O | 3rd UV stage: On Board Reception |
| | A | Execution Ver.: Acceptance |
| | C | Execution Ver.: Completion |
| ST | Source Type (MS => Man.Stack, AS => Auto Stack) | |
| Source | Source workstation ID | |
| FC | Frame Counter: indicating current frame count. Only applicable for CLTU AD mode | |
| TC | Transmission Counter: indicating the current number of (re)transmission. Only applicable for CLTU AD mode. | |
| Q | This column will show an asterisk (*) should any of the verification stages be anything other than “Success (S)” or not applicable (blank). | |
| Verification Status Headings | | |
| | The status of each individual verification stage may have one of the following values:<br>F Fail<br>U Unverified<br>X Unknown<br>P Pending<br>T Time-out<br>S Success<br>I Idle<br>A Assumed Passed<br>C Affected<br>V Uncertain Successful<br>N Uncertain Failed<br>E Superseded<br>Blank N/A<br>The following behaviour of a time-tagged commands verification status are extended:<br>• If a time-tagged command is deleted prior to execution, a string “DELETED” is showed in verification stage field<br>• If a time-tagged command is disabled at execution, EV stages are marked as “D” | |
| R | Release from SCOS-2000 to the SLE User (NCTRS/NIS). Note that a failure for this stage may be caused by one of the following reasons:<br>• PTV NOT OK at release time (the PTV state is visible in the CQD<br>• PTV/CEV pane, see Section 3.1.3.3 below)<br>• PTV OK (e.g. dynamic PTV was overridden) but no TCP/IP connection between the releaser and the NCTRS was available at release time<br>• The command was successfully released but eventually rejected by the NCTRS e.g. because the required connection to the station equipment was | |

| | |
|---|---|
| | not available at release time. In this case an administrative message is also received from the NCTRS and logged in the HFA |
| G | Ground station reception (UV 1st stage) |
| T | Uplink a.k.a. radiation (UV 2nd stage) and in case of Throw Event Command it corresponds to the Execution stage. |
| O | On-board reception a.k.a. transfer (3rd UV stage, only applicable in AD mode) |
| A | On-board application acceptance |
| SS | Execution start – two instances of the stage are shown, one corresponding to updates from Real Time and the other corresponding to updates from Playback TM |
| 1122 | Execution step „n" – two instances of each stage are shown, one corresponding to updates from Real Time and the other corresponding to updates from Playback TM |
| CC | Execution completion – two instances of the stage are shown, one corresponding to updates from Real Time and the other corresponding to updates from Playback TM |

Table 15 – TC Report ASCII column output

## *6.7 Binary*

Binary format is specific to each of the request types.

### 6.7.1 Archive File

The file is stored as received from the mission File Archive, packaged in a TAR file.

### 6.7.2 File System

The files are stored as received from the file system, packaged in a TAR file.

### 6.7.3 Google Proto Buffers

Google Protocol Buffers binary format is used to deliver data in an efficient format. Compared to XML format it is more compact and faster to process in case of large data volumes. The proto files describing the data structure are stored in edds-ws-common and are compiled as a part of the build process. Data is encoded as a framed byte array. Helper classes are provided in project edds-ws-client in package esa.egos.edds.ws.client.binary to simplify working with binary format.

#### *6.7.3.1 Header line*

Each EDDS binary file has ASCII encoded header line included to provide simple interaction by external applications. Format of header line is simple key value pairs separated by semicolons:

```
# Key1: Value1; ... ; KeyN: ValueN \n
```

- Header line starts with # (byte value 23 in HEX) and space (byte value 20 in HEX)
- Each key value pair ends with semicolon (byte value 3B in HEX) and optional space (byte value 20 in HEX)
- Key is separated from value with colon (byte value 3A in HEX) and optional space (byte value 20 in HEX)
- Header line ends with single line feed character (byte value A0 in HEX)
- Currently supported keys are:
    - Type – data type in binary format (current supported values are Parameter and SMON Parameter)
    - Version – version of binary format

#### *6.7.3.2 Data*

Data format is based on Google Protocol Buffers (GPB, see [RD-16]). The file contains the list of serialized GPB DarcParameterBinary objects, each of them prefixed with its size in bytes, the value is in GPB varint format.

Note that Google Protocol Buffer encoded files are not indended to be decoded manually. Instead, the original Proto file describing the format in plain text should be compiled and the Google Protocol Buffers library should be used instead. The Proto file describing this format is provided in the EDDS source code within the edds-ws-common package. For more information on Google Protocol Buffers, see [RD-16].

#### *6.7.3.3 Specific formats*

##### 6.7.3.3.1 Parameter TM

Protobuf format is used to deliver Parameter TM data efficiently. Binary is one of the available formats Parameter TM request submitter can choose from.

###### *6.7.3.3.1.1 Data*

Following is the GPB DarcParameterBinary message definition:

```
import "ParamValidity.proto";


message DarcParameterBinary {


      enum Type {
            // Special type indicating that the proto type definition should be updated to include a new type
            UNKNOWN = 0;
            BIT = 1;
            UTINYINT = 2;
            STINYINT = 3;
            USMALLINT = 4;
            SSMALLINT = 5;
            UMEDIUMINT = 6;
            SMEDIUMINT = 7;
            SINT = 8;
            UINT = 9;
            FLOAT = 10;
            DOUBLE = 11;
            STRING = 12;
            DATETIME = 13;
            JOB = 14;
            LOG = 15;
      }


      required string param_name = 1;
```

```
      required int64 gen_time = 2;
      required int64 storage_time = 3;
      required string value = 4;
      required ParamValidity validity = 5;
      required Type type = 6;

      // Following are not present in DARC v2.2.2 and earlier
      optional int64    parentGenTime = 7; // SCOS TM packet generation time
      optional int64    parentId = 8; // SPID in PARC
      optional Type     rawValType = 9;
      optional bool     boolRawVal = 10;
      optional string   strRawVal = 11;
      optional double   dblRawVal = 12;
      optional float    fltRawVal = 13;
      optional sint64   longRawVal = 14;
}
```

The above message imports the ParamValidity definition which is specified as follows:

```
package esa.egos.edds.model;

option java_outer_classname = "ParamValidityProto";
enum ParamValidity {
      VALID = 0;
      INVALID = 1;
      UNKNOWN = 2;
      EXPIRED = 3;
}
```

#### *6.7.3.3.1.2 Decoding Files*

Note that it is not necessary to manually decode these files! EDDS provides an API in the edds-ws-client to decode them. It is also possible to decode the files using Google Protocol Buffers libraries for many other languages including Python, Perl and C++.

| **First line** | **# Type: Parameter; Version: 1;** | **Header line for the binary file format** |
|---|---|---|
| **Rest of file** | Binary data | Framed Google Protocol Buffers encoded data**.** The encoded data is prefixed with the length of the message so that multiple messages can be included in one file. This functionality is provided by both the Apache ActiveMQ and the Google Protobuf implementations. Example code on how to read the data with either implementation are provided in the esa.egos.edds.ws.client.examples test package of edds-ws-client. |

#### 6.7.3.3.2 Parameter TM Definitions

Protobuf format is used to deliver Parameter TM definitions data efficiently. Binary is one of the available formats Parameter TM Definitions request submitter can choose from.

##### *6.7.3.3.2.1 Data*

Following is the GPB `ParamDefinitions` message definition:

```
message ParamDefinitionRecord
{
    optional string name = 1;
    optional string description = 2;
    optional string unit = 3;
    optional string type = 4;
    optional bool active = 5;
}

message ParamDefinitions
{
    repeated ParamDefinitionRecord entry = 1;
}
```

#### 6.7.3.3.3 SMON Parameter

The Protobuf format is used to deliver Parameter TM data from SMON efficiently. Binary is one of the available formats that the SMON Parameter request can choose from. It is also possible to choose the DARC Binary format, so that the output from the SMON Parameter request is compatible with programs that can read DARC Binary data files. See Section 6.7.3.3.1 for details of that format.

##### *6.7.3.3.3.1 Data*

Following is the GPB SMONParameter message definition:

```
message SMONParameterBinary
{
       required string name = 1;
       required string calib_id = 2;
       repeated PacketInstanceBinary packet_instances = 3;
       repeated RepresentationSampleBinary representation_samples = 4;

    enum ValidityValueBinary {
      UNKNOWN = 0;
      VALID = 1;
      INVALID = 3;
      EXPIRED = 4;
    }

    message PacketInstanceBinary {
```

```
      required string reception_time = 1;
      required string generation_time = 2;
      required int32 sample_offset = 3;
      required int32 sequence_counter = 4;
      required int32 spacecraft_id = 5;
      required SMONParameterBinary.ValidityValueBinary validity = 6;
      required int32 data_stream = 7;
      required int32 domain = 8;
      required int32 packet_size = 9;
      required string ground_station = 10;
      required string packet_mnemonic = 11;
    }

    message RepresentationSampleBinary {
      required string representation_name = 1;
      required string sample_time = 2;
      required string value = 3;

        message Validity {

            required SMONParameterBinary.ValidityValueBinary validity = 1;
            required string validity_details = 2;

        }
      required Validity validity = 4;

        message BehaviourState {
            required string status_type = 1;

            enum GeneralBehaviourStateBinary {
                INCONSISTENT_STATUS = 0;
                NOMINAL = 1;
                OUT_OF_LIMIT = 2;
                UNCHECKED = 3;
                UNDEFINED = 4;
                VIOLATED = 5;
                WARNING = 6;
            }
            required GeneralBehaviourStateBinary ool_state = 2;
```

```
            required int32 nr_of_violations = 3;
            required string value = 4;

            message DetailedBehaviourStateBinary {
                optional LimitBehaviourStateBinary limitState = 1;
                optional StatusBehaviourStateBinary statusState = 2;
                optional SCCBehaviourStateBinary sccState = 3;
                optional DeltaBehaviourStateBinary deltaState = 4;

                enum LimitBehaviourStateBinary {
                    WITHIN_RANGE = 0;
                    LOW = 1;
                    HIGH = 2;
                    LOW_LOW = 3;
                    HIGH_HIGH = 4;
                }

                enum StatusBehaviourStateBinary {
                    ALLOWED = 0;
                    UNEXPECTED = 1;
                }

                enum SCCBehaviourStateBinary {
                    SCC_ENABLE = 0;
                    SCC_UNINIT = 1;
                    SCC_DISABLE = 2;
                    SCC_OFF = 3;
                    SCC_FAIL = 4;
                }

                enum DeltaBehaviourStateBinary {
                    DELTA_ALLOWED = 0;
                    DELTA_EQUAL = 1;
                    MAX_DELTA_LOW = 2;
                    MAX_DELTA_HIGH = 3;
                    MIN_DELTA_LOW = 4;
                    MIN_DELTA_HIGH = 5;
                }
            }
            required DetailedBehaviourStateBinary detailed_state = 5;
```

```
        }
      repeated BehaviourState behaviour_states = 5;
    }


}
```

#### 6.7.3.3.4 Event Record Report

The Protobuf format is used to deliver packet TM data from PARC efficiently. Binary is one of the available formats that the Event Record Report request can choose from.

##### *6.7.3.3.4.1 Data*

Following is the GPB `EventRecordReport` message definition:

```
message EventRecordReportBinary
{
    optional string id = 1;
    optional string domain = 2;
    optional int64 generation_time = 3;
    optional string application = 4;
    optional string severity = 5;
    optional string type = 6;
    optional string workstation = 7;
    optional string message = 8;
}
```

#### 6.7.3.3.5 Packet Raw

The Protobuf format is used to deliver raw packet data from PARC efficiently. Binary is one of the available formats that the Packet TC Raw, Packet TM Raw and Packet EV Raw requests can choose from.

##### *6.7.3.3.5.1 Data*

Following is the GPB `PacketRaw` message definition:

```
message PacketRawBinary
{
    optional string packet = 1;
    optional int64 packet_id = 2;
}
```

#### 6.7.3.3.6 Packet TC Report

The Protobuf format is used to deliver packet TC report data from PARC efficiently. Binary is one of the available formats that the Packet TC Report request can choose from.

##### *6.7.3.3.6.1 Data*

Following is the GPB `PacketTCReport` message definition:

```
message PacketTCBinary
{
    optional string command_name = 1;
    optional string domain = 2;
    optional string source = 3;
    optional string description = 4;
    optional string sequence_name = 5;
    optional string release_time = 6;
    optional string uplink_time = 7;
```

```
    optional string execution_time = 8;
    optional string sub_system_id = 9;
    optional int64 sub_schedule_id = 10;
    optional int32 p_uSService_type = 11;
    optional int32 p_uSSub_service_type = 12;
    optional int32 apid = 13;
    optional int32 pid = 14;
    optional int32 vcid = 15;
    optional int32 category = 16;
    optional int32 ground_station_id = 17;
    optional int32 ssc = 18;
    optional string db_version = 19;
    optional string uplink_mode = 20;
    optional string static_ptv_check_state = 21;
    optional string dynamic_ptv_check_state = 22;
    optional string cev_check_state = 23;
    optional bool is_in_group = 24;
    optional bool is_group_end = 25;
    optional bool is_in_block = 26;
    optional bool is block end = 27;
    optional string interlock_type = 28;
    optional string interlock_stage_type = 29;
    optional string src_type = 30;
    optional string frame_count = 31;
    optional string release_state = 32;
    optional string ground_state = 33;
    optional string uplink_state = 34;
    optional string on_board_state = 35;
    optional string on_board_acc_state = 36;
    optional string exec_start_rt_state = 37;
    optional string exec_start_pb_state = 38;
    optional string exec_step1_rt_state = 39;
    optional string exec_step1_pb_state = 40;
    optional string exec_step2_rt_state = 41;
    optional string exec_step2_pb_state = 42;
    optional string exec_comp_state = 43;
    optional string exec_comp_pb_state = 44;
    optional string tt_obq_status = 45;
    optional string tt_del_status = 49;
    optional string tt_load_status = 50;
    repeated PktTcReportParameterBinary pkt_tc_report_parameters = 46;
    optional int32 trans_count = 47;
    repeated MissionSpecificField mission_specific_fields = 48;
    optional bytes body = 51;

    message PktTcReportParameterBinary {
        optional string parameter_name = 1;
        optional string parameter_description = 2;
        optional string parameter_unit = 3;
        optional string param_type = 4;
        optional string param_rep = 5;
        optional bool fix_edit = 6;
        optional bool has_changed = 7;
        optional string radix = 8;
        optional bool is_editable = 9;
        optional bool manually_edited = 10;
        optional string param_value = 11;
    }

    message MissionSpecificField {
        optional string name = 1;
```

```
        optional string type = 2;
        optional string value = 3;
    }
}
```

#### 6.7.3.3.7 Packet TM Report

The Protobuf format is used to deliver packet TM report data from PARC efficiently. Binary is one of the available formats that the Packet TM Report request can choose from.

##### *6.7.3.3.7.1 Data*

Following is the GPB `PacketTMReport` message definition:

```
message PacketTMBinary
{
    optional int32 apid = 1;
    optional int32 pid = 2;
    optional int32 category = 3;
    optional string database_version = 4;
    optional string generation_time = 5;
    optional string data_stream = 6;
    optional string partition_name = 25;
    optional string domain = 7;
    optional string ground_station = 8;
    optional string quality_flag = 9;
    optional string reception_time = 10;
    optional string sle_service_id = 11;
    optional int32 source_sequence_counter = 12;
    optional int64 spid = 13;
    optional int32 type = 14;
    optional int32 sub_type = 15;
    optional string time_quality = 16;
    optional string virtual_channel = 17;
    optional string data_unit_type = 18;
    optional int32 pi1 = 19;
    optional int32 pi2 = 20;
    optional int32 packet_length = 21;
    optional string mnemonic = 22;
    optional string description = 23;
    optional sint64 id = 24;
    optional int32 spacecraftId = 26;
    optional bytes body = 28;

    repeated PktTmReportParameterBinary pkt_tm_report_parameters = 27;

    message PktTmReportParameterBinary {
        optional string parameter_name = 1;
        optional string parameter_description = 2;
        optional string parameter_units = 3;
        optional string parameter_radix = 4;
        optional int64 filing_time = 5;
        optional int32 bit_offset = 6;
        optional int32 byte_offset = 7;
        optional string parameter_value = 8;
        optional int64 length = 9;
    }

    enum TimeQuality {
      GOOD = 0;
      INACCURATE = 1;
      BAD = 2;
```

```
      NA = 255;
    }
}
```

#### 6.7.3.3.8 Packet TM Gap Report

The Protobuf format is used to deliver packet TM gap report data from PARC efficiently. Binary is one of the available formats that the Packet TM Gap Report request can choose from.

##### *6.7.3.3.8.1 Data*

Following is the GPB `PacketTMGapBinary` message definition:

```
message PacketTMGapBinary
{
    optional int64 start_gap_time = 1;
    optional int64 end_gap_time = 2;
    optional int32 data_partition = 3;
    optional int32 apid = 4;
    optional int32 start_ssc_pkt = 5;
    optional int32 end_ssc_pkt = 6;
    optional int32 num_pkts_missing = 7;
}
```

#### 6.7.3.3.9 Out of Limit Record Report

The Protobuf format is used to deliver packet OOL report data from PARC efficiently. Binary is one of the available formats that the OOL Report request can choose from.

##### *6.7.3.3.9.1 Data*

Following is the GPB `OOLReport` message definition:

```
package esa.egos.edds.model;

enum OOLRecordType {
    NO_VALUE = 0;
    LIMIT = 1;
    STATE = 2;
    STATUS_CONSISTENCY = 3;
    SOFT_HARD_LIMIT = 4;
    LIMIT_MO = 5;
    DELTA = 6;
}

message OOLReportBinary {
    message OOLReportRecord {
        enum OOLParameterState {
            NOMINAL = 0;
            WARNING = 1;
            OUT_OF_LIMITS = 2;
            SCC = 3;
            SCC_DISABLE = 4;
            SCC_OFF = 5;
            SCC_UNINIT = 6;
            VIOLATION = 7;
            NO_VALUE = 8;
        }

        enum OOLBehaviourLimitState {
            LIMIT_HIGH = 0;
                      LIMIT_HIGH_HIGH = 1;
                      LIMIT_LOW = 2;
```

```
                        LIMIT_LOW_LOW = 3;
                        LIMIT_WITHIN_RANGE = 4;
        }

        enum OOLBehaviourSccState {
            B_SCC_ENABLE = 0;
            B_SCC_DISABLE = 1;
            B_SCC_FAIL = 2;
            B_SCC_OFF = 3;
            B_SCC_UNINIT = 4;
        }

        enum OOLBehaviourDeltaState {
            DELTA_ALLOWED = 0;
            DELTA_EQUAL = 1;
            MAX_DELTA_HIGH = 2;
            MAX_DELTA_LOW = 3;
            MIN_DELTA_HIGH = 4;
            MIN_DELTA_LOW = 5;
        }

        enum OOLBehaviourStatusState {
            STATUS_ALLOWED = 0;
            STATUS_UNEXPECTED = 1;
        }

        optional OOLRecordType record_type = 1;
        optional int64 generation_time = 2;
        optional int64 parameter_changed_time = 3;
        optional string parameter_name = 4;
        optional OOLParameterState parameter_state = 5;
        optional string ool_state = 6;
        optional string value = 7;
        optional string lower_limit = 8;
        optional string upper_limit = 9;
        optional string allowed_values = 10;
        optional string scc_limit = 11;
        optional string reference_value = 12;
        optional string delta_value = 13;
        optional string min_value = 14;
        optional string last_value = 15;
        optional int32 violation_number = 16;
        optional int32 violation_number_hard = 17;
        optional int32 violation_number_soft = 18;
        optional string description = 19;
        optional string unit = 20;
        optional OOLBehaviourLimitState behaviour_limit_state = 21;
        optional OOLBehaviourSccState behaviour_scc_state = 22;
        optional OOLBehaviourDeltaState behaviour_delta_state = 23;
        optional OOLBehaviourStatusState behaviour_status_state = 24;
        optional string violation_description = 25;
    }

    repeated OOLReportRecord records = 1;
}
```

# 7. Naming Conventions

## 7.1 Request ID Convention

The Request ID is formed using the information in the following table:

| *Field* | *Type* | *Possible Values* |
|---|---|---|
| RequestType | String | BatchRequest, StreamRequest, Cancel, DeleteData, DeleteRequest, AccountRequest |
| Subtype | String | Taken from DataAccessDataElement (See Section D.22) |
| Mission | String | Any alphanumeric value |
| Domain | String | Typically numbers from 0 – 51 |
| Username | String | The user ID of the user performing the request |
| Time | String | Time of the creation of the request in DOY form in GMT |

Table 16 – Request ID Convention

The Request ID can either be on of the following two formats:

```
[RequestType].[Username].[yyyy.DDD.hh.mm.ss.SSS]
```

Or

```
[RequestType].[Subtype].[Mission].[Domain].[yyyy.DDD.hh.mm.ss.SSS]
```

The first form is used for changes to user and mission LDAP account information (AccountRequest types) and the other form is used for all other request types. The Request ID is created by the EDDS Archiver (by the ScheduleUtility class) when the request is added to the database.

## 7.2 Response ID Convention

The Response ID is formed using the information in the following table:

| *Field* | *Type* | *Possible Values* |
|---|---|---|
| RequestId | RequestId | Same as Section 7 |
| Time | String | Time the response file was created in DOY form in GMT |
| Counter | Int | The response file number, starting at 1. |
| Extension | String | The file type |

Table 17 – Response ID Convention

The Response ID is in the following format:

```
[RequestType].[Subtype].[Mission].[Domain].[yyyy.DDD.hh.mm.ss.SSS]@[yyyy.DDD
.hh.mm.ss.SSS].[Counter].[Extension]
```

# 8. Delivery

## *8.1 Delivery Mechanism*

The EDDS supports the following delivery mechanisms for the delivery of data to the end user.

The batch request response data can be delivered to the user via File Server or EDDS Server each file separately as soon as EDDS Server is finished processing a file and it is available for Delivery Manager.

### 8.1.1 File Server

Data types that support the 'File Server' delivery mechanism are delivered over SFTP or FTP using the EDDS web server. Direct delivery requires the end user to be running a server that supports SFTP/FTP.

In order to user SFTP the user has to provide username and password of the remote file server. In case these data is not provided, the web server will automatically try to use FTP.

### 8.1.2 EDDS Server

Data types that support the EDDS Server delivery mechanism are stored on an EDDS server. Also when the File Server delivery fails, the data is still stored in EDDS file server.

### 8.1.3 Stream

Data types that support Stream delivery require the end user to run a stream client application that can be downloaded from the EDDS web site and installed on the user's machine. Stream delivery supports online and offline data where, in the context of the EDDS, offline is taken to refer to the retrieval of previously archived data and online is taken to refer to the routing of data as it is received on the relevant control system. In addition, online data delivery supports two modes of operation: timely and complete. Timely mode ensures data is delivered within a specified time and will drop data if this criterion cannot be met. Complete mode ensures all data is delivered, although there may be considerable delay in the arrival of the complete data set.

# 9. Web Services Description

The EDDS uses web services as the fundamental mechanism to provide the functionality behind EDDS batch services and EDDS stream services. This section of the EUICD details the structure of the EDDS Web Services.

## *9.1 Web Service Introduction*

The EDDS provides access to data via Web Services that are defined using Web Services Description Language (WSDL) see [RD-3]. The Web Services described in this section of the document allows client applications access to batch and user management services.

The services provide operations that allow a client to be authenticated, make requests for batch data, make requests for stream data, perform user management and receive data in response to those requests.

A WSDL service description is an XML document that contains a set of definitions for:

- Port Types
- Messages
- Bindings
- Services

A port type is a named set of abstract operations and the abstract messages involved. Message definitions are always considered to be an abstract definition of the message content. A message binding describes how the abstract content is mapped into a concrete format. However, in the case of the EDDS the content is intended to map directly onto the XML schemas. The bindings provide the protocol details for operations and messages defined by a particular port type. In the case of the EDDS, the bindings are to a SOAP protocol using XML messages. Finally, a service definition groups a set of related ports together. The definition of the EDDS Web Services is defined in the XML documents,

Port operations defined by EDDS provide a means to indicate if an error has occurred during the request of an operation.) An exception is raised when a service request cannot be executed with success.

The WSDL file can be viewed in a web browser by simply entering the end point URL normally passed to the client application into the web browser's address bar.

## *9.2 PortTypes*

A port type is a named set of abstract operations and the abstract messages involved. The port type name attribute provides a unique name among all port types defined within in the enclosing service definition document. WSDL has four transmission primitives that an endpoint can support:

- One-way - The endpoint receives a message.
- Request-response - The endpoint receives a message, and sends a correlated message.
- Solicit-response - The endpoint sends a message, and receives a correlated message.
- Notification - The endpoint sends a message.

WSDL refers to these primitives as operations.

The operation instances defined in the EDDS port types are based on 'one-way' and 'request-response' transmission primitives. The following sections describe the port types that have been defined for the EDDS.

### 9.2.1 EDDS Port Type

The EDDS port type provides the operations that allow the authentication of a user and subsequent allocation of a session identifier. All users of the EDDS are assigned a session and it is under this

session that a series of operations are made. A session will be timed out by the EDDS server if inactive, however it is strongly recommended that applications should actively close the session when appropriate. This ensures that server resources are freed as soon as possible to service new session requests. Not following this guideline will result in the potential delaying (or rejection) of session requests. The timeout period of sessions can be changed by the EDDS Administrator in the EDDS Web Server configuration in the file "web.xml". The authentication port type also provides operations for the client to query the roles and missions available within the session.

The EDDS port type is a component that is used by both batch and stream services.

It provides the set of operations available for the request and receipt of data (and acknowledgements) within the scope of an EDDS batch service.

It provides the set of operations available for the execution of user management requests.

#### *9.2.1.1 EddsPortType*

The EDDS port type describes the named set of messages that a service sends and/or receives

| | |
|---|---|
| operations | **batchRequest**<br><br>*The batch request operation*<br>input **ws:batchRequest**<br>output **ws:batchRequestResponse**<br>fault **ws:requestFault**<br><br>*An error occurs during the elaboration of the request*<br><br>fault **ws:authorizationFault**<br><br>*If the user has no priviledges to perform the request*<br><br>fault **ws:sessionFault**<br><br>*If the user is not logged in*<br><br>**streamRequest**<br><br>*The stream request operation*<br>input **ws:streamRequest**<br>output **ws:streamRequestResponse**<br>fault **ws:requestFault**<br><br>*An error occurs during the elaboration of the request*<br><br>fault **ws:authorizationFault**<br><br>*If the user has no priviledges to perform the request*<br><br>fault **ws:sessionFault**<br><br>*If the user is not logged in* |

### getStatus

*The get status operation*

input **ws:getStatus**

output **ws:getStatusResponse**

fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### reSubmit

*The re-submit operation*

input **ws:reSubmit**

output **ws:reSubmitResponse**

fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getStatuses

*Gets the status of a list of jobs*

input **ws:getStatuses**

output **ws:getStatusesResponse**

fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getResponse

*The get response operation*

input **ws:getResponse**
output **ws:getResponseResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getRequest

*The get request operation*

input **ws:getRequest**
output **ws:getRequestResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getStreamRequest

*The get stream request operation*

input **ws:getStreamRequest**
output **ws:getStreamRequestResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### startStreamData

*Starts the incoming stream of the specified active stream request*

input **ws:startStreamData**
output **ws:startStreamDataResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no privileges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### stopStreamData

*Stops the incoming stream of the specified active stream request*

input **ws:stopStreamData**
output **ws:stopStreamDataResponse**
fault **ws:sessionFault**

*If the user is not logged in*

### getParamDefinitions

*Gets the parameter definitions for the specified mission*

input **ws:getParamDefinitions**
output **ws:getParamDefinitionsResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no privileges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getCatalogue

*Gets the catalogue for the specified data source*

input **ws:getCatalogue**
output **ws:getCatalogueResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no privileges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getFarcCatalogue

*Gets the FARC catalogue for the specified mission and domain*
*@deprecated use getCatalogue instead*

input **ws:getFarcCatalogue**
output **ws:getFarcCatalogueResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no privileges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getDataspaces

*Gets the dataspaces for the specified mission and request type*

input **ws:getDataspaces**
output **ws:getDataspacesResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no privileges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### cancel

*The cancel operation*

input **ws:cancel**
output **ws:cancelResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### suspend

*The suspend operation*

input **ws:suspend**
output **ws:suspendResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### resume

*The resume operation*

input **ws:resume**
output **ws:resumeResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### deleteData

*The operation to delete response data*
input **ws:deleteData**
output **ws:deleteDataResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### deleteRequest

*The operation to delete a request*
input **ws:deleteRequest**
output **ws:deleteRequestResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getJobs

*The get jobs operation*

input **ws:getJobs**

output **ws:getJobsResponse**

fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getJobsWithStatusAndLimit

input **ws:getJobsWithStatusAndLimit**

output **ws:getJobsWithStatusAndLimitResponse**

fault **ws:authorizationFault**

*If the user has no privileges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getJobsWithStatus

*Gets the jobs for the specified start and end date. The message contains a java.util.ArrayList of type RequestInfoRec encoded in Base64*

input **ws:getJobs**

output **ws:getJobsWithStatusResponse**

fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getHistoricalLog

*Gets the historical system logs*

input **ws:getHistoricalLog**
output **ws:getHistoricalLogResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### stopHistoricalLogRetrieval

*Stops the retrieval of historical log messages*

input **ws:stopHistoricalLogRetrieval**
output **ws:stopHistoricalLogRetrieval Response**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getTransformations

*Gets the available XSL Transformations for the given mission and request type*

input **ws:getTransformations**
output **ws:getTransformationsResponse**
fault **ws:requestFault**

*An error occurs during the elaboration of the request*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:sessionFault**

*If the user is not logged in*

### logIn

*Authenticate the user and start the session*

input **ws:logIn**

*The credentials of the user: username and password*

output **ws:logInResponse**

*No response given*

fault **ws:authenticationFault**

*If the username or password are incorrect or the LDAP server could not be reached*

fault **ws:passwordExpiredFault**

*If the user's password has expired and needs to be changed*

### hasSessionExpired

*Checks if the user's session has expired, and return true if it has. This operation has a one-way transport.*

input **ws:checkSession**

*Input is not used. JAX-WS doesn't support notification style messages.*

output **ws:checkSessionResponse**

*Returns true if the session has expired or has not been started*

### logOut

*Close the session for the user. This operation has a one-way transport*

input **ws:logOut**

### checkUserPassword

*Check if the password supplied matches the user's current password. Used to double check the user's current password before allowing the user to change their password.*

input **ws:checkUserPassword**

*The user's current password in plain text*

output **ws:checkUserPasswordResponse**

*No output given*

fault **ws:authenticationFault**

*If the password doesn't match or the LDAP server could not be reached*

fault **ws:sessionFault**

*If the user is not logged in*

### accountRequest

*The account request operation*

input **ws:accountRequest**

*The actual request*

output **ws:accountRequestResponse**

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getUsers

*Retrives the list of users*

input **ws:getUsers**

*Flag to indicate whether to fetch all the users*

output **ws:getUsersResponse**

*The list of users*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getMissions

*the list of missions*

input **ws:getMissions**

*Empty message*

output **ws:getMissionsResponse**

*The list of missions*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getMissionsAndDomains

*the list of missions with their domains*

input **ws:getMissionsAndDomains**

*Empty message*

output **ws:getMissionsAndDomainsResponse**

*The list of missions*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getRoles

*Returns the roles the user has permission to use for the specified mission*

input **ws:getRoles**

*The name of the mission*

output **ws:getRolesResponse**

*The role details*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getUserAccountDetails

*Returns the details for the specified user*

input **ws:getUserAccountDetails**

*The name of the user*

output **ws:getUserAccountDetailsResponse**

*The user's details*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getMissionDetails

*Returns the details for the specified mission*

input **ws:getMissionDetails**

*The name of the mission*

output **ws:getMissionDetailsResponse**

*The mission details*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

fault **ws:sessionFault**

*If the user is not logged in*

### getUserQuota

*Returns the quota usage for the specified mission and logged on user*

input **ws:getUserQuota**

*The name of the mission*

output **ws:getUserQuotaResponse**

*The quota details for the mission and logged on user*

fault **ws:authorizationFault**

*If the user has no priviledges to perform the request*

fault **ws:requestFault**

*An error occurs in the elaboration of the request*

| | |
|---|---|
| | fault **ws:sessionFault**<br>*If the user is not logged in*<br><br>**hasPermissionToSeeAllUsers**<br>*Checks if user has privileges to see all users data.*<br>input **ws:hasPermissionToSeeAllUsers**<br>*Username*<br>output **ws:permissionToSeeAllUsersResponse**<br>*Returns true if the user has permission to see other users data*<br>fault **ws:authorizationFault**<br>*If the user has no priviledges to perform the request*<br>fault **ws:requestFault**<br>*An error occurs in the elaboration of the request*<br>fault **ws:sessionFault**<br>*If the user is not logged in* |
| used by | binding **EddsBinding** |

## 9.3 Messages

This section describes the XML messages that EDDS sends and receive in order to provide services.

### 9.3.1 message accountRequest

*The message contains the details of a account management request*

| | |
|---|---|
| parts | **accountRequest**<br>element **model:AccountRequestMessagePart** |
| used by | Operation **accountRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="accountRequest"><br><wsdl:documentation>The message contains the details of a account management request</wsdl:documentation><br><wsdl:part name="accountRequest" element="model:AccountRequestMessagePart"/><br></wsdl:message> |

### 9.3.2 message accountRequestResponse

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **accountRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="accountRequestResponse"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.3 message authenticationFault

*The message contains details related to a authentication fault*

| | |
|---|---|
| parts | **authenticationFault**<br>element **model:AuthenticationFault** |
| used by | Operation **logIn** in PortType **EddsPortType**<br>Operation **checkUserPassword** in PortType **EddsPortType** |
| source | <wsdl:message name="authenticationFault"><br><wsdl:documentation>The message contains details related to a authentication fault</wsdl:documentation><br><wsdl:part name="authenticationFault" element="model:AuthenticationFault"/><br></wsdl:message> |

### 9.3.4 message authorizationFault

*The message contains details related to a authorization fault*

| | |
|---|---|
| parts | **authorizationFault**<br>element **model:AuthorizationFault** |
| used by | Operation **batchRequest** in PortType **EddsPortType**<br>Operation **streamRequest** in PortType **EddsPortType**<br>Operation **getStatus** in PortType **EddsPortType**<br>Operation **getStatuses** in PortType **EddsPortType**<br>Operation **getResponse** in PortType **EddsPortType**<br>Operation **getRequest** in PortType **EddsPortType**<br>Operation **getStreamRequest** in PortType **EddsPortType**<br>Operation **startStreamData** in PortType **EddsPortType**<br>Operation **getParamDefinitions** in PortType **EddsPortType**<br>Operation **getFarcCatalogue** in PortType **EddsPortType**<br>Operation **cancel** in PortType **EddsPortType**<br>Operation **suspend** in PortType **EddsPortType**<br>Operation **resume** in PortType **EddsPortType**<br>Operation **deleteData** in PortType **EddsPortType**<br>Operation **deleteRequest** in PortType **EddsPortType**<br>Operation **getJobs** in PortType **EddsPortType**<br>Operation **getJobsWithStatus** in PortType **EddsPortType**<br>Operation **getJobsWithStatusAndLimit** in PortType **EddsPortType**<br>Operation **getHistoricalLog** in PortType **EddsPortType**<br>Operation **stopHistoricalLogRetrieval** in PortType **EddsPortType**<br>Operation **getTransformations** in PortType **EddsPortType** |

| | |
|---|---|
| | Operation **accountRequest** in PortType **EddsPortType**<br>Operation **getUsers** in PortType **EddsPortType**<br>Operation **getMissions** in PortType **EddsPortType**<br>Operation **getMissionsAndDomains** in PortType **EddsPortType**<br>Operation **getRoles** in PortType **EddsPortType**<br>Operation **getUserAccountDetails** in PortType **EddsPortType**<br>Operation **getMissionDetails** in PortType **EddsPortType**<br>Operation **getUserQuota** in PortType **EddsPortType**<br>Operation **hasPermissionToSeeAllUsers** in PortType **EddsPortType** |
| source | <wsdl:message name="authorizationFault"><br><wsdl:documentation>The message contains details related to a authorization fault</wsdl:documentation><br><wsdl:part name="authorizationFault" element="model:AuthorizationFault"/><br></wsdl:message> |

### 9.3.5 message batchRequest

*The message contains the details of a batch request*

| | |
|---|---|
| parts | **batchRequest**<br>element **model:RequestMessagePart** |
| used by | Operation **batchRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="batchRequest"><br><wsdl:documentation>The message contains the details of a batch request</wsdl:documentation><br><wsdl:part name="batchRequest" element="model:RequestMessagePart"/><br></wsdl:message> |

### 9.3.6 message batchRequestResponse

*The message contains job ID associated to a batch request*

| | |
|---|---|
| parts | **batchRequestResponse**<br>element **model:JobListIdPart** |
| used by | Operation **batchRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="batchRequestResponse"><br><wsdl:documentation>The message contains job ID associated to a batch request</wsdl:documentation><br><wsdl:part name="batchRequestResponse" element="model:JobListIdPart"/><br></wsdl:message> |

### 9.3.7 message cancel

*The message contains the details of "cancel" requests (the job IDs)*

| | |
|---|---|
| parts | **cancel**<br>element **model:CancelPartList** |
| used by | Operation **cancel** in PortType **EddsPortType** |
| source | <wsdl:message name="cancel"> |

| | |
|---|---|
| | <wsdl:documentation>The message contains the details of "cancel" requests (the job IDs)</wsdl:documentation><br><wsdl:part name="cancel" element="model:CancelPartList"/><br></wsdl:message> |

### 9.3.8 message suspend

*The message contains the details of "suspend" request (the job IDs)*

| | |
|---|---|
| parts | **suspend**<br>element **model:SuspendPartList** |
| used by | Operation **suspend** in PortType **EddsPortType** |
| source | <wsdl:message name="suspend"><br><wsdl:documentation> The message contains the details of "suspend" requests (the job IDs)</wsdl:documentation><br><wsdl:part name="suspend" element="model:SuspendPartList"/><br></wsdl:message> |

### 9.3.9 message resume

*The message contains the details of "resume" requests (the job IDs)*

| | |
|---|---|
| parts | **resume**<br>element **model:ResumePartList** |
| used by | Operation **resume** in PortType **EddsPortType** |
| source | <wsdl:message name="resume"><br><wsdl:documentation>The message contains the details of "resume" requests (the job IDs)</wsdl:documentation><br><wsdl:part name="resume" element="model:ResumePartList"/><br></wsdl:message> |

### 9.3.10 message cancelResponse

*The message contains the job IDs associated with the cancel requests*

| | |
|---|---|
| parts | **cancelResponse**<br>element **model:AcknowledgementPartList** |
| used by | Operation **cancel** in PortType **EddsPortType** |
| source | <wsdl:message name="cancelResponse"><br><wsdl:documentation>The message contains the job IDs associated with the cancel requests</wsdl:documentation><br><wsdl:part name="cancelResponse" element="model:AcknowledgementPartList"/><br></wsdl:message> |

### 9.3.11 message suspendResponse

*The message contains the job IDs associated with the suspend requests*

| | |
|---|---|
| parts | **suspendResponse**<br>element **model:AcknowledgementPartList** |
| used by | Operation **suspend** in PortType **EddsPortType** |
| source | <wsdl:message name="suspendResponse"><br><wsdl:documentation>The message contains the job IDs associated with the suspend requests</wsdl:documentation><br><wsdl:part name="suspendResponse" element="model:AcknowledgementPartList"/><br></wsdl:message> |

### 9.3.12 message resumeResponse

*The message contains the job IDs associated with the resume requests*

| | |
|---|---|
| parts | **resumeResponse**<br>element **model:AcknowledgementPartList** |
| used by | Operation **resume** in PortType **EddsPortType** |
| source | <wsdl:message name="resumeResponse"><br><wsdl:documentation>The message contains the job IDs associated with the resume requests</wsdl:documentation><br><wsdl:part name="resumeResponse" element="model:AcknowledgementPartList"/><br></wsdl:message> |

### 9.3.13 message checkSession

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **hasSessionExpired** in PortType **EddsPortType** |
| source | <wsdl:message name="checkSession"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.14 message checkSessionResponse

*True if session has expired (or not started)*

| | |
|---|---|
| parts | **sessionResponse**<br>element **model:SessionExpired** |
| used by | Operation **hasSessionExpired** in PortType **EddsPortType** |
| source | <wsdl:message name="checkSessionResponse"><br><wsdl:documentation>True if session has expired (or not started)</wsdl:documentation><br><wsdl:part name="sessionResponse" element="model:SessionExpired"/><br></wsdl:message> |

### 9.3.15 message checkUserPassword

*The message contains the password to be verified*

| | |
|---|---|
| parts | **checkUserPassword**<br>element **model:Password** |
| used by | Operation **checkUserPassword** in PortType **EddsPortType** |
| source | <wsdl:message name="checkUserPassword"><br><wsdl:documentation>The message contains the password to be verified</wsdl:documentation><br><wsdl:part name="checkUserPassword" element="model:Password"/><br></wsdl:message> |

### 9.3.16 message checkUserPasswordResponse

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **checkUserPassword** in PortType **EddsPortType** |
| source | <wsdl:message name="checkUserPasswordResponse"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.17 message deleteData

*The message contains the details of a request to delete response data (a job ID)*

| | |
|---|---|
| parts | **deleteData**<br>element **model:DeleteDataPart** |
| used by | Operation **deleteData** in PortType **EddsPortType** |
| source | <wsdl:message name="deleteData"><br><wsdl:documentation>The message contains the details of a request to delete response data (a job ID)</wsdl:documentation><br><wsdl:part name="deleteData" element="model:DeleteDataPart"/><br></wsdl:message> |

### 9.3.18 message deleteDataResponse

*The message contains the job IDs associated to a request to delete response data*

| | |
|---|---|
| parts | **deleteDataResponse**<br>element **model:AcknowledgementPartList** |
| used by | Operation **deleteData** in PortType **EddsPortType** |
| source | <wsdl:message name="deleteDataResponse"><br><wsdl:documentation>The message contains the job IDs associated to a request to delete response data</wsdl:documentation><br><wsdl:part name="deleteDataResponse" element="model:AcknowledgementPartList"/> |

| | |
|---|---|
| | </wsdl:message> |

### 9.3.19 message deleteRequest

*The message contains the details of a request to delete requests (the job IDs)*

| | |
|---|---|
| parts | **deleteRequest**<br>element **model:DeleteRequestPart** |
| used by | Operation **deleteRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="deleteRequest"><br><wsdl:documentation>The message contains the details of a request to delete requests (the job IDs)</wsdl:documentation><br><wsdl:part name="deleteRequest" element="model:DeleteRequestPart"/><br></wsdl:message> |

### 9.3.20 message deleteRequestResponse

*The message contains the job IDs associated to the deletion requests*

| | |
|---|---|
| parts | **deleteRequestResponse**<br>element **model:AcknowledgementPartList** |
| used by | Operation **deleteRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="deleteRequestResponse"><br><wsdl:documentation>The message contains the job IDs associated to the deletion requests</wsdl:documentation><br><wsdl:part name="deleteRequestResponse" element="model:AcknowledgementPartList"/><br></wsdl:message> |

### 9.3.21 message getAllowedRequestTypes

*Gets the request types the logged-in user has permission to issue*

| | |
|---|---|
| parts | |
| used by | Operation **getAllowedRequestTypes** in PortType **EddsPortType** |
| source | <wsdl:message name="getAllowedRequestTypes"><br><wsdl:documentation> Gets the request types the logged-in user has permission to issue<br></wsdl:documentation><br></wsdl:message> |

### 9.3.22 message getAllowedRequestTypesResponse

*Returns the list of request types the logged-in user has permission to issue*

| | |
|---|---|
| parts | **allowedRequestTypesResponse**<br>element **model:AllowedRequestTypes** |
| used by | Operation **getAllowedRequestTypes** in PortType **EddsPortType** |
| source | <wsdl:message name="getAllowedRequestTypesResponse"> |

| | |
|---|---|
| | <wsdl:documentation>Returns the list of request types the logged-in user has permission to issue</wsdl:documentation><br><wsdl:part name="allowedRequestTypesResponse" element="model:AllowedRequestTypes"/><br></wsdl:message> |

### 9.3.23 message getCatalogue

*Gets the catalogue for the specified data source.*

| | |
|---|---|
| parts | **getCatalogue**<br>element **model:CatalogueRequest** |
| used by | Operation **getCatalogue** in PortType **EddsPortType** |
| source | <wsdl:message name="getCatalogue"><br><wsdl:documentation>Gets the catalogue for the specified data source.</wsdl:documentation><br><wsdl:part name="getCatalogue" element="model:CatalogueRequest"/><br></wsdl:message> |

### 9.3.24 message getCatalogueResponse

*Returns the allocated request ID for the request. This is used to take the asynchronous messages off the topic.*

| | |
|---|---|
| parts | **catalogueResponse**<br>element **model:JobIdPart** |
| used by | Operation **getCatalogue** in PortType **EddsPortType** |
| source | <wsdl:message name="getCatalogueResponse"><br><wsdl:documentation>Returns the allocated request ID for the request. This is used to take the asynchronous messages off the topic.</wsdl:documentation><br><wsdl:part name="catalogueResponse" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.25 message getDataspaces

*Gets the list of available dataspaces. For DARC, the first entry in the list is the currently active one.*

| | |
|---|---|
| parts | **getDataspaces**<br>element **model:DataspacesRequest** |
| used by | Operation **getDataspaces** in PortType **EddsPortType** |
| source | <wsdl:message name="getDataspaces"><br><wsdl:documentation>Gets the list of available dataspaces. For DARC, the first entry in the list is the currently active one.</wsdl:documentation><br><wsdl:part name="getDataspaces" element="model:DataspacesRequest"/><br></wsdl:message> |

### 9.3.26 message getDataspacesResponse

*Returns the list of available dataspaces. For DARC, the first entry in the list is the currently active one*

| | |
|---|---|
| parts | **dataspacesResponse**<br>element **model:ListString** |
| used by | Operation **getDataspaces** in PortType **EddsPortType** |
| source | <wsdl:message name="getDataspacesResponse"><br><wsdl:documentation>Returns the list of available dataspaces. For DARC, the first entry in the list is the currently active one</wsdl:documentation><br><wsdl:part name="dataspacesResponse" element="model:ListString"/><br></wsdl:message> |

### 9.3.27 message getFarcCatalogue

*Gets the FARC catalogue for the specified mission and domain (-1 represents the "No domain").*
*@deprecated use getCatalogue instead*

| | |
|---|---|
| parts | **getFarcCatalogue**<br>element **model:FarcCatalogueRequest** |
| used by | Operation **getFarcCatalogue** in PortType **EddsPortType** |
| source | <wsdl:message name="getFarcCatalogue"><br><wsdl:documentation>Gets the FARC catalogue for the specified mission and domain (-1 represents the "No domain").<br>@deprecated use getCatalogue instead</wsdl:documentation><br><wsdl:part name="getFarcCatalogue" element="model:FarcCatalogueRequest"/><br></wsdl:message> |

### 9.3.28 message getFarcCatalogueResponse

*Returns the allocated request ID for the request. This is used to take the messages off the topic.*
*@deprecated*

| | |
|---|---|
| parts | **farcCatalogueResponse**<br>element **model:JobIdPart** |
| used by | Operation **getFarcCatalogue** in PortType **EddsPortType** |
| source | <wsdl:message name="getFarcCatalogueResponse"><br><wsdl:documentation>Returns the allocated request ID for the request. This is used to take the messages off the topic.<br>@deprecated</wsdl:documentation><br><wsdl:part name="farcCatalogueResponse" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.29 message getHistoricalLog

*The message contains the start and end date to retrieve the historical log from EDDS*

| | |
|---|---|
| parts | **getHistoricalLog**<br>element **model:TimeWindow** |
| used by | Operation **getHistoricalLog** in PortType **EddsPortType** |
| source | <wsdl:message name="getHistoricalLog"><br><wsdl:documentation>The message contains the start and end date to retrieve the historical log from EDDS</wsdl:documentation> |

| | |
|---|---|
| | <wsdl:part name="getHistoricalLog" element="model:TimeWindow"/><br></wsdl:message> |

### 9.3.30 message getHistoricalLogResponse

*Returns the allocated request ID for the request. This is used to take the messages off the topic.*

| | |
|---|---|
| parts | **getHistoricalLogResponse**<br>element **model:JobIdPart** |
| used by | Operation **getHistoricalLog** in PortType **EddsPortType** |
| source | <wsdl:message name="getHistoricalLogResponse"><br><wsdl:documentation>Returns the allocated request ID for the request. This is used to take the messages off the topic.</wsdl:documentation><br><wsdl:part name="getHistoricalLogResponse" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.31 message getJobs

*The message contains the start and end date to retrieve the jobs from EDDS*

| | |
|---|---|
| parts | **getJobs**<br>element **model:TimeWindow** |
| used by | Operation **getJobs** in PortType **EddsPortType**<br>Operation **getJobsWithStatus** in PortType **EddsPortType** |
| source | <wsdl:message name="getJobs"><br><wsdl:documentation>The message contains the start and end date to retrieve the jobs from EDDS</wsdl:documentation><br><wsdl:part name="getJobs" element="model:TimeWindow"/><br></wsdl:message> |

### 9.3.32 message getJobsResponse

*The list of jobs*

| | |
|---|---|
| parts | **getJobsResponse**<br>element **model:JobListIdPart** |
| used by | Operation **getJobs** in PortType **EddsPortType** |
| source | <wsdl:message name="getJobsResponse"><br><wsdl:documentation>The list of jobs</wsdl:documentation><br><wsdl:part name="getJobsResponse" element="model:JobListIdPart"/><br></wsdl:message> |

### 9.3.33 message getJobsWithStatus

*The message contains the start and end date to retrieve the jobs from EDDS*

| | |
|---|---|
| parts | **getJobsWithStatus**<br>element **model:TimeWindow** |

| | |
|---|---|
| source | <wsdl:message name="getJobsWithStatus"><br><wsdl:documentation>The message contains the start and end date to retrieve the jobs from EDDS</wsdl:documentation><br><wsdl:part name="getJobsWithStatus" element="model:TimeWindow"/><br></wsdl:message> |

### 9.3.34 message getJobsWithStatusAndLimit

| | |
|---|---|
| parts | **getJobsWithStatusAndLimit**<br>element **model:TimeWindowWithLimit** |
| used by | Operation **getJobsWithStatusAndLimit** in PortType **EddsPortType** |
| source | <wsdl:message name="getJobsWithStatusAndLimit"><br><wsdl:part name="getJobsWithStatusAndLimit" element="model:TimeWindowWithLimit"/><br></wsdl:message> |

### 9.3.35 message getJobsWithStatusAndLimitResponse

| | |
|---|---|
| parts | **jobIdPart**<br>element **model:JobIdPart** |
| used by | Operation **getJobsWithStatusAndLimit** in PortType **EddsPortType** |
| source | <wsdl:message name="getJobsWithStatusAndLimitResponse"><br><wsdl:part name="jobIdPart" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.36 message getJobsWithStatusResponse

*Returns the allocated unique ID for the request. This is used to take the messages off the topic. The ID is a random string, not a Request ID.*

| | |
|---|---|
| parts | **getJobsWithStatusResponse**<br>element **model:JobIdPart** |
| used by | Operation **getJobsWithStatus** in PortType **EddsPortType** |
| source | <wsdl:message name="getJobsWithStatusResponse"><br><wsdl:documentation>Returns the allocated unique ID for the request. This is used to take the messages off the topic. The ID is a random string, not a Request ID.</wsdl:documentation><br><wsdl:part name="getJobsWithStatusResponse" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.37 message getLastConsolidation

*Gets the last consolidation time for the specified mission, request type and dataspace name if given.*

| | |
|---|---|
| parts | **getLastConsolidation**<br>element **model:LastConsolidationRequest** |
| used by | Operation **getLastConsolidation** in PortType **EddsPortType** |
| source | <wsdl:message name="getLastConsolidation"><br><wsdl:documentation>Gets the list of available dataspaces. For DARC, the first entry in the list is the currently active one.</wsdl:documentation> |

| | |
|---|---|
| | <wsdl:part name="getLastConsolidation" element="model:LastConsolidationRequest"/><br></wsdl:message> |

### 9.3.38 message getLastConsolidationResponse

*Gets the last consolidation time for the specified mission, request type and dataspace name if given.*

| | |
|---|---|
| parts | **lastConsolidationResponse**<br>element **model:Long** |
| used by | Operation **getLastConsolidation** in PortType **EddsPortType** |
| source | <wsdl:message name="getLastConsolidationResponse"><br><wsdl:documentation>Returns the list of available dataspaces. For DARC, the first entry in the list is the currently active one</wsdl:documentation><br><wsdl:part name="lastConsolidationResponse" element="model:Long"/><br></wsdl:message> |

### 9.3.39 message getMissionDetails

*The message contains a mission's name*

| | |
|---|---|
| parts | **getMissionDetails**<br>element **model:MissionName** |
| used by | Operation **getMissionDetails** in PortType **EddsPortType** |
| source | <wsdl:message name="getMissionDetails"><br><wsdl:documentation>The message contains a mission's name</wsdl:documentation><br><wsdl:part name="getMissionDetails" element="model:MissionName"/><br></wsdl:message> |

### 9.3.40 message getMissionDetailsResponse

*The message contains the missions details associated to the mission's name as defined in the LDAP*

| | |
|---|---|
| parts | **getMissionDetailsResponse**<br>element **model:MissionDetails** |
| used by | Operation **getMissionDetails** in PortType **EddsPortType** |
| source | <wsdl:message name="getMissionDetailsResponse"><br><wsdl:documentation>The message contains the missions details associated to the mission's name as defined in the LDAP</wsdl:documentation><br><wsdl:part name="getMissionDetailsResponse" element="model:MissionDetails"/><br></wsdl:message> |

### 9.3.41 message getMissions

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **getMissions** in PortType **EddsPortType** |

| | |
|---|---|
| source | <wsdl:message name="getMissions"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.42 message getMissionsResponse

*The list of missions*

| | |
|---|---|
| parts | **getMissionsResponse**<br>element **model:MissionsList** |
| used by | Operation **getMissions** in PortType **EddsPortType** |
| source | <wsdl:message name="getMissionsResponse"><br><wsdl:documentation>The list of missions</wsdl:documentation><br><wsdl:part name="getMissionsResponse" element="model:MissionsList"/><br></wsdl:message> |

### 9.3.43 message getMissionsAndDomains

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **getMissionsAndDomains** in PortType **EddsPortType** |
| source | <wsdl:message name="getMissionsAndDomains"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.44 message getMissionsAndDomainsResponse

*The list of missions with their domains*

| | |
|---|---|
| parts | **getMissionsAndDomainsResponse**<br>element **model:MissionsDomainList** |
| used by | Operation **getMissionsAndDomains** in PortType **EddsPortType** |
| source | <wsdl:message name="getMissionsAndDomainsResponse"><br><wsdl:documentation>The list of missions with their domains</wsdl:documentation><br><wsdl:part name="getMissionsAndDomainsResponse"<br>element="model:MissionsDomainList"/><br></wsdl:message> |

### 9.3.45 message getParamDefinitions

*Gets the parameter definitions for the specified mission.*

| | |
|---|---|
| parts | **getParamDefinitions**<br>element **model:MissionName** |
| used by | Operation **getParamDefinitions** in PortType **EddsPortType** |

| | |
|---|---|
| source | <wsdl:message name="getParamDefinitions"><br><wsdl:documentation>Gets the parameter definitions for the specified mission.</wsdl:documentation><br><wsdl:part name="getParamDefinitions" element="model:MissionName"/><br></wsdl:message> |

### 9.3.46 message getParamDefinitionsResponse

*Returns the allocated request ID for the request. This is used to take the messages off the topic.*

| | |
|---|---|
| parts | **paramDefinitionsResponse**<br>element **model:JobIdPart** |
| used by | Operation **getParamDefinitions** in PortType **EddsPortType** |
| source | <wsdl:message name="getParamDefinitionsResponse"><br><wsdl:documentation>Returns the allocated request ID for the request. This is used to take the messages off the topic.</wsdl:documentation><br><wsdl:part name="paramDefinitionsResponse" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.47 message getQuotaDetails

*Get the quota details for the specified user and mission*

| | |
|---|---|
| parts | **getQuotaDetailsMission**<br>element **model:UserMission** |
| used by | Operation **getQuotaDetails** in PortType **EddsPortType** |
| source | <wsdl:message name="getQuotaDetails"><br><wsdl:documentation>Get the quota details for the specified user and mission</wsdl:documentation><br><wsdl:part name="getQuotaDetailsMission" element="model:UserMission"/><br></wsdl:message> |

### 9.3.48 message getQuotaDetailsResponse

*The message contains the quota usage details*

| | |
|---|---|
| parts | **getQuotaDetailsResponse**<br>element **model:UserQuotaDetails** |
| used by | Operation **getQuotaDetails** in PortType **EddsPortType** |
| source | <wsdl:message name="getQuotaDetailsResponse"><br><wsdl:documentation>The message contains the quota usage details</wsdl:documentation><br><wsdl:part name="getQuotaDetailsResponse" element="model:UserQuotaDetails"/><br></wsdl:message> |

### 9.3.49 message getRequest

*The message contains the details of a "request" request (a job ID)*

| | |
|---|---|
| parts | **getRequest**<br>element **model:JobIdPart** |

| | |
|---|---|
| used by | Operation **getRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="getRequest"><br><wsdl:documentation>The message contains the details of a "request" request (a job ID)</wsdl:documentation><br><wsdl:part name="getRequest" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.50 message getRequestResponse

*The message contains the original request associated to the given job ID*

| | |
|---|---|
| parts | **getRequestResponse**<br>element **model:RequestMessagePart** |
| used by | Operation **getRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="getRequestResponse"><br><wsdl:documentation>The message contains the original request associated to the given job ID</wsdl:documentation><br><wsdl:part name="getRequestResponse" element="model:RequestMessagePart"/><br></wsdl:message> |

### 9.3.51 message getResponse

*The message contains the details of a "response" request (a job ID)*

| | |
|---|---|
| parts | **getResponse**<br>element **model:DownloadList** |
| used by | Operation **getResponse** in PortType **EddsPortType** |
| source | <wsdl:message name="getResponse"><br><wsdl:documentation> Get the response file(s) for a request. If the file list is empty, all response files are returned.</wsdl:documentation><br><wsdl:part name="getResponse" element="model:DownloadList"/><br></wsdl:message> |

### 9.3.52 message getResponseResponse

*The message contains the response file associated to a specific request*

| | |
|---|---|
| parts | **getResponseResponse**<br>element **model:ResponseData** |
| used by | Operation **getResponse** in PortType **EddsPortType** |
| source | <wsdl:message name="getResponseResponse"><br><wsdl:documentation>The message contains the response file associated to a specific request</wsdl:documentation><br><wsdl:part name="getResponseResponse" element="model:ResponseData"/><br></wsdl:message> |

### 9.3.53 message getRoles

*The message contains the name of the mission to get the roles for*

| | |
|---|---|
| parts | **getRoles**<br>element **model:MissionName** |
| used by | Operation **getRoles** in PortType **EddsPortType** |
| source | <wsdl:message name="getRoles"><br><wsdl:documentation>The message contains the name of the mission to get the roles for</wsdl:documentation><br><wsdl:part name="getRoles" element="model:MissionName"/><br></wsdl:message> |

### 9.3.54 message getRolesResponse

*The list of roles for the specified mission*

| | |
|---|---|
| parts | **getRolesResponse**<br>element **model:RolesList** |
| used by | Operation **getRoles** in PortType **EddsPortType** |
| source | <wsdl:message name="getRolesResponse"><br><wsdl:documentation>The list of roles for the specified mission</wsdl:documentation><br><wsdl:part name="getRolesResponse" element="model:RolesList"/><br></wsdl:message> |

### 9.3.55 message getStatus

*The message contains the details of a "status" request (a job ID)*

| | |
|---|---|
| parts | **getStatus**<br>element **model:JobIdPart** |
| used by | Operation **getStatus** in PortType **EddsPortType** |
| source | <wsdl:message name="getStatus"><br><wsdl:documentation>The message contains the details of a "status" request (a job ID)</wsdl:documentation><br><wsdl:part name="getStatus" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.56 message getStatuses

*Gets the status of a list of jobs*

| | |
|---|---|
| parts | **getStatus**<br>element **model:JobListIdPart** |
| used by | Operation **getStatuses** in PortType **EddsPortType** |
| source | <wsdl:message name="getStatuses"><br><wsdl:documentation>Gets the status of a list of jobs</wsdl:documentation><br><wsdl:part name="getStatus" element="model:JobListIdPart"/><br></wsdl:message> |

### 9.3.57 message getStatusesResponse

*Returns the allocated unique ID for the request. This is used to take the messages off the topic. The ID is a random string, not a Request ID.*

| | |
|---|---|
| parts | **getStatusesResponse**<br>element **model:JobIdPart** |
| used by | Operation **getStatuses** in PortType **EddsPortType** |
| source | <wsdl:message name="getStatusesResponse"><br><wsdl:documentation>Returns the allocated unique ID for the request. This is used to take the messages off the topic. The ID is a random string, not a Request ID.</wsdl:documentation><br><wsdl:part name="getStatusesResponse" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.58 message getStatusResponse

*The message contains the acknowledgement of a specific request*

| | |
|---|---|
| parts | **getStatusResponse**<br>element **model:AcknowledgementPart** |
| used by | Operation **getStatus** in PortType **EddsPortType** |
| source | <wsdl:message name="getStatusResponse"><br><wsdl:documentation>The message contains the acknowledgement of a specific request</wsdl:documentation><br><wsdl:part name="getStatusResponse" element="model:AcknowledgementPart"/><br></wsdl:message> |

### 9.3.59 message getTransformations

*The message contains the mission name and request type*

| | |
|---|---|
| parts | **getTransformations**<br>element **model:TransformationsRequest** |
| used by | Operation **getTransformations** in PortType **EddsPortType** |
| source | <wsdl:message name="getTransformations"><br><wsdl:documentation>The message contains the mission name and request type</wsdl:documentation><br><wsdl:part name="getTransformations" element="model:TransformationsRequest"/><br></wsdl:message> |

### 9.3.60 message getTransformationsResponse

*The message contains a list of available transformations*

| | |
|---|---|
| parts | **getTransformationsResponse**<br>element **model:TransformationsList** |

| | |
|---|---|
| used by | Operation **getTransformations** in PortType **EddsPortType** |
| source | <wsdl:message name="getTransformationsResponse"><br><wsdl:documentation>The message contains a list of available transformations</wsdl:documentation><br><wsdl:part name="getTransformationsResponse" element="model:TransformationsList"/><br></wsdl:message> |

### 9.3.61 message getUserAccountDetails

*The message contains a username*

| | |
|---|---|
| parts | **getUserAccountDetails**<br>element **model:UserName** |
| used by | Operation **getUserAccountDetails** in PortType **EddsPortType** |
| source | <wsdl:message name="getUserAccountDetails"><br><wsdl:documentation>The message contains a username</wsdl:documentation><br><wsdl:part name="getUserAccountDetails" element="model:UserName"/><br></wsdl:message> |

### 9.3.62 message getUserAccountDetailsResponse

*The message contains the user details associated to the username as defined in the LDAP*

| | |
|---|---|
| parts | **getUserAccountDetailsResponse**<br>element **model:UserAccountDetails** |
| used by | Operation **getUserAccountDetails** in PortType **EddsPortType** |
| source | <wsdl:message name="getUserAccountDetailsResponse"><br><wsdl:documentation>The message contains the user details associated to the username as defined in the LDAP</wsdl:documentation><br><wsdl:part name="getUserAccountDetailsResponse" element="model:UserAccountDetails"/><br></wsdl:message> |

### 9.3.63 message getUserQuota

*The message contains a mission's name*

| | |
|---|---|
| parts | **getUserQuota**<br>element **model:MissionName** |
| used by | Operation **getUserQuota** in PortType **EddsPortType** |
| source | <wsdl:message name="getUserQuota"><br><wsdl:documentation>The message contains a mission's name</wsdl:documentation><br><wsdl:part name="getUserQuota" element="model:MissionName"/><br></wsdl:message> |

### 9.3.64 message getUserQuotaResponse

*The message contains the user quota usage details*

| | |
|---|---|
| parts | **getUserQuotaResponse**<br>element **model:UserQuotaDetails** |
| used by | Operation **getUserQuota** in PortType **EddsPortType** |
| source | <wsdl:message name="getUserQuotaResponse"><br><wsdl:documentation>The message contains the user quota usage details</wsdl:documentation><br><wsdl:part name="getUserQuotaResponse" element="model:UserQuotaDetails"/><br></wsdl:message> |

### 9.3.65 message getUsers

*Flag to indicate whether to fetch all users or not*

| | |
|---|---|
| parts | **getUsers**<br>element **model:IncludeAll** |
| used by | Operation **getUsers** in PortType **EddsPortType** |
| source | <wsdl:message name="getUsers"><br><wsdl:documentation>Flag to indicate whether to fetch all users or not</wsdl:documentation><br><wsdl:part name="getUsers" element="model:IncludeAll"/><br></wsdl:message> |

### 9.3.66 message getUsersResponse

*The list of users*

| | |
|---|---|
| parts | **getUsersResponse**<br>element **model:UsersList** |
| used by | Operation **getUsers** in PortType **EddsPortType** |
| source | <wsdl:message name="getUsersResponse"><br><wsdl:documentation>The list of users</wsdl:documentation><br><wsdl:part name="getUsersResponse" element="model:UsersList"/><br></wsdl:message> |

### 9.3.67 message hasPermissionToSeeAllUsers

*The message contains a username*

| | |
|---|---|
| parts | **hasPermissionToSeeAllUsers**<br>element **model:UserName** |
| used by | Operation **hasPermissionToSeeAllUsers** in PortType **EddsPortType** |
| source | <wsdl:message name="hasPermissionToSeeAllUsers"><br><wsdl:documentation>The message contains a username</wsdl:documentation><br><wsdl:part name="hasPermissionToSeeAllUsers" element="model:UserName"/><br></wsdl:message> |

### 9.3.68 message logIn

*The message contains the user credentials needed for the authentication*

| | |
|---|---|
| parts | **credentials**<br>element **model:UserCredentials** |
| used by | Operation **logIn** in PortType **EddsPortType** |
| source | <wsdl:message name="logIn"><br><wsdl:documentation>The message contains the user credentials needed for the authentication</wsdl:documentation><br><wsdl:part name="credentials" element="model:UserCredentials"/><br></wsdl:message> |

### 9.3.69 message logInResponse

*The message returns the user credentials enriched with the session ID*

| | |
|---|---|
| parts | **credentials**<br>element **model:UserCredentials** |
| used by | Operation **logIn** in PortType **EddsPortType** |
| source | <wsdl:message name="logInResponse"><br><wsdl:documentation>The message returns the user credentials enriched with the session ID</wsdl:documentation><br><wsdl:part name="credentials" element="model:UserCredentials"/><br></wsdl:message> |

### 9.3.70 message logOut

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **logOut** in PortType **EddsPortType** |
| source | <wsdl:message name="logOut"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.71 message passwordExpiredFault

*The message contains details related to a authentication fault*

| | |
|---|---|
| parts | **passwordExpiredFault**<br>element **model:PasswordExpiredFault** |
| used by | Operation **logIn** in PortType **EddsPortType** |
| source | <wsdl:message name="passwordExpiredFault"> |

| | |
|---|---|
| | <wsdl:documentation>The message contains details related to a authentication fault</wsdl:documentation><br><wsdl:part name="passwordExpiredFault" element="model:PasswordExpiredFault"/><br></wsdl:message> |

### 9.3.72 message permissionToSeeAllUsersResponse

*True if session has expired (or not started)*

| | |
|---|---|
| parts | **permissionToSeeAllUsersResponse**<br>element **model:PermissionToSeeAllUsers** |
| used by | Operation **hasPermissionToSeeAllUsers** in PortType **EddsPortType** |
| source | <wsdl:message name="permissionToSeeAllUsersResponse"><br><wsdl:documentation>True if session has expired (or not started)</wsdl:documentation><br><wsdl:part name="permissionToSeeAllUsersResponse" element="model:PermissionToSeeAllUsers"/><br></wsdl:message> |

### 9.3.73 message requestFault

*The message contains details related to a request fault*

| | |
|---|---|
| parts | **requestFault**<br>element **model:RequestFault** |
| used by | Operation **batchRequest** in PortType **EddsPortType**<br>Operation **streamRequest** in PortType **EddsPortType**<br>Operation **getStatus** in PortType **EddsPortType**<br>Operation **getStatuses** in PortType **EddsPortType**<br>Operation **getResponse** in PortType **EddsPortType**<br>Operation **getRequest** in PortType **EddsPortType**<br>Operation **getStreamRequest** in PortType **EddsPortType**<br>Operation **startStreamData** in PortType **EddsPortType**<br>Operation **getParamDefinitions** in PortType **EddsPortType**<br>Operation **getFarcCatalogue** in PortType **EddsPortType**<br>Operation **cancel** in PortType **EddsPortType**<br>Operation **suspend** in PortType **EddsPortType**<br>Operation **resume** in PortType **EddsPortType**<br>Operation **deleteData** in PortType **EddsPortType**<br>Operation **deleteRequest** in PortType **EddsPortType**<br>Operation **getJobs** in PortType **EddsPortType**<br>Operation **getJobsWithStatus** in PortType **EddsPortType**<br>Operation **getJobsWithStatusAndLimit** in PortType **EddsPortType**<br>Operation **getHistoricalLog** in PortType **EddsPortType**<br>Operation **stopHistoricalLogRetrieval** in PortType **EddsPortType**<br>Operation **getTransformations** in PortType **EddsPortType**<br>Operation **accountRequest** in PortType **EddsPortType**<br>Operation **getUsers** in PortType **EddsPortType**<br>Operation **getMissions** in PortType **EddsPortType**<br>Operation **getMissionsAndDomains** in PortType **EddsPortType**<br>Operation **getRoles** in PortType **EddsPortType**<br>Operation **getUserAccountDetails** in PortType **EddsPortType**<br>Operation **getMissionDetails** in PortType **EddsPortType**<br>Operation **getUserQuota** in PortType **EddsPortType** |

| | |
|---|---|
| | Operation **hasPermissionToSeeAllUsers** in PortType **EddsPortType** |
| source | <wsdl:message name="requestFault"><br><wsdl:documentation>The message contains details related to a request fault</wsdl:documentation><br><wsdl:part name="requestFault" element="model:RequestFault"/><br></wsdl:message> |

### 9.3.74 message reSubmit

*The message contains the details of a request to re-submit(a job ID)*

| | |
|---|---|
| parts | **reSubmit**<br>element **model:JobIdPart** |
| source | <wsdl:message name="reSubmit"><br><wsdl:documentation>The message contains the details of a request to re-submit(a job ID)</wsdl:documentation><br><wsdl:part name="reSubmit" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.75 message reSubmitResponse

*The message contains job IDs associated to a batch request*

| | |
|---|---|
| parts | **reSubmitResponse**<br>element **model:JobListIdPart** |
| source | <wsdl:message name="reSubmitResponse"><br><wsdl:documentation>The message contains job IDs associated to a batch request</wsdl:documentation><br><wsdl:part name="reSubmitResponse" element="model:JobListIdPart"/><br></wsdl:message> |

### 9.3.76 message sessionFault

*The message contains details related to a session fault*

| | |
|---|---|
| parts | **sessionFault**<br>element **model:SessionFault** |
| used by | Operation **batchRequest** in PortType **EddsPortType**<br>Operation **streamRequest** in PortType **EddsPortType**<br>Operation **getStatus** in PortType **EddsPortType**<br>Operation **getStatuses** in PortType **EddsPortType**<br>Operation **getResponse** in PortType **EddsPortType**<br>Operation **getRequest** in PortType **EddsPortType**<br>Operation **getStreamRequest** in PortType **EddsPortType**<br>Operation **startStreamData** in PortType **EddsPortType**<br>Operation **stopStreamData** in PortType **EddsPortType**<br>Operation **getParamDefinitions** in PortType **EddsPortType**<br>Operation **getFarcCatalogue** in PortType **EddsPortType**<br>Operation **cancel** in PortType **EddsPortType**<br>Operation **suspend** in PortType **EddsPortType**<br>Operation **resume** in PortType **EddsPortType** |

| | |
|---|---|
| | Operation **deleteData** in PortType **EddsPortType**<br>Operation **deleteRequest** in PortType **EddsPortType**<br>Operation **getJobs** in PortType **EddsPortType**<br>Operation **getJobsWithStatus** in PortType **EddsPortType**<br>Operation **getJobsWithStatusAndLimit** in PortType **EddsPortType**<br>Operation **getHistoricalLog** in PortType **EddsPortType**<br>Operation **stopHistoricalLogRetrieval** in PortType **EddsPortType**<br>Operation **getTransformations** in PortType **EddsPortType**<br>Operation **checkUserPassword** in PortType **EddsPortType**<br>Operation **accountRequest** in PortType **EddsPortType**<br>Operation **getUsers** in PortType **EddsPortType**<br>Operation **getMissions** in PortType **EddsPortType**<br>Operation **getMissionsAndDomains** in PortType **EddsPortType**<br>Operation **getRoles** in PortType **EddsPortType**<br>Operation **getUserAccountDetails** in PortType **EddsPortType**<br>Operation **getMissionDetails** in PortType **EddsPortType**<br>Operation **getUserQuota** in PortType **EddsPortType**<br>Operation **hasPermissionToSeeAllUsers** in PortType **EddsPortType** |
| source | <wsdl:message name="sessionFault"><br><wsdl:documentation>The message contains details related to a session fault</wsdl:documentation><br><wsdl:part name="sessionFault" element="model:SessionFault"/><br></wsdl:message> |

### 9.3.77 message streamRequest

*The message contains the details of a stream request*

| | |
|---|---|
| parts | **streamRequest**<br>element **model:StreamRequestMessagePart** |
| used by | Operation **streamRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="streamRequest"><br><wsdl:documentation>The message contains the details of a stream request</wsdl:documentation><br><wsdl:part name="streamRequest" element="model:StreamRequestMessagePart"/><br></wsdl:message> |

### 9.3.78 message streamRequestResponse

*The message contains job ID associated to a stream request*

| | |
|---|---|
| parts | **streamRequestResponse**<br>element **model:JobIdPart** |
| used by | Operation **streamRequest** in PortType **EddsPortType** |
| source | <wsdl:message name="streamRequestResponse"><br><wsdl:documentation>The message contains job ID associated to a stream request</wsdl:documentation><br><wsdl:part name="streamRequestResponse" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.79 message startStreamData

*Starts the incoming stream of the specified active stream request to the client.*

| | |
|---|---|
| parts | **startStreamData**<br>element **model:JobIdPart** |
| used by | Operation **startStreamData** in PortType **EddsPortType** |
| source | <wsdl:message name="startStreamData"><br><wsdl:documentation>Starts the incoming stream of the specified active stream request to the client.</wsdl:documentation><br><wsdl:part name="startStreamData" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.80 message startStreamDataResponse

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **startStreamData** in PortType **EddsPortType** |
| source | <wsdl:message name="startStreamDataResponse"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.81 message stopHistoricalLogRetrieval

*Stops the retrieval of historical log messages. Requires the request ID provided by getHistoricalLog.*

| | |
|---|---|
| parts | **stopHistoricalLogRetrieval**<br>element **model:JobIdPart** |
| used by | Operation **stopHistoricalLogRetrieval** in PortType **EddsPortType** |
| source | <wsdl:message name="stopHistoricalLogRetrieval"><br><wsdl:documentation>Stops the retrieval of historical log messages. Requires the request ID provided by getHistoricalLog.</wsdl:documentation><br><wsdl:part name="stopHistoricalLogRetrieval" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.82 message stopHistoricalLogRetrievalResponse

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **stopHistoricalLogRetrievalResponse** in PortType **EddsPortType** |
| source | <wsdl:message name="stopHistoricalLogRetrievalResponse"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

### 9.3.83 message stopStreamData

*Stops the incoming stream of the specified active stream request to the client.*

| | |
|---|---|
| parts | **stopStreamData**<br>element **model:JobIdPart** |
| used by | Operation **stopStreamData** in PortType **EddsPortType** |
| source | <wsdl:message name="stopStreamData"> |

| | |
|---|---|
| | <wsdl:documentation>Stops the incoming stream of the specified active stream request to the client.</wsdl:documentation><br><wsdl:part name="stopStreamData" element="model:JobIdPart"/><br></wsdl:message> |

### 9.3.84 message stopStreamDataResponse

*Empty message*

| | |
|---|---|
| parts | |
| used by | Operation **stopStreamData** in PortType **EddsPortType** |
| source | <wsdl:message name="stopStreamDataResponse"><br><wsdl:documentation>Empty message</wsdl:documentation><br></wsdl:message> |

## *9.4 Bindings*

The EDDS binding describes how the service is bound to the messaging protocol. Note that this EUICD assumes the use of SOAP as the underlying protocol for all services.

| | |
|---|---|
| type | **ws:EddsPortType** |
| extensibility | <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/> |
| operations | **batchRequest**<br><br>*This operation perform a batch request on the EDDS erver. The request is asynchonous and its output is the job ID or an error in case of failure*<br>extensibility: <soap:operation soapAction="http://edds.egos.esa/batchrequest/batchRequest" style="document"/><br>input: name="batchRequest"<soap:body use="literal"/><br>output: name="batchRequestResponse"<soap:body use="literal"/><br><br>**streamRequest**<br><br>*This operation perform a stream request on the EDDS erver. The request is asynchonous and its output is the job ID or an error in case of failure*<br>extensibility: <soap:operation soapAction="http://edds.egos.esa/streamrequest/streamRequest" style="document"/><br>input: name="streamRequest"<soap:body use="literal"/><br>output: name="streamRequestResponse"<soap:body use="literal"/><br><br>**getStatus**<br><br>*This operation provides the status of a specific request. The operation takes as input a job ID and return an acknowledgement*<br>extensibility: <soap:operation soapAction="http://edds.egos.esa/batchrequest/getStatus" style="document"/><br>input: name="getStatus"<soap:body use="literal"/><br>output: name="getStatusResponse"<soap:body use="literal"/> |

### reSubmit

*This operation re-submits a request. The operation takes as input a job ID and its output is the list of job IDs*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/reSubmit" style="document"/>

input name="reSubmit"<soap:body use="literal"/>

output name="reSubmitResponse"<soap:body use="literal"/>

### getStatuses

*Gets the status of a list of jobs. The operation takes as input a list of job IDs and returns a java.util.ArrayList of type RequestInfoRec encoded in Base64*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getStatuses" style="document"/>

input name="getStatuses"<soap:body use="literal"/>

output name="getStatusesResponse"<soap:body use="literal"/>

### getResponse

*This operation returns the result file of abatch request. The response is available if the delivery method of the associated batch request was "server delivery". The method is synchronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getResponse" style="document"/>

input name="getResponse"<soap:body use="literal"/>

output name="getResponseResponse"<soap:body use="literal"/>

### getRequest

*This operation provides the template of an existing batch request. The operation takes in input the batch request job ID and returns as output the corresponding XML. The method is synchronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getRequest" style="document"/>

input name="getRequest"<soap:body use="literal"/>

output name="getRequestResponse"<soap:body use="literal"/>

### getStreamRequest

*This operation provides the template of an existing batch request. The operation takes in input the batch request job ID and returns as output the corresponding XML. The method is synchronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/streamrequest/getStreamRequest" style="document"/>

input name="getStreamRequest"<soap:body use="literal"/>

output name="getStreamRequestResponse"<soap:body use="literal"/>

### startStreamData

*Starts the CometD forwarder of the specified stream request*

extensibility <soap:operation soapAction="http://edds.egos.esa/streamrequest/startStreamData" style="document"/>

input name="startStreamData"<soap:body use="literal"/>

output name="startStreamDataResponse"<soap:body use="literal"/>

**stopStreamData**

*Stops the CometD forwarder of the specified stream request*

extensibility <soap:operation soapAction="http://edds.egos.esa/streamrequest/stopStreamData" style="document"/>

input name="stopStreamData"<soap:body use="literal"/>

output name="stopStreamDataResponse"<soap:body use="literal"/>

**getParamDefinitions**

*Gets the parameter definitions for the specified mission. The method is synchronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getParamDefinitions" style="document"/>

input name="getParamDefinitions"<soap:body use="literal"/>

output name="getParamDefinitionsResponse"<soap:body use="literal"/>

**getCatalogue**

*Gets the catalogue for the specified data source. The method is asynchronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getCatalogue" style="document"/>

input name="getCatalogue"<soap:body use="literal"/>

output name="getCatalogueResponse"<soap:body use="literal"/>

**getFarcCatalogue**

*Gets the FARC catalogue for the specified mission and domain. The method is asynchronous.*
*@deprecated*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getFarcCatalogue" style="document"/>

input name="getFarcCatalogue"<soap:body use="literal"/>

output name="getFarcCatalogueResponse"<soap:body use="literal"/>

**getDataspaces**

*Gets the dataspaces for the specified mission and request type. The method is synchronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getDataspaces" style="document"/>

input name="getDataspaces"<soap:body use="literal"/>

output name="getDataspacesResponse"<soap:body use="literal"/>

**cancel**

*This operation cancel a scheduled request or try to interrupt an already executing request. The operation takes in input the job ID of the operation to cancel and return the job ID of the cancel request. The operation is asyncronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/cancel" style="document"/>

input name="cancel"<soap:body use="literal"/>

output name="cancelResponse"<soap:body use="literal"/>

### suspend

*This operation suspends an active request. The operation takes in input the job ID of the operation to suspend and return the job ID of the suspend request. The operation is asyncronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/suspend" style="document"/>

input name="suspend"<soap:body use="literal"/>

output name="suspendResponse"<soap:body use="literal"/>

### resume

*This operation resumes a suspended or failed request. The operation takes in input the job ID of the operation to resume and return the job ID of the resumed request. The operation is asyncronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/resume" style="document"/>

input name="resume"<soap:body use="literal"/>

output name="resumeResponse"<soap:body use="literal"/>

### deleteData

*This operation deletes the data related to a request. The operation is asynchronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/deleteData" style="document"/>

input name="deleteData"<soap:body use="literal"/>

output name="deleteDataResponse"<soap:body use="literal"/>

### deleteRequest

*This operation deletes a request. The operation is asyncronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/deleteRequest" style="document"/>

input name="deleteRequest"<soap:body use="literal"/>

output name="deleteRequestResponse"<soap:body use="literal"/>

### getJobs

*This operation returns the list of jobs over a defined time span. The operation takes in input the start and end date (where null is considered as ALL) and returns the list of operation that a user has right to read. The operation is syncronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getJobs" style="document"/>

input name="getJobs"<soap:body use="literal"/>

output name="getJobsResponse"<soap:body use="literal"/>

### getJobsWithStatus

*This operation returns the list of jobs with their status over a defined time span. The operation takes in input the start and end date (where null is considered as ALL) and returns the list of operation that a user*

*has right to read. The operation is syncronous. The message contains a java.util.ArrayList of type RequestInfoRec encoded in Base64*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getJobsWithStatus" style="document"/>

input name="getJobsWithStatus"<soap:body use="literal"/>

output name="getJobsWithStatusResponse"<soap:body use="literal"/>

### getJobsWithStatusAndLimit

*This operation returns the list of jobs with their status over a defined time span. The operation takes in input the start and end date (where null is considered as ALL) and returns the list of operation that a user has right to read. The number of results returned can be limited by specifying an upper limit. Ommitting the limit returns all matching rows. The operation is syncronous. The message contains a java.util.ArrayList of type RequestInfoRec encoded in Base64*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getJobsWithStatusAndLimit" style="document"/>

input name="getJobsWithStatusAndLimit"<soap:body use="literal"/>

output name="getJobsWithStatusAndLimitResponse"<soap:body use="literal"/>

### getHistoricalLog

*The operation return the historical log messages over a defined time span. The operation takes as input the start and end date (where null is considered as ALL) and returns a request ID used to listen to the resulting stream. The operation is asyncronous.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getHistoricalLog" style="document"/>

input name="getHistoricalLog"<soap:body use="literal"/>

output name="getHistoricalLogResponse"<soap:body use="literal"/>

### stopHistoricalLogRetrieval

*The operation stops the historical log message retrieval. The operation takes as input the request ID of the stream.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/stopHistoricalLogRetrieval" style="document"/>

input name="stopHistoricalLogRetrieval"<soap:body use="literal"/>

output name="stopHistoricalLogRetrievalResponse"<soap:body use="literal"/>

### getTransformations

*The operation returns the available transformations for the requet type.*

extensibility <soap:operation soapAction="http://edds.egos.esa/batchrequest/getTransformations" style="document"/>

input name="getTransformations"<soap:body use="literal"/>

output name="getTransformationsResponse"<soap:body use="literal"/>

### logIn

*Login the user and start the session*

extensi <soap:operation soapAction="http://edds.egos.esa/authentication/logIn"

bility style="document"/>
input name="logIn"<soap:body use="literal"/>
output name="logInResponse"<soap:body use="literal"/>

### hasSessionExpired

*Checks if the user's session has expired, and return true if it has*

extensibility <soap:operation soapAction="http://edds.egos.esa/authentication/hasSessionExpired" style="document"/>
input name="checkSession"<soap:body use="literal"/>
output name="checkSessionResponse"<soap:body use="literal"/>

### logOut

*Logout the user and close the session*

extensibility <soap:operation soapAction="http://edds.egos.esa/authentication/logOut" style="document"/>
input name="logOut"<soap:body use="literal"/>
output

### checkUserPassword

*Check if the password supplied matches the user's current password. Used to double check the user's current password before allowing the user to change their password.*

extensibility <soap:operation soapAction="http://edds.egos.esa/authentication/checkUserPassword" style="document"/>
input name="checkUserPassword"<soap:body use="literal"/>
output name="checkUserPasswordResponse"<soap:body use="literal"/>

### accountRequest

*This operation performs an accaunt management request. The operation is asynchronous: the detail of the request are contained in the request itself and the result of the operation is a job id. In case of error the operation returns an error.*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/accountRequest" style="document"/>
input <soap:body use="literal"/>
output <soap:body use="literal"/>

### getUsers

*The operation return the list of users. The operation is syncronous. An error on the request will throw a fault*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/getUsers" style="document"/>
input name="getUsers"<soap:body use="literal"/>
output name="getUsersResponse"<soap:body use="literal"/>

### getRoles

*The operation return the list of roles the user has permission to use for the specified mission. The operation is syncronous. An error on the request will throw a fault*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/getRoles" style="document"/>

input name="getRoles"<soap:body use="literal"/>

output name="getRolesResponse"<soap:body use="literal"/>

### getMissions

*The operation return the list of missions. The operation is syncronous. An error on the request will throw a fault*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/getMissions" style="document"/>

input name="getMissions"<soap:body use="literal"/>

output name="getMissionsResponse"<soap:body use="literal"/>

### getMissionsAndDomains

*The operation return the list of missions with their domains. The operation is syncronous. An error on the request will throw a fault*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/getMissionsAndDomains" style="document"/>

input name="getMissionsAndDomains"<soap:body use="literal"/>

output name="getMissionsAndDomainsResponse"<soap:body use="literal"/>

### getUserAccountDetails

*The operation return the details associated to a specific user as defined in the LDAP. The operation is syncronous. An error on the request will throw a fault*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/getUserAccountDetails" style="document"/>

input name="getUserAccountDetails"<soap:body use="literal"/>

output name="getUserAccountDetailsResponse"<soap:body use="literal"/>

### getMissionDetails

*The operation return the details associated to a specific mission as defined in the LDAP. The operation is syncronous. An error on the request will throw a fault*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/getMissionDetails" style="document"/>

input name="getMissionDetails"<soap:body use="literal"/>

output name="getMissionDetailsResponse"<soap:body use="literal"/>

### getUserQuota

*Returns the details for the specified mission*

extensibility <soap:operation soapAction="http://edds.egos.esa/userrequest/getUserQuota" style="document"/>

input name="getUserQuota"<wsdl:documentation>The name of the mission</wsdl:documentation><soap:body use="literal"/>

output name="getUserQuotaResponse"<wsdl:documentation>The quota details for the mission</wsdl:documentation><soap:body use="literal"/>

| | |
|---|---|
| | **hasPermissionToSeeAllUsers**<br><br>*Checks if user has permission to see other users data*<br>extensibility: <soap:operation soapAction="http://edds.egos.esa/userrequest/hasPermissionToSeeAllUsers" style="document"/><br>input: name="hasPermissionToSeeAllUsers"<wsdl:documentation>Username</wsdl:documentation><soap:body use="literal"/><br>output: name="permissionToSeeAllUsersResponse"<wsdl:documentation>The result whether user has permission to see other users data or not</wsdl:documentation><soap:body use="literal"/> |
| used by | Port **EddsPort** in Service **EddsService** |

# 10. E-mail Interface

## *10.1 Data Elements*

The EDDS allows users to request the delivery of acknowledgement messages by email. This implies that the receiving client system has access to a mail server.

## *10.2 Message Description*

The email contains a configurable message that can be tailored by the mission. The acknowledgement message is in attachment to the email in XML format.

## *10.3 Communication Protocol*

SMTP or SMTPs are used by the EDDS.

## *10.4 Errors*

A SMTP/SMTPs client cannot verify the correct reception of an email. It is assumed that the configuration for the email has been properly set by the mission and that the email address given by the user is valid.

# 11. File Server Interface

## *11.1 Data Elements*

The EDDS allows users to request the delivery of batch responses to one or more client hosted file server(s). On completion of the batch request, the EDDS will try to deliver the response to the addresses given in the corresponding request.

## *11.2 Message Description*

A description of a File server delivery request can be found in section Appendix C

A description of a batch response can be found in section Appendix C

## *11.3 Communication Protocol*

The EDDS uses the FTP protocol (or SFTP depending on the mission configuration) to deliver the batch response using the PUT method. The client's file server must support the PUT action.

## *11.4 Errors*

If a batch response cannot be delivered to one or more of the remote FTP server(s) (after a number of retries) it may be deleted or retained (for a limited period) on the EDDS server as described in the original batch request.

# 12. Client API

The section describes the Java APIs provided by the EDDS application. The purpose of the APIs are to allow a client application access to the EDDS services. After the “package” Maven target has been run within the EDDS source directories, the JAR file can be found within the “edds-ws-client/target” folder. After the “install” target has been run, the library is copied to the local Maven repository. See the Configuration and Installation Guide (CIG) [RD-15] for information on how to build and deploy EDDS.

The EDDS APIs are derived from the definition of the EDDS Web Services. The API’s implement a façade pattern on top of the classes generated from the WSDL files, which describe the EDDS services. They hide the implementation details of the services, like the connection to the web server.

EDDS Client API offers the following types of methods:

- EDDS Web Services client
- EDDS Push notifications client
- Utility methods

## *12.1 Edds Web Services Client API*

The tables below describe the Client API. The class EddsService is a façade to the application. The methods available in the API match exactly those listed in Section 9.4.

### 12.1.1 Instantiating

| Operation | Returns | Description |
|---|---|---|
| EddsService(String serverEndPoint) | EddsService | Creates an instance |
| setEndPointAddress(String address) | void | Sets the end-point to the address specified |
| connectToServer() | void | Initialises the service or reconnects to the server on a previously set address |
| setNotificationManager(NotificationManager notificationManager) | void | Sets an instance of the notification manager to be used with this EddsService |

### 12.1.2 Session Management

| **Operation** | **Returns** | **Description** |
|---|---|---|
| logIn(String userName, String password) | String | Creates session with server, also reconnects NotificationManager. Returns session ID. |
| hasSessionExpired() | boolean | Checks if the user's session has expired, or has not been created |
| checkUserPassword(String password) | void | Check if the password supplied matches the user's current password. |

### 12.1.3 Issuing Requests

| **Operation** | **Returns** | **Description** |
|---|---|---|
| batchRequest(RequestMessagePart parameters) | JobListIdPart | Submit a batch request. |
| streamRequest(StreamRequestMessagePart parameters) | JobIdPart | Perform a stream request. |

### 12.1.4 Managing Requests

| **Operation** | **Returns** | **Description** |
|---|---|---|
| cancel(CancelPartList cancelJobIds) | AcknowledgementPartList | Sends a Cancel request |
| reSubmit(JobIdPart job) | JobListIdPart | Resubmits the given request as a new request. |
| suspend(SuspendPartList suspendJobIds) | AcknowledgementPartList | Suspend request(s) |
| resume(ResumePartList resumeJobIds) | AcknowledgementPartList | Resume request(s) |
| deleteData(JobIdPartList requestIds) | AcknowledgementPartList | Delete response data |
| deleteRequest(JobIdPartList requestIds) | AcknowledgementPartList | Delete request(s) and their response data |
| startStreamData(JobIdPart jobIdPart) | void | Start the stream from the web server to the client using CometD for the specified active stream request |
| stopStreamData(JobIdPart jobIdPart) | void | Stop the stream from the web server to the client using CometD for the specified active stream request |

### 12.1.5 Special Requests

| Operation | Returns | Description |
|---|---|---|
| *getParamDefinitions(String mission) | JobIdPart | Initiates the retrieval of parameter definitions for the specified mission. |
| getDataspaces(String mission, String domain, DataSource dataSource) | List<String> | Gets the available dataspaces from the EDDS server for the specified mission, domain (optional) and data source. |
| *getFarcCatalogue(String mission, String domain, String folder) | JobIdPart | Initiates the retrieval of a FARC Catalogue for the specified mission, domain and folder. |
| *getFsCatalogue(String mission, String folder) | String - the request ID | Initiates the retrieval of a File System Catalogue for the specified mission and folder |
| *getHistoricalLog(Date from, Date to) | JobIdPart | Return a list of historical log messages between the from and to date. |
| stopHistoricalLogRetrieval(JobIdPart requestId) | void | Stops the retrieval of historical log messages identified by the requestId. |
| getLastConsolidation(String mission, DataSource dataSource, String dataspace) | long | Gets the last consolidation time for the specified mission, data source and dataspace. |

* The response to this request is delivered through asynchronous notification to the push notifications client. See section 12.2.

### 12.1.6 Utility Methods for Requests

| Operation | Returns | Description |
|---|---|---|
| getResponse(DownloadList downloadList) | ResponseData | Gets the response file(s) from EDDS File server. |
| getJobs(XMLGregorianCalendar start, XMLGregorianCalendar end) | JobListIdPart | Gets the jobs in the given time windows. |
| getJobsWithStatus(XMLGregorianCalendar start, XMLGregorianCalendar end) | JobIdPart | Gets the status of jobs in the given time windows. |
| getJobsWithStatusAndLimit(JobsFilter filter) | JobIdPart | Gets the status of jobs in the given time windows, limiting the number of rows returned by the limit specified. |
| getStatus(JobIdPart job) | AcknowledgementPart | Gets the acknowledgement. |
| getStatuses(JobListIdPart jobs) | JobIdPart | Gets the statuses of multiple jobs. |
| getRequest(JobIdPart job) | RequestMessagePart | Return the specified RequestMessagePart |
| getRequest(String job) | RequestMessagePart | Return the specified RequestMessagePart |
| getStreamRequest(JobIdPart job) | StreamRequestMessagePart | Return the specified StreamRequestMessagePart |

### 12.1.7 Utility Methods for User Management

| Operation | Returns | Description |
|---|---|---|
| getAllowedRequestTypes() | List <DataSourceAccess> | Gets the list of allowed request types with data sources that the user can submit |
| getMissions() | MissionsList | Gets all the mission names. |
| getMissionsAndDomains() | MissionsDomainList | Gets all the mission names and domains. |
| getMissionDetails(String mission) | MissionDetailsList | Gets all the details for the specified mission. |

| Operation | Returns | Description |
|---|---|---|
| getRoles(String missionName) | RolesList | Gets all the roles for the specified mission |
| getUsers(boolean includeAll) | UsersList | Returns a the list of EDDS users |
| getUserAccountDetails(String username) | UserAccountDetails | Returns the full account details of the specified user |
| getUserQuota(String mission) | UserQuotaDetailsList | Gets the current user quota usage for the specified mission. |
| hasPermissionToSeeAllUsers(String username) | boolean | Checks if user has permission to see other users data. |
| getQuotaDetails(String user, String mission) | UserQuotaDetailsList | Gets the quota usage for the specified user and mission. |
| getTransformations(String mission, DataAccessDataElement type) | List<String> | Retrieves the list of available transformations for given mission and request type |

### 12.1.8 Edds Client API – code examples

This section provides some snippets of code in order to facilitate the developer in the usage of the library. The code is quite minimalistic since all the complexity of the SOAP protocol is hidden by the library. More examples can be found in the source code under edds-ws-client/src/test/java under esa.egos.edds.ws.client.examples.

#### *12.1.8.1 LogIn*

```
    /**
     * Perform the login of a user and open a session on the web server.
     *
     * @param username The username
     * @param password The password
     * @throws WebServiceException
     * @throws MalformedURLException
     * @throws PasswordExpiredFault
     */
    public void logIn(String username, String password) throws
MalformedURLException, WebServiceException, PasswordExpiredFault
    {
        String serverAddress =
"http://10.48.29.159:8080/edds/EddsService?wsdl";
        eddsService = new EddsService(serverAddress);
        // These two lines are necessary only if notifications are used
        notificationManager = new NotificationManager(eddsService,
serverAddress);
        eddsService.setNotificationManager(notificationManager);
        // Initialize the connection to the web service
        eddsService.connectToServer();

        try
        {
            eddsService.logIn(username, password);
        }
        catch (AuthenticationFault ex)
        {
            // exception management
        }
    }
```

#### *12.1.8.2 LogOut*

```
    /**
     * Close the session of the user
     *
     * @param username The username
     * @param password The password
     * @throws WebServiceException
     * @throws MalformedURLException
     */
    public void logOut(String username, String password) throws
MalformedURLException, WebServiceException
    {
        // we assume the login has been already performed
        eddsService.logOut();
    }
```

#### 12.1.8.3 GetStatus

```
    /**
     * Return the status of a request
     *
     * @param jobIdPart The ID of the reqeust
     * @throws WebServiceException
     * @throws MalformedURLException
     */
    public void getStatus(JobIdPart jobIdPart) throws
MalformedURLException, WebServiceException
    {
        try
        {
            // we assume the login has been already performed

            // we have as return the complete acknowledgement of the
request
            AcknowledgementPart acknowledgment =
eddsService.getStatus(jobIdPart);

            // ...
        }
        catch (RequestFault ex)
        {
            // exception management
        }
        catch (SessionFault ex)
        {
            // exception management
        }
        catch (AuthorizationFault ex)
        {
            // exception management
        }
    }
```

#### 12.1.8.4 Get request statuses

```
   /**
     * Return the request information of multiple requests
     *
     * @param jobListIdPart The IDs of the requests
     * @throws WebServiceException
     * @throws DatatypeConfigurationException
```

```
     * @throws ClassNotFoundException
     * @throws IOException
     * @throws TimeFormatException
     */
    public void getJobsWithStatuses(JobListIdPart jobListIdPart) throws
WebServiceException, DatatypeConfigurationException, IOException,
            ClassNotFoundException, TimeFormatException
    {
        try
        {
            // we assume the login has been already performed

            // Create a start time
            Date startTime = new Date(System.currentTimeMillis());
            GregorianCalendar startTimeGregorian = new
GregorianCalendar();
            startTimeGregorian.setTime(startTime);
            XMLGregorianCalendar startTimeXml =
DatatypeFactory.newInstance().newXMLGregorianCalendar(startTimeGregorian)
;

            // Create an end time
            Date endTime = new Date(System.currentTimeMillis());
            GregorianCalendar endTimeGregorian = new GregorianCalendar();
            endTimeGregorian.setTime(endTime);
            XMLGregorianCalendar endTimeXml =
DatatypeFactory.newInstance().newXMLGregorianCalendar(endTimeGregorian);

            // we have as return a job ID which can be used to identify
the response from CometD. The JobID is a random string, not a RequestId
            JobIdPart jobId = eddsService.getJobsWithStatus(startTimeXml,
endTimeXml);
        }
        catch (RequestFault ex)
        {
            // exception management
        }
        catch (SessionFault ex)
        {
            // exception management
        }
        catch (AuthorizationFault ex)
        {
            // exception management
        }
    }
```

#### 12.1.8.5 Perform BatchRequest

```
    /**
     * Perform a batch request
     *
     * @param request The request message
     * @throws WebServiceException
     * @throws MalformedURLException
     */
    public void batchReqeust(RequestMessagePart request) throws
MalformedURLException, WebServiceException
    {
        try
        {
```

```
            // we assume the login has been already performed

            // the request is submitted and we receive the related ID
            JobListIdPart jobId = eddsService.batchRequest(request);

            // ...
        }
        catch (RequestFault ex)
        {
            // exception management
        }
        catch (SessionFault ex)
        {
            // exception management
        }
        catch (AuthorizationFault ex)
        {
            // exception management
        }
    }
```

#### 12.1.8.6 Perform StreamRequest

```
    /**
     * Perform a stream request
     *
     * @param request The request message
     * @throws WebServiceException
     * @throws MalformedURLException
     */
    public void streamRequest(StreamRequestMessagePart request) throws
MalformedURLException, WebServiceException
    {
        try
        {
            // we assume the login has been already performed

            // the request is submitted and we receive the related ID
            JobListIdPart jobId = eddsService.streamRequest(request);

            // ...
        }
        catch (RequestFault ex)
        {
            // exception management
        }
        catch (SessionFault ex)
        {
            // exception management
        }
        catch (AuthorizationFault ex)
        {
            // exception management
        }
    }
```

To receive the stream data, follow the example in Section 12.2.2, using `NotificationChannel.PARAM_STREAM` as the channel to listen to, and implement `NotificationListener <DarcParamRec>`. Next call the method `startStreamData(requestId)` in the Client API to request that the Web Server starts to send the

stream data to your application. When finished, ensure you call `stopStreamData(requestId)`. The RequestId to pass is the one returned to you from the above method - `streamRequest(request)`.

#### 12.1.8.7 Cancel

```
    /**
     * Cancels request(s)
     *
     * @param jobIds The request IDs
     * @throws WebServiceException
     * @throws MalformedURLException
     */
    public void cancel(CancelPartList jobIds) throws
MalformedURLException, WebServiceException
    {
        try
        {
            // we assume the login has been already performed


            // we have as return the complete acknowledgement of the
request(s)
            AcknowledgementPartList acknowledgements =
eddsService.cancel(jobIds);

            // ...
        }
        catch (RequestFault ex)
        {
            // exception management
        }
        catch (SessionFault ex)
        {
            // exception management
        }
        catch (AuthorizationFault ex)
        {
            // exception management
        }
    }
```

#### 12.1.8.8 Suspend

```
   /**
     * Suspends a request(s)
     *
     * @param jobIds The request IDs
     * @throws WebServiceException
     * @throws MalformedURLException
     */
    public void suspend(SuspendPartList jobIds) throws
MalformedURLException, WebServiceException
    {
        try
        {
            // we assume the login has been already performed

            // we have as return the complete acknowledgement of the
request(s)
            AcknowledgementPartList acknowledgements =
eddsService.suspend(jobIds);
```

```
            // ...
        }
        catch (RequestFault ex)
        {
            // exception management
        }
        catch (SessionFault ex)
        {
            // exception management
        }
        catch (AuthorizationFault ex)
        {
            // exception management
        }
    }
```

#### 12.1.8.9 Resume

```
/**
     * Resumes a request(s)
     *
     * @param jobIds The request IDs
     * @throws WebServiceException
     * @throws MalformedURLException
     */
    public void resume(ResumePartList jobIds) throws
MalformedURLException, WebServiceException
    {
        try
        {
            // we assume the login has been already performed

            // we have as return the complete acknowledgement of the
request(s)
            AcknowledgementPartList acknowledgements =
eddsService.resume(jobIds);

            // ...
        }
        catch (RequestFault ex)
        {
            // exception management
        }
        catch (SessionFault ex)
        {
            // exception management
        }
        catch (AuthorizationFault ex)
        {
            // exception management
        }
    }
```

#### 12.1.8.10 Get parameter definitions

```
    public void getParamDefinitions(String mission)
    {
        try
        {
            // we assume the login has been already performed
```

```
            JobIdPart jobId = eddsService.getParamDefinitions(mission);

            // ...
        }
        catch (RequestFault e)
        {
            // exception management
        }
        catch (SessionFault e)
        {
            // exception management
        }
        catch (AuthorizationFault e)
        {
            // exception management
        }
    }
```

#### 12.1.8.11 Download response file

```
    /**
     * Save the response files for the given jobId locally
     *
     * @param jobId the request id
     */
    public void saveResponseFiles(String jobId) throws
WebServiceException, RequestFault, SessionFault, AuthorizationFault,
            FileNotFoundException, IOException
    {
        DownloadList downloadList = new DownloadList();
        downloadList.setJob(jobId);
        List <ResponseDataElement> dataHandlers = eddsService.
getResponse(downloadList).getResponseDataElement();

        // Save the response files
        for (ResponseDataElement responseElem : dataHandlers)
        {
            BufferedOutputStream bos = new BufferedOutputStream(new
FileOutputStream(new File(responseElem.getFileName())));
            responseElem.getResponse().writeTo(bos);
            bos.close();
        }
   }
```

## *12.2 EDDS Push notifications client*

EDDS clients can register their listeners to receive push notification on messages from EDDS system. The client listeners are called asynchronously when any messages are received. Supported notification types are:

| Channel (from enum NotificationChannel) | Return Type | Description |
|---|---|---|
| USER_MANAGEMENT | AccountRequestMessagePart | User management updates |
| STATUS_UPDATES | RequestInfoRec | Job updates |
| STATUS_RETRIEVAL | RequestInfoRecs | Used to get a list of jobs and their status |
| STATUS_RETRIEVAL_ERRORS | String | Error message if unable to retrieve status information |
| EDDS_LOGS | LoggingEvent | EDDS live system log messages |
| PARAM_DEFINITIONS | ParamDefRecs | Parameter definitions in response to the requests through the web service. |
| PARAM_DEFINITIONS_ERRORS | String | Parameter definition errors |
| ARCHIVE_CATALOGUE | | The FARC catalogue entries |
| ARCHIVE_CATALOGUE_ERRORS | String | Any error information when retrieving the catalogue |
| ARCHIVE_UPDATES | FarcCatRec | Information about a new commit in the FARC |
| HISTORICAL_LOGS | SystemLogRec | Historical logs in response to the requests through the web service. |
| USER_QUOTA_USAGE | UserQuotaDetailsList | Quota updates |
| PARAM_STREAM | DarcParamRec | DARC parameter stream |
| PKT_TC_STREAM | PacketTCBinary | Telecommand stream |
| PKT_TM_STREAM | PacketTMBinary | Telemetry stream |
| PKT_EV_STREAM | EventRecordReportBinary | SCOS Event Log stream |
| PKT_OOL_STREAM | OOLReportBinary | Out of limits stream |
| FILE_SYSTEM_CATALOGUE | Catalogue | The File System Catalogue entries in response to the Special request for File System |
| FILE_SYSTEM_UPDATES | FsCatalogueEntry | Notifications about changes in designated File System directory. |

### 12.2.1 Security

The same session key that is obtained during login of EDDS Web services is used to authenticate the client. If client fails to provide the server with an existing session key, the service is denied.

### 12.2.2 Example: Register notifications listener

```
/**
```

```
     * Register your listener to receive asynchronous notifications for
status updates
     *
     * @param listener the listener the will receive updates when they
are received from the EDDS Web Server
     * @see NotificationManager#registerListener(NotificationChannel,
NotificationListener) for the list supported types
     */
    public void registerStatusUpdatesListener(NotificationListener
<RequestInfoRec> listener)
    {
      notificationManager.
registerListener(NotificationChannel.STATUS_UPDATES, listener);
    }
```

## *12.3 EDDS Utility methods*

### 12.3.1 Decoding EDDS Param Binary format

EDDS Client API provides utility functions to read and write the TM Parameter binary format. The implementation is in package esa.egos.edds.ws.client.binary. For more detailed documentation read the Javadoc of the provided classes.

#### *12.3.1.1 Example: Reading Parameter TM data from EDDS Binary file*

```
    /**
     * Read the Parameter BINARY response file. It contains a list of {@link
DarcParameterBinary} objects
     * encoded using Google Protocol Buffers. Each record is prepended with
it's length.
     * @param file the file object of the file being read.
     * @throws InvalidProtocolBufferException when something unexpected occurs
while reading the data
     * @throws IOException problem reading the file
     */
    public void readParamBinaryFormat(File file) throws
InvalidProtocolBufferException, IOException{
        DarcParameterBinaryInputSupport bin = null;
        try
        {
            bin = new DarcParameterBinaryInputSupport(file);
            DarcParameterBinary rec;
            while ( (rec = bin.next()) != null)
            {
                System.out.println(rec.getParamName() + " " + rec.getGenTime()
+ ": " + rec.getValue());
            }
        }
        finally
        {
            if (bin != null)
            {
                bin.close();
            }
        }
```

## 12.4 Dependencies

The EDDS Client API can be used by including the respective Maven artifact to the project. Maven then will resolve the dependencies and add all required libraries to the classpath. To use the EDDS Client API add the following Maven artifact to the project:

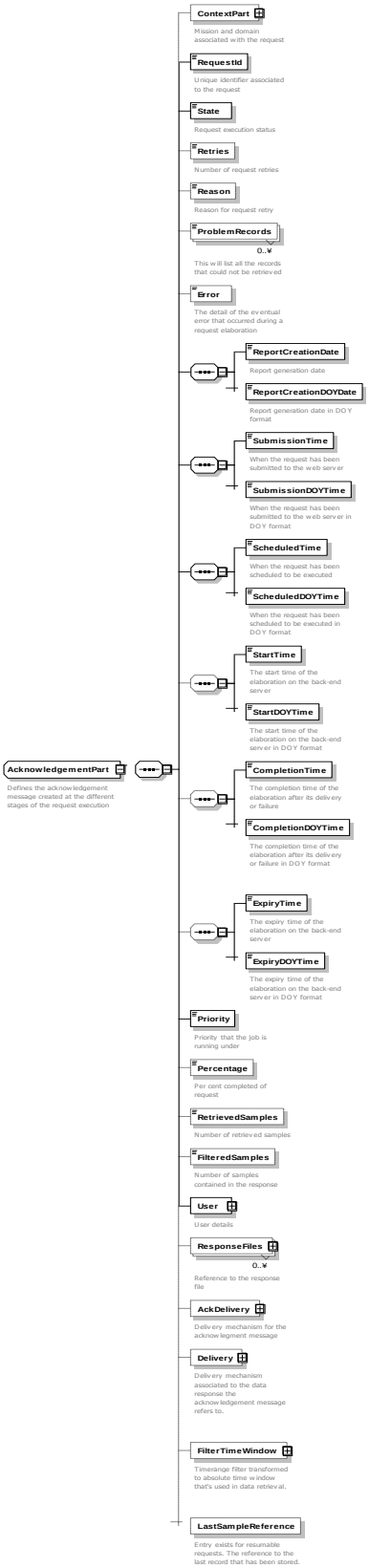
```
<dependency>
	<groupId>esa.egos.edds</groupId>
	<artifactId>edds-ws-client</artifactId>
	<version>2.2.0</version>
</dependency>
```

# Appendix A Acknowledgement Data Type

## *A.1 complexType AcknowledgementPart*

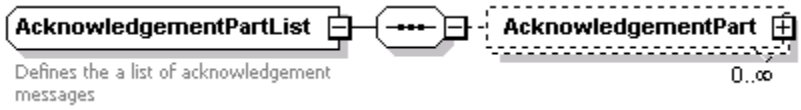
diagram



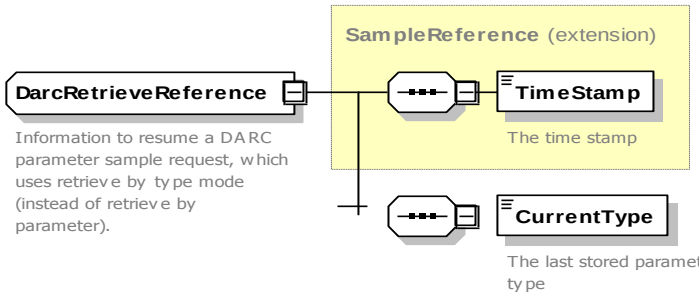

 

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **ContextPart RequestId State Retries Reason ProblemRecords Error ReportCreationDate ReportCreationDOYDate SubmissionTime SubmissionDOYTime ScheduledTime ScheduledDOYTime StartTime StartDOYTime CompletionTime CompletionDOYTime ExpiryTime ExpiryDOYTime Priority Percentage RetrievedSamples FilteredSamples User ResponseFiles AckDelivery Delivery FilterTimeWindow LastSampleReference** |
| used by | element **AcknowledgementPartList/AcknowledgementPart** |
| annotation | documentation<br>Defines the acknowledgement message created at the different stages of the request execution |

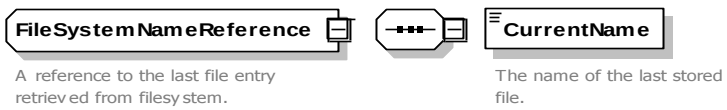
## A.2 complexType AcknowledgementPartList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **AcknowledgementPart** |
| annotation | documentation<br>Defines the a list of acknowledgement messages |

## A.3 complexType DarcRetrieveReference

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **SampleReference** |
| properties | base SampleReference |
| children | **TimeStamp CurrentType** |
| annotation | documentation<br>Information to resume a DARC parameter sample request, which uses retrieve by type mode (instead of retrieve by parameter). |

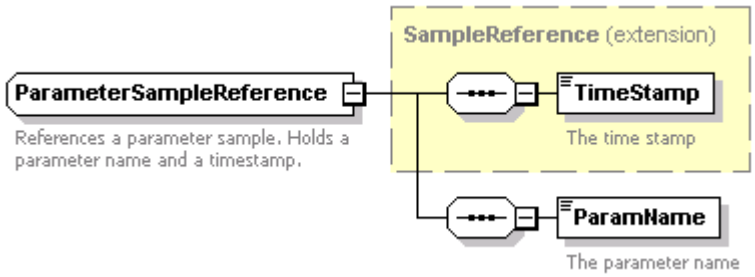
## A.4 complexType FileSystemNameReference

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **RetrievalReference** |
| properties | base RetrievalReference |
| children | **CurrentName** |

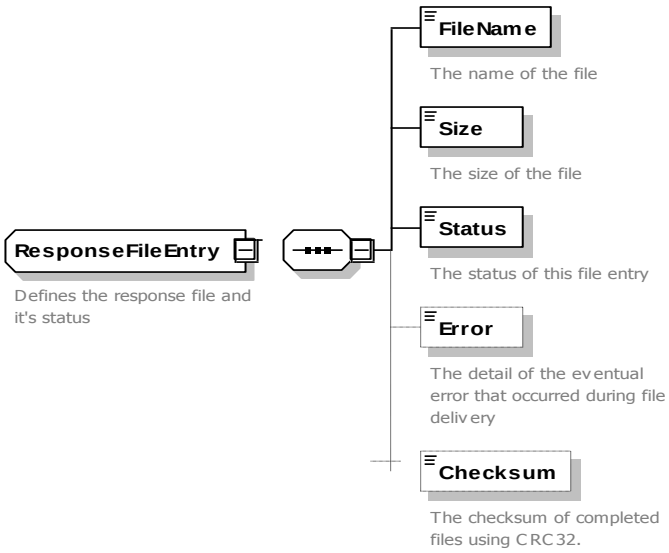
 

| | |
|---|---|
| annotation | documentation<br>A reference to the last file entry retrieved from filesystem. |

## A.5 complexType ParameterSampleReference

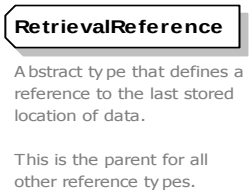
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **SampleReference** |
| properties | base SampleReference |
| children | **TimeStamp ParamName** |
| annotation | documentation<br>References a parameter sample. Holds a parameter name and a timestamp. |

## A.6 complexType ResponseFileEntry

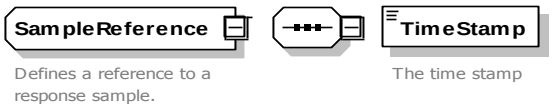
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileName Size Status Error Checksum** |
| used by | element **AcknowledgementPart/ResponseFiles** |
| annotation | documentation<br>Defines the response file and it's status |

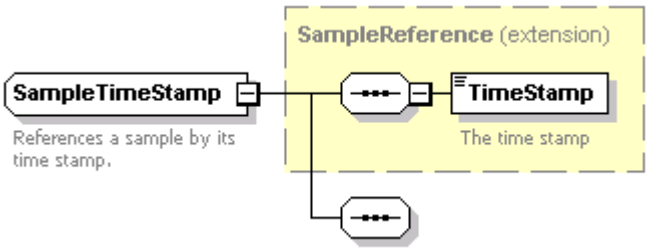
## A.7 complexType RetrievalReference

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| properties | abstract true |
| used by | element **AcknowledgementPart/LastSampleReference**<br>complexTypes FileSystemNameReference SampleReference |
| annotation | documentation<br>Abstract type that defines a reference to the last stored location of data.<br>This is the parent for all other reference types. |

## A.8 complexType SampleReference

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of RetrievalReference |
| properties | base RetrievalReference |
| children | **TimeStamp** |
| used by | complexTypes DarcRetrieveReference ParameterSampleReference SampleTimeStamp |
| annotation | documentation<br>Defines a reference to a response sample. |

## A.9 complexType SampleTimeStamp

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **SampleReference** |
| properties | base SampleReference |
| children | **TimeStamp** |
| annotation | documentation<br>References a sample by its time stamp. |

## A.10 simpleType ResponseFileStatus

| | |
|---|---|
| namespace | http://edds.egos.esa/model |

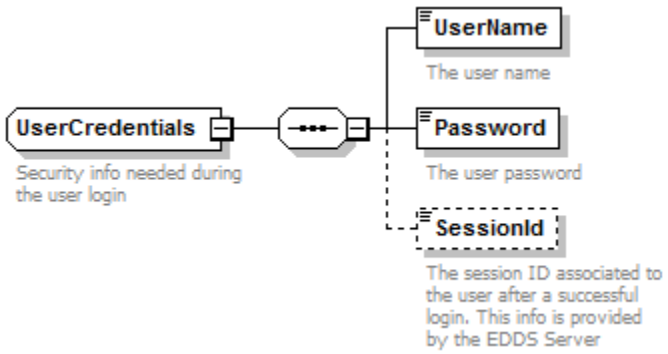
| | |
|---|---|
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ResponseFileEntry/Status** |
| facets | Kind / Value / annotation<br>enumeration ACTIVE — documentation: The file is being written by the EDDS Server<br>enumeration SERVER_COMPLETED — documentation: EDDS Server completed writing the file, delivery-manager needs to deliver the file<br>enumeration DELIVERED_LOCAL — documentation: The file is available in the EDDS Server FTP directory<br>enumeration DELIVERED_LOCAL_REMOTE — documentation: The file is delivered to the remote server and is also available in the EDDS Server FTP directory<br>enumeration DELIVERED_REMOTE — documentation: The delivery of the file is completed<br>enumeration DELETED — documentation: The data on EDDS file server is deleted. Can be reached after DELIVERED_LOCALLY or DELIVERED_LOCAL_REMOTE<br>enumeration ERROR — documentation: The file cannot be saved on EDDS file server |
| annotation | documentation<br>Response file statuses |

# Appendix B Authentication Data Type

This section of the document describes the complex types used for authentication as defined in the authentication.xsd file.

## *B.1 complexType UserCredentials*

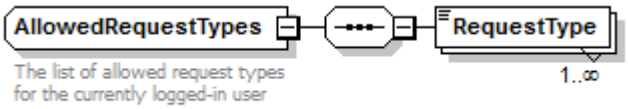
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **UserName Password SessionId** |
| used by | element **UserCredentials** |
| annotation | documentation<br>Security info needed during the user login |

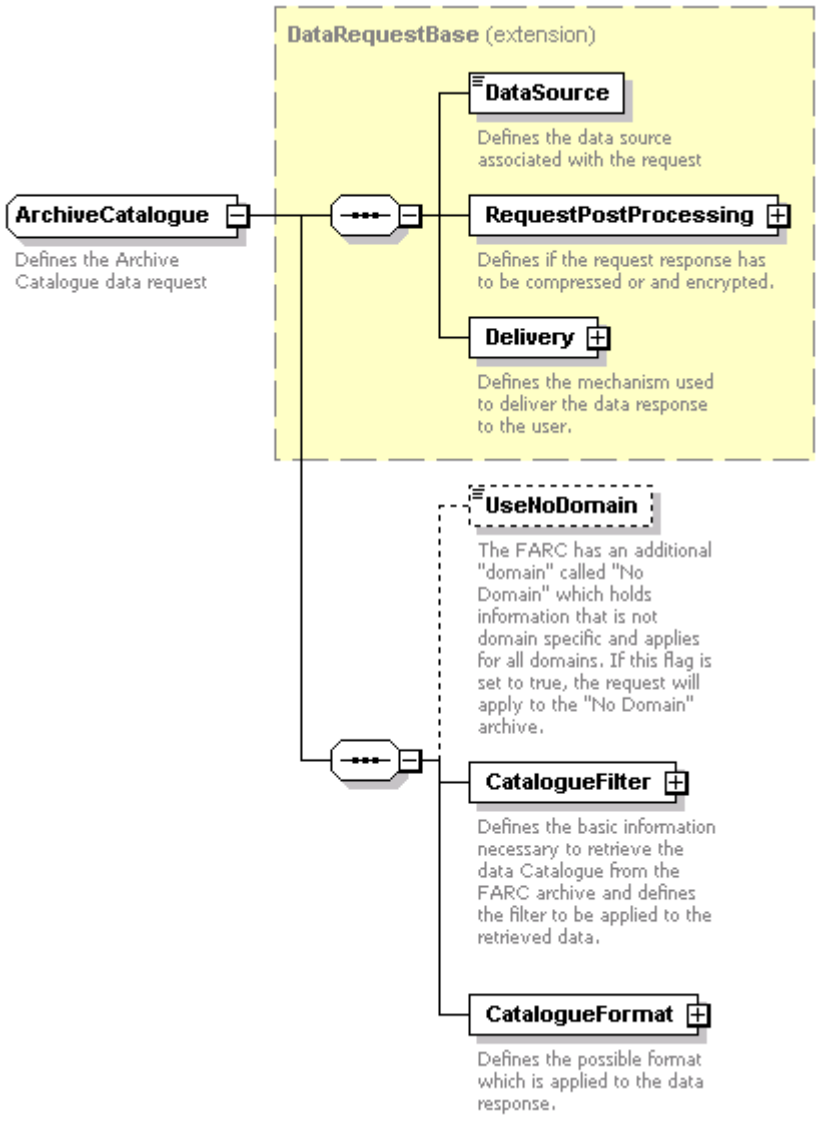
# Appendix C Batch Request Data Type

This section of the document describes the complex types used for batch requests as defined in the batchrequest.xsd file.

## C.1 complexType AllowedRequestTypes

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | RequestType |
| used by | element AllowedRequestTypes |
| annotation | documentation<br>The list of allowed request types for the currently logged-in user |

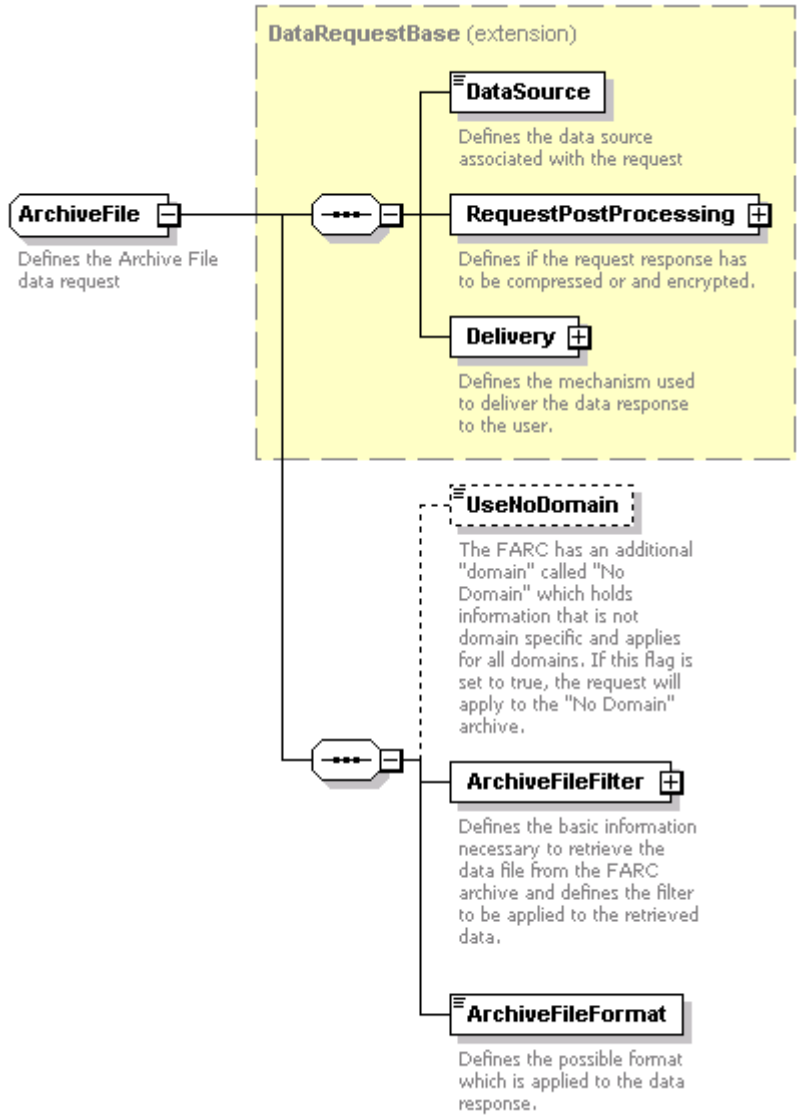
## C.2 complexType ArchiveCatalogue

| | |
|---|---|
| diagram |  |

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery UseNoDomain CatalogueFilter CatalogueFormat** |
| used by | elements **ArchiveCatalogue DataRequest/ArchiveCatalogue** |
| annotation | documentation<br>Defines the Archive Catalogue data request |

## *C.3 complexType ArchiveFile*

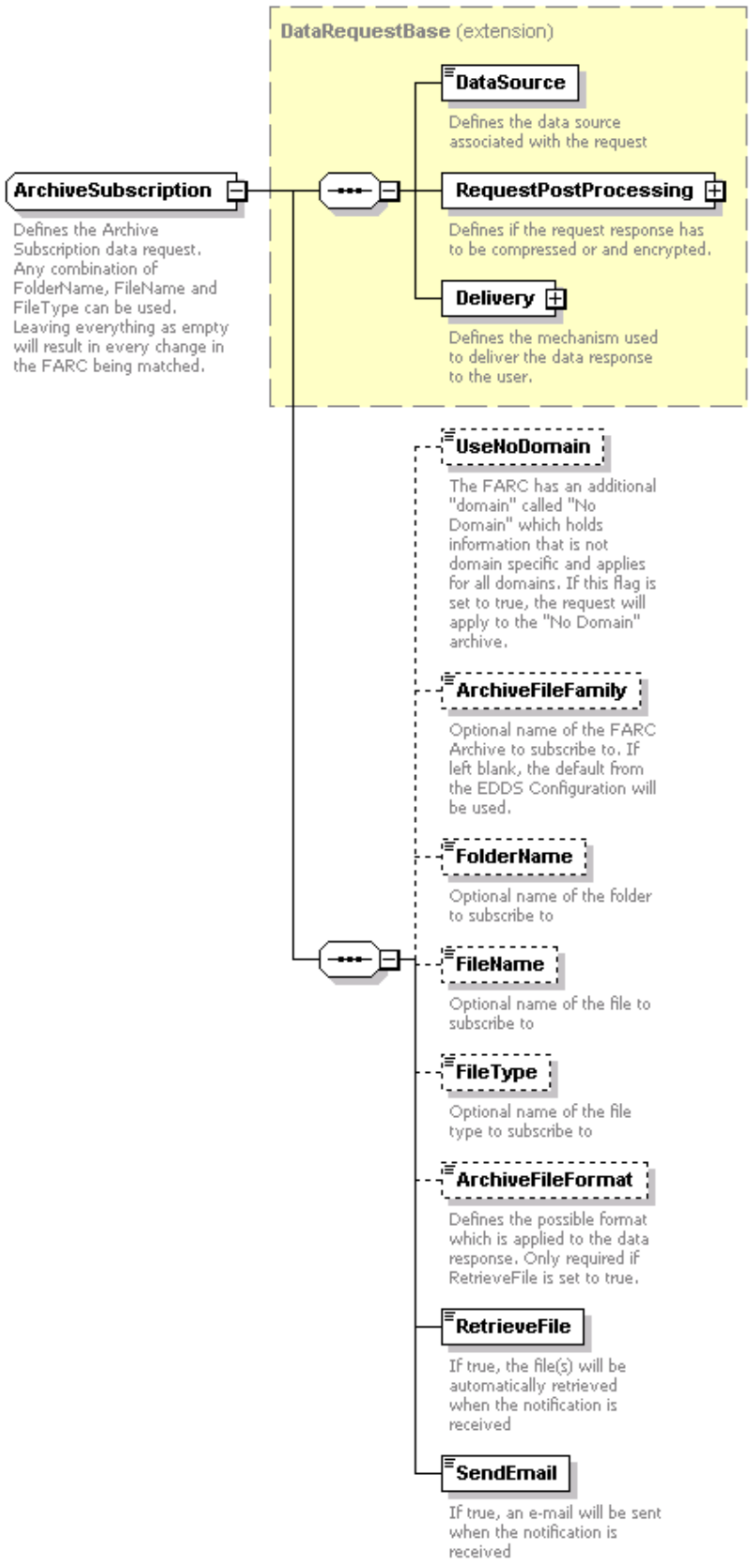
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery UseNoDomain ArchiveFileFilter ArchiveFileFormat** |
| used by | elements **ArchiveFile DataRequest/ArchiveFile** |
| annotation | documentation<br>Defines the Archive File data request |

## C.4 complexType ArchiveSubscription

diagram

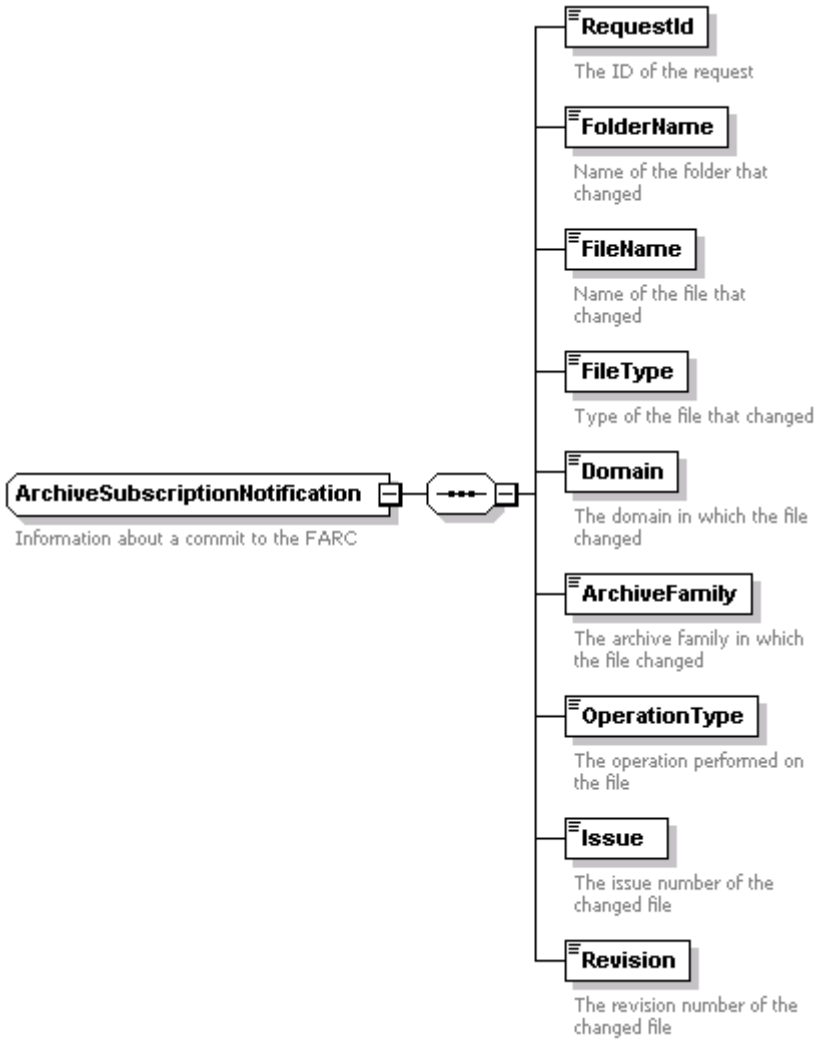



| namespace | http://edds.egos.esa/model |
|---|---|

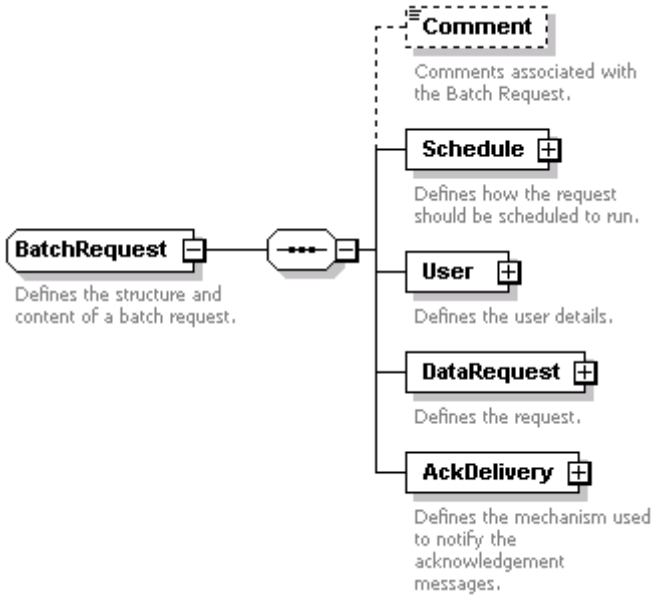
| | |
|---|---|
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery UseNoDomain ArchiveFileFamily FolderName FileName FileType ArchiveFileFormat RetrieveFile SendEmail** |
| used by | elements **ArchiveSubscription DataRequest/ArchiveSubscription** |
| annotation | documentation<br>Defines the Archive Subscription data request. Any combination of FolderName, FileName and FileType can be used. Leaving everything as empty will result in every change in the FARC being matched. |

## C.5 complexType ArchiveSubscriptionNotification

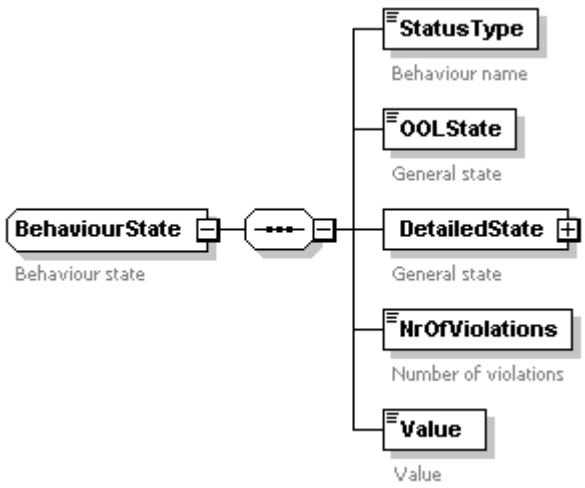
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **RequestId FolderName FileName FileType Domain ArchiveFamily OperationType Issue Revision** |
| used by | element **ArchiveSubscriptionNotification** |
| annotation | documentation<br>Information about a commit to the FARC |

## C.6 complexType BatchRequest

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Comment Schedule User DataRequest AckDelivery** |
| used by | elements **BatchRequest RequestMessagePart/BatchRequest** |
| annotation | documentation<br>Defines the structure and content of a batch request. |

## C.7 complexType BehaviourState

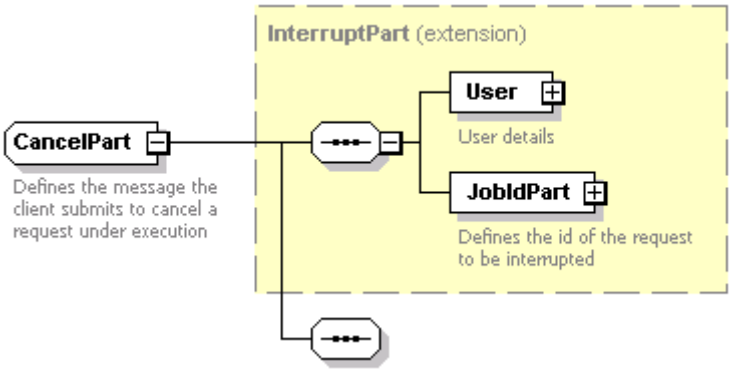
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **StatusType OOLState DetailedState NrOfViolations Value** |
| used by | element **BehaviourStates/BehaviourState** |
| annotation | documentation<br>Behaviour state |

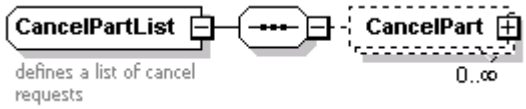
## C.8 complexType BehaviourStates

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **BehaviourState** |
| used by | element **ParamRepresentationSample/BehaviourStates** |
| annotation | documentation<br>Behaviour states |

## C.9 complexType CancelPart

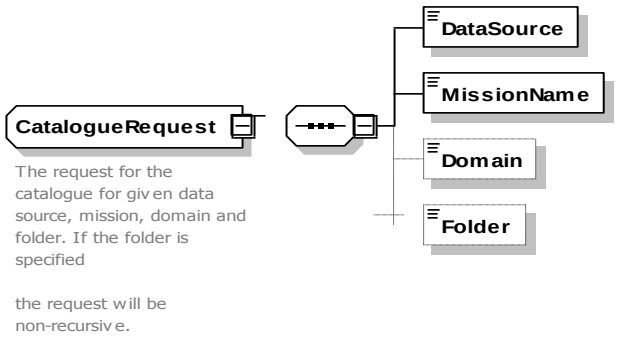
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **InterruptPart** |
| properties | base InterruptPart |
| children | **User JobIdPart** |
| used by | element **CancelPart** |
| annotation | documentation<br>Defines the message the client submits to cancel a request under execution |

## C.10 complexType CancelPartList

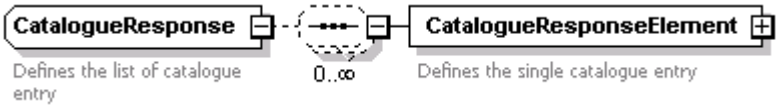
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **CancelPart** |
| used by | element **CancelPartList** |
| annotation | documentation<br>defines a list of cancel requests |

## C.11 complexType CatalogueRequest

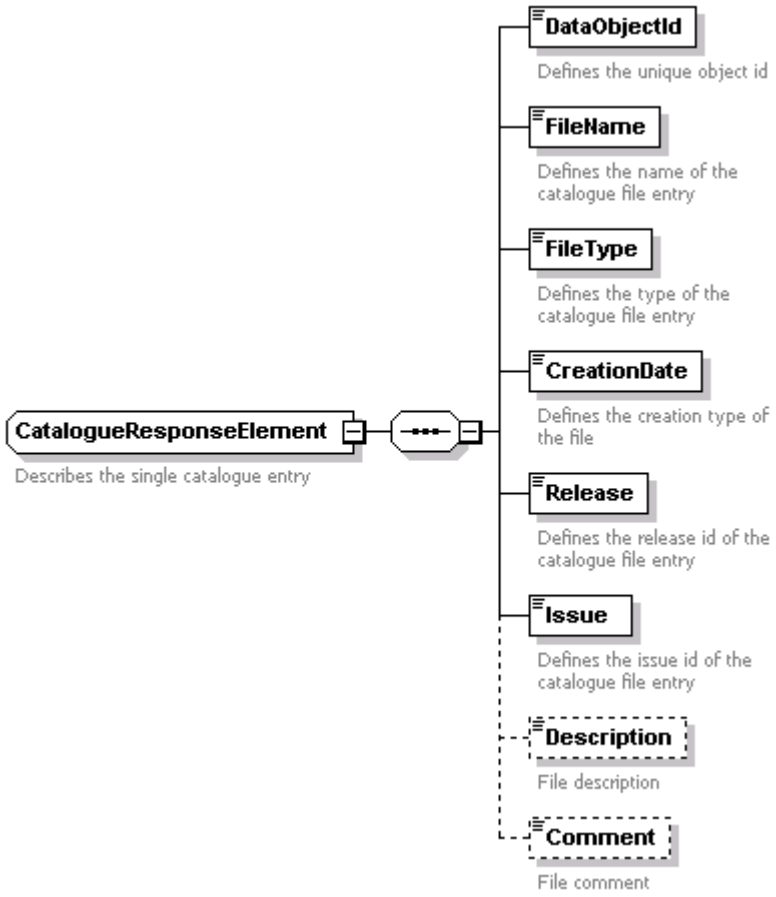
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DataSource MissionName Domain Folder** |
| used by | element **CatalogueRequest** |
| annotation | documentation<br>The request for the catalogue for given data source, mission, domain and folder. If the folder is specified the request will be non-recursive. |

## C.12 complexType CatalogueResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **CatalogueResponseElement** |
| used by | element **Response/CatalogueResponse** |
| annotation | documentation<br>Defines the list of catalogue entry |

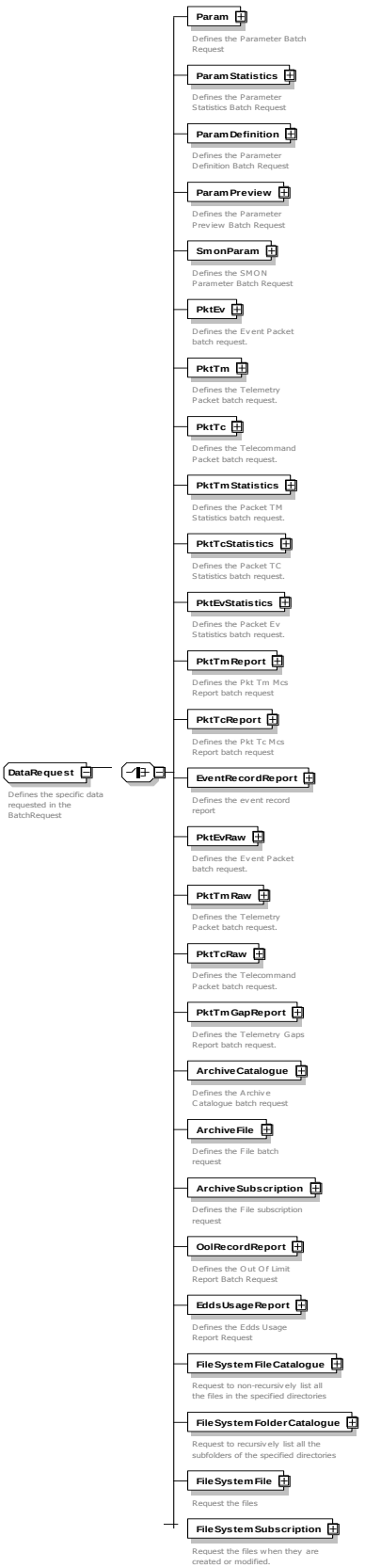
 

## C.13 complexType CatalogueResponseElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DataObjectId FileName FileType CreationDate Release Issue Description Comment** |
| used by | element **CatalogueResponse/CatalogueResponseElement** |
| annotation | documentation<br>Describes the single catalogue entry |

## C.14 complexType DataRequest

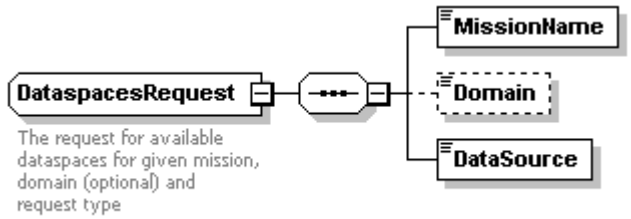
 

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Param ParamStatistics ParamDefinition ParamPreview SmonParam PktEv PktTm PktTc PktTmStatistics PktTcStatistics PktEvStatistics PktTmReport PktTcReport EventRecordReport PktEvRaw PktTmRaw PktTcRaw PktTmGapReport ArchiveCatalogue ArchiveFile ArchiveSubscription OolRecordReport EddsUsageReport FileSystemFileCatalogue FileSystemFolderCatalogue** |

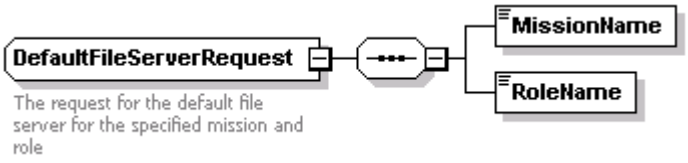
 

| | |
|---|---|
| | **FileSystemFile FileSystemSubscription** |
| used by | elements **DataRequest BatchRequest/DataRequest** |
| annotation | documentation<br>Defines the specific data requested in the BatchRequest |

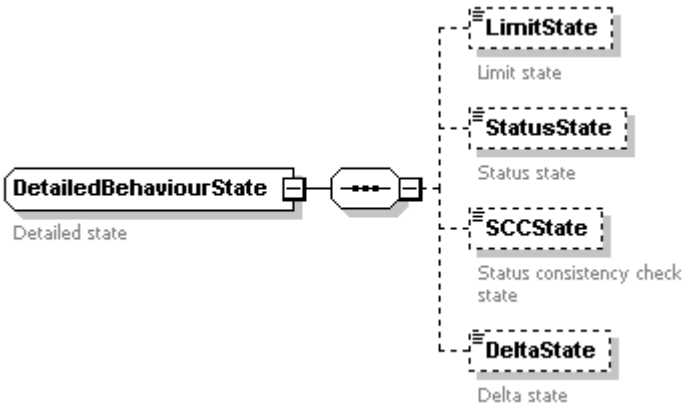
## C.15 complexType DataspacesRequest

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **MissionName Domain DataSource** |
| used by | element **DataspacesRequest** |
| annotation | documentation<br>The request for available dataspaces for given mission, domain (optional) and request type |

## C.16 complexType DefaultFileServerRequest

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **MissionName RoleName** |
| used by | element **DefaultFileServerRequest** |
| annotation | documentation<br>The request for the default file server for the specified mission and role |

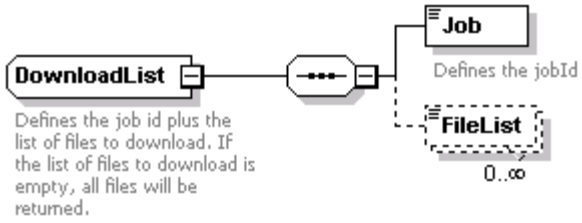
## C.17 complexType DetailedBehaviourState

| | |
|---|---|
| diagram |  |

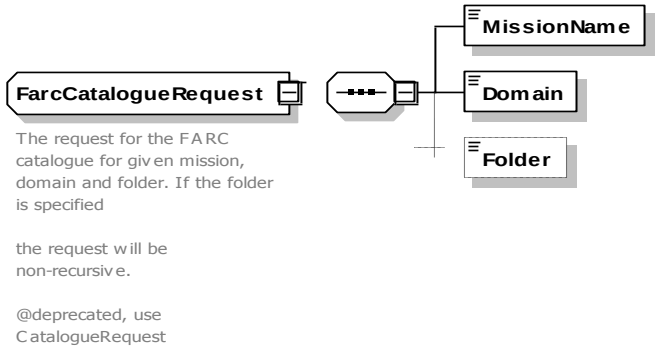
 

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **LimitState StatusState SCCState DeltaState** |
| used by | element **BehaviourState/DetailedState** |
| annotation | documentation<br>Detailed state |

## C.18 complexType DownloadList

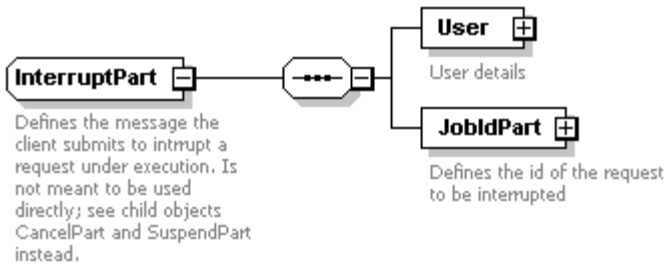
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Job FileList** |
| used by | element **DownloadList** |

## C.19 complexType FarcCatalogueRequest

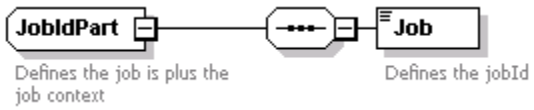
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **MissionName Domain Folder** |
| used by | element **FarcCatalogueRequest** |
| annotation | documentation<br>The request for the FARC catalogue for given mission, domain and folder. If the folder is specified the request will be non-recursive.<br>@deprecated, use CatalogueRequest |

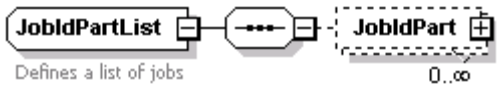
## C.20 complexType InterruptPart

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **User JobIdPart** |
| used by | complexTypes **CancelPart ResumePart SuspendPart** |
| annotation | documentation<br>Defines the message the client submits to intrrupt a request under execution. Is not meant to be used directly; see child objects CancelPart and SuspendPart instead. |

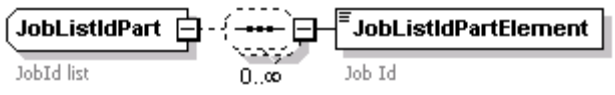
## C.21 JobIdPart

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Job** |
| used by | elements **DeleteDataPart DeleteRequestPart JobIdPart CancelPart/JobIdPart** |
| annotation | documentation<br>Defines the job is plus the job context |

## C.22 complexType JobIdPartList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **JobIdPart** |
| used by | elements **DeleteDataPart DeleteRequestPart JobIdPartList** |
| annotation | documentation<br>Defines a list of jobs |

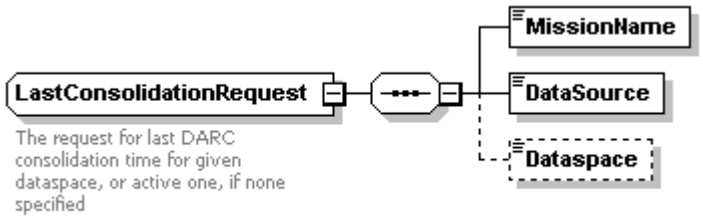
## C.23 complexType JobListIdPart

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **JobListIdPartElement** |

| | |
|---|---|
| used by | element **JobListIdPart** |
| annotation | documentation<br>JobId list |

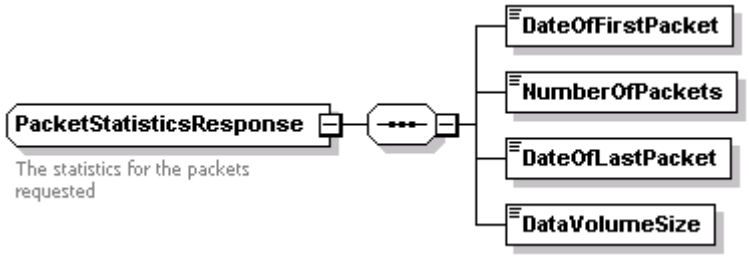
## C.24 complexType LastConsolidationRequest

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | MissionName DataSource Dataspace |
| used by | element LastConsolidationRequest |
| annotation | documentation<br>The request for last DARC consolidation time for given dataspace, or active one, if none specified |

## C.25 complexType ListString

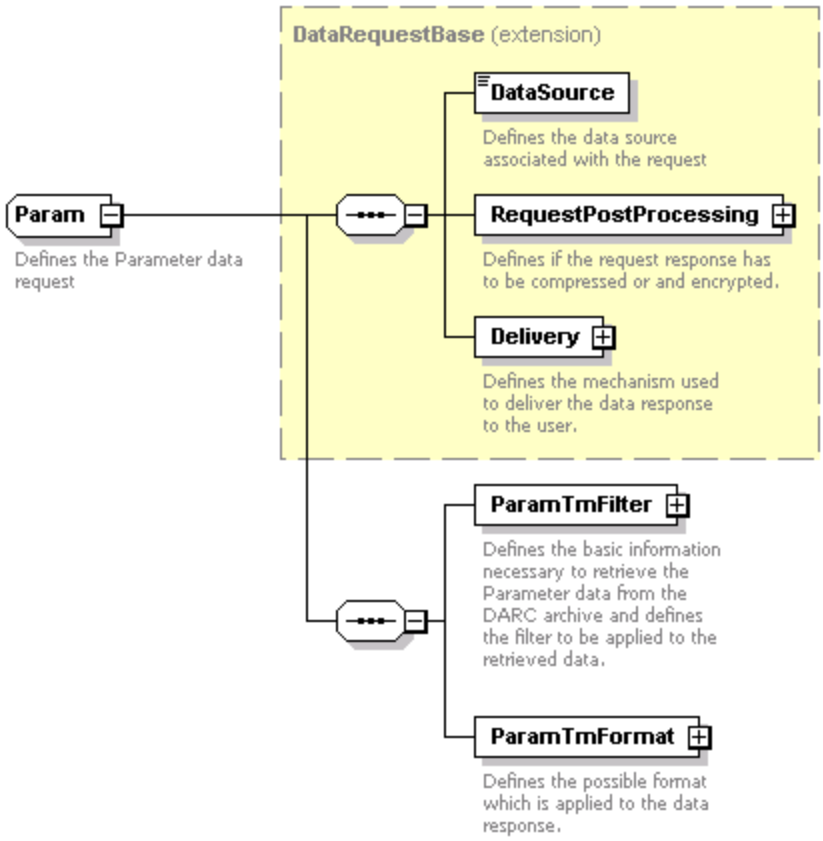
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | ListElement |
| used by | element ListString |
| annotation | documentation<br>A list of String values |

## C.26 PacketStatisticsResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DateOfFirstPacket NumberOfPackets DateOfLastPacket DataVolumeSize** |
| used by | element **Response/PacketStatisticsResponse** |
| annotation | documentation<br>The statistics for the packets requested |

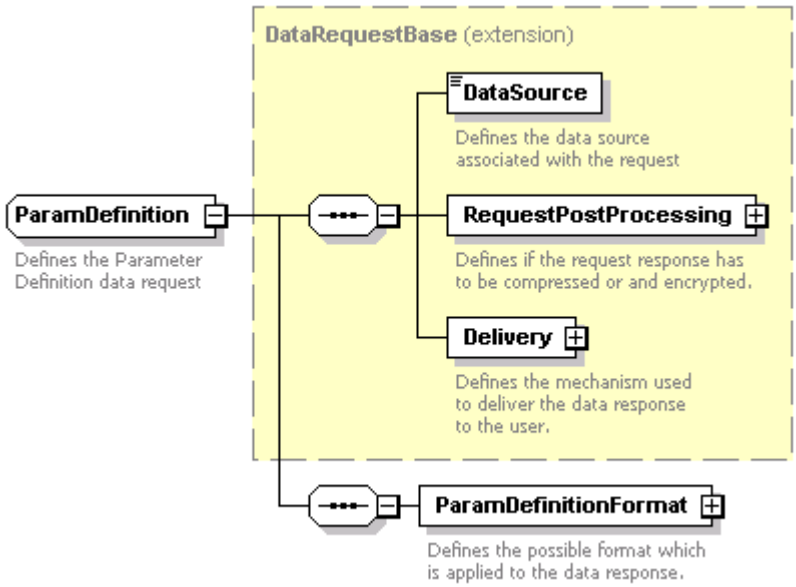
 

## C.27 complexType Param

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery ParamTmFilter ParamTmFormat** |
| used by | elements **Param DataRequest/Param** |
| annotation | documentation<br>Defines the Parameter data request |

## C.28 complexType ParamDefinition

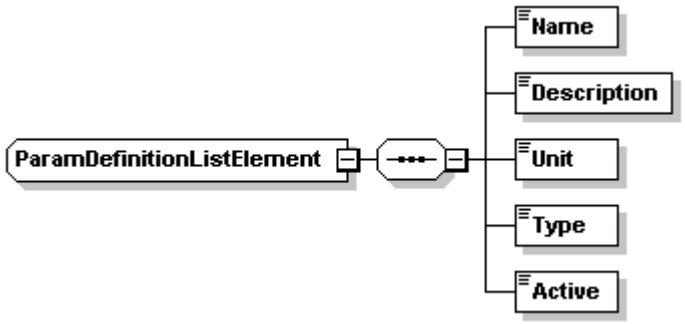
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery ParamDefinitionFormat** |
| used by | elements **ParamDefinition DataRequest/ParamDefinition** |
| annotation | documentation<br>Defines the Parameter Definition data request |

## C.29 complexType ParamDefinitionList

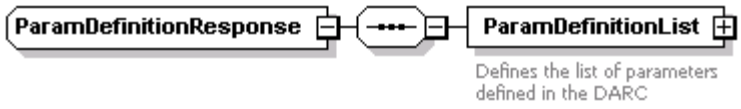
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamDefinitionListElement** |
| used by | element **ParamDefinitionResponse/ParamDefinitionList** |

## C.30 complexType ParamDefinitionListElement

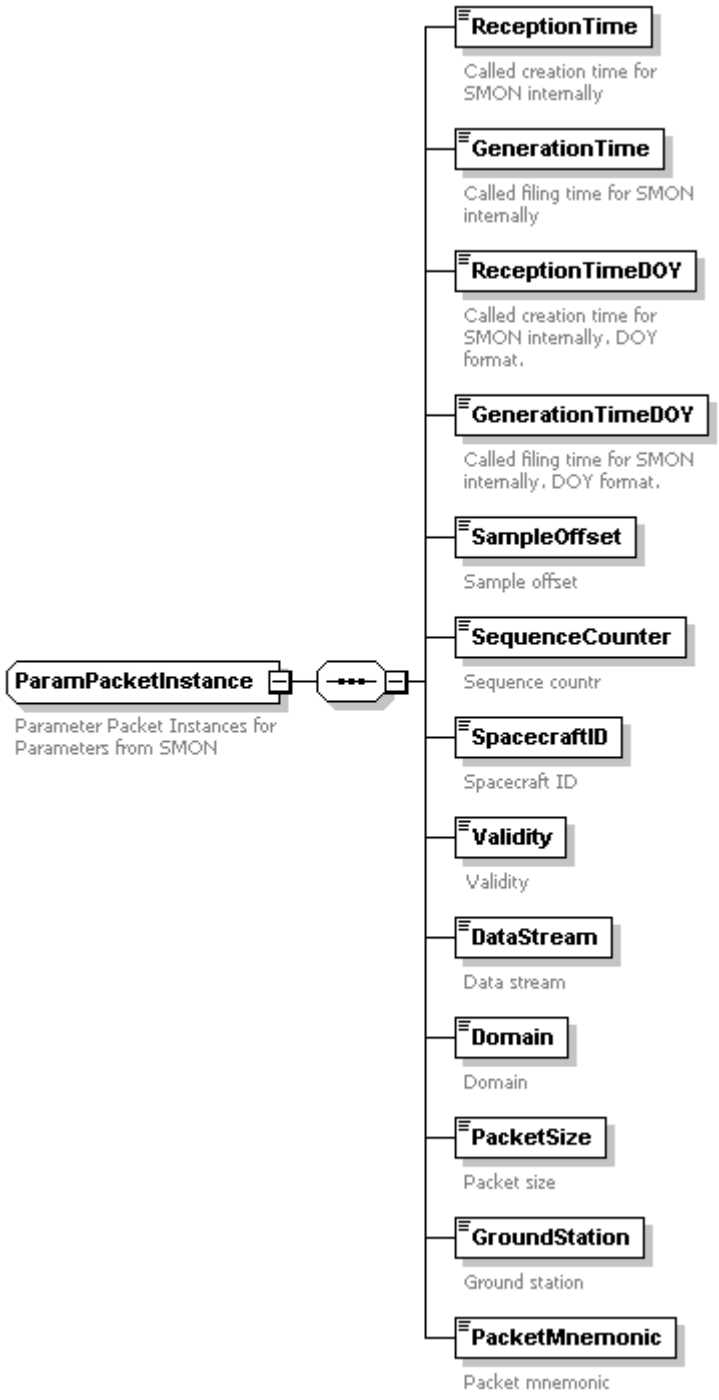
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description Unit Type Active** |
| used by | elements **ParamDefinitionListElement ParamDefinitionList/ParamDefinitionListElement** |

## C.31 complexType ParamDefinitionResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamDefinitionList** |
| used by | element **Response/ParamDefinitionResponse** |

## *C.32 complexType ParamPacketInstance*

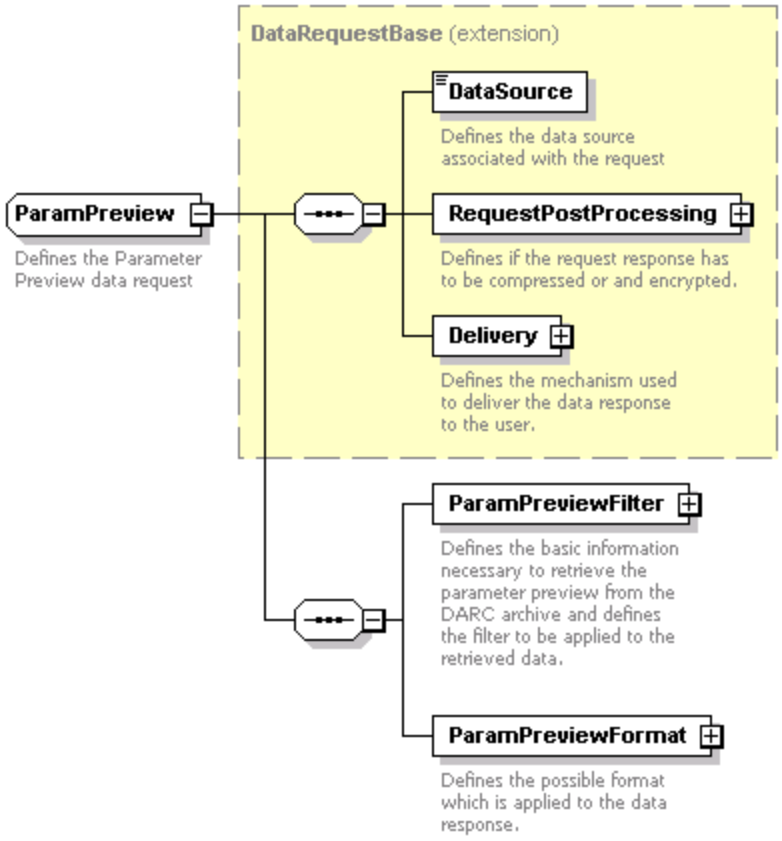
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ReceptionTime GenerationTime ReceptionTimeDOY GenerationTimeDOY SampleOffset SequenceCounter SpacecraftID Validity DataStream Domain PacketSize GroundStation PacketMnemonic** |
| used by | elements **ParamPacketInstances/PacketInstance ParamPacketInstance** |
| annotation | documentation<br>Parameter Packet Instances for Parameters from SMON |

## C.33 complexType ParamPacketInstances

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PacketInstance** |
| used by | element **SMONParamSampleListElement/PacketInstances** |
| annotation | documentation<br>Parameter Packet Instances for Parameters from SMON |

## C.34 complexType ParamPreview

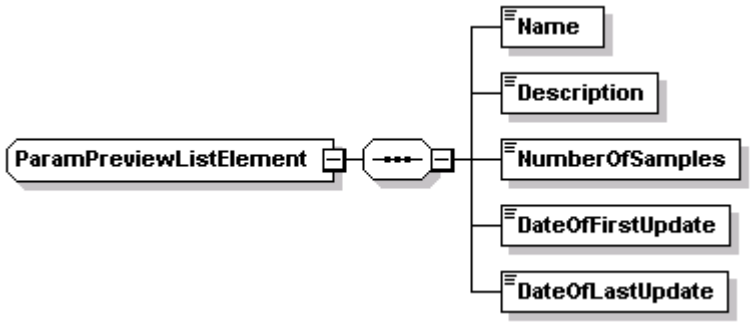
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery ParamPreviewFilter ParamPreviewFormat** |
| used by | elements **ParamPreview DataRequest/ParamPreview** |
| annotation | documentation<br>Defines the Parameter Preview data request |

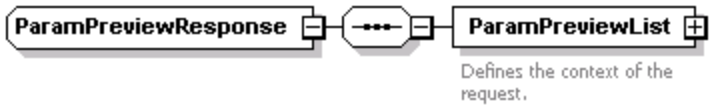
## C.35 complexType ParamPreviewList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamPreviewListElement** |
| used by | element **ParamPreviewResponse/ParamPreviewList** |

## C.36 complexType ParamPreviewListElement

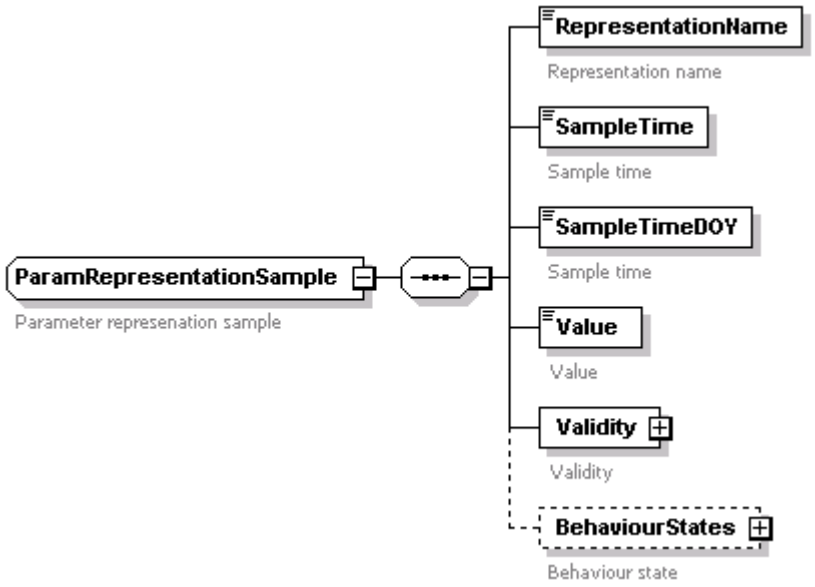
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description NumberOfSamples DateOfFirstUpdate DateOfLastUpdate** |
| used by | elements **ParamPreviewListElement ParamPreviewList/ParamPreviewListElement** |

## C.37 complexType ParamPreviewResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamPreviewList** |
| used by | element **Response/ParamPreviewResponse** |

## C.38 complexType ParamRepresentationSample

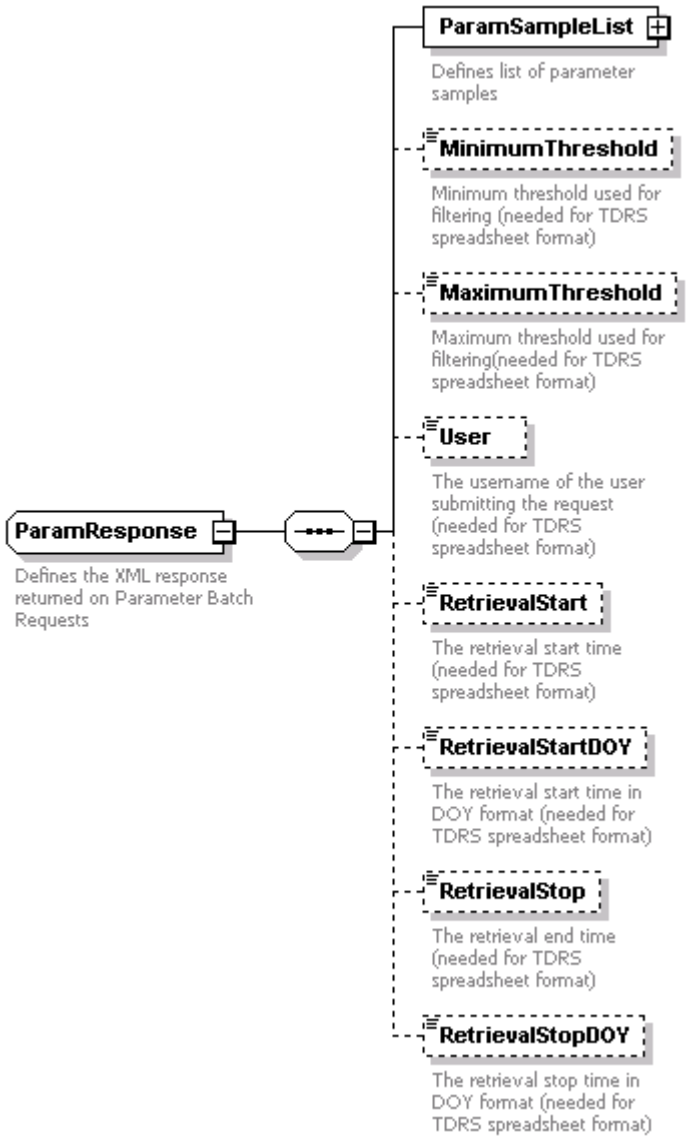
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **RepresentationName SampleTime SampleTimeDOY Value Validity BehaviourStates** |
| used by | elements **ParamRepresentationSample ParamRepresentationSamples/ParamRepresentationSample** |
| annotation | documentation<br>Parameter represenation sample |

## C.39 complexType ParamRepresentationSamples

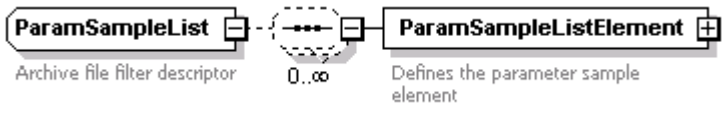
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamRepresentationSample** |
| used by | element **SMONParamSampleListElement/ParamRepresentationSamples** |
| annotation | documentation<br>Parameter representation samples from SMON |

## C.40 complexType ParamResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamSampleList MinimumThreshold MaximumThreshold User RetrievalStart RetrievalStartDOY RetrievalStop RetrievalStopDOY** |
| used by | element **Response/ParamResponse** |
| annotation | documentation<br>Defines the XML response returned on Parameter Batch Requests |

## C.41 complexType ParamSampleList

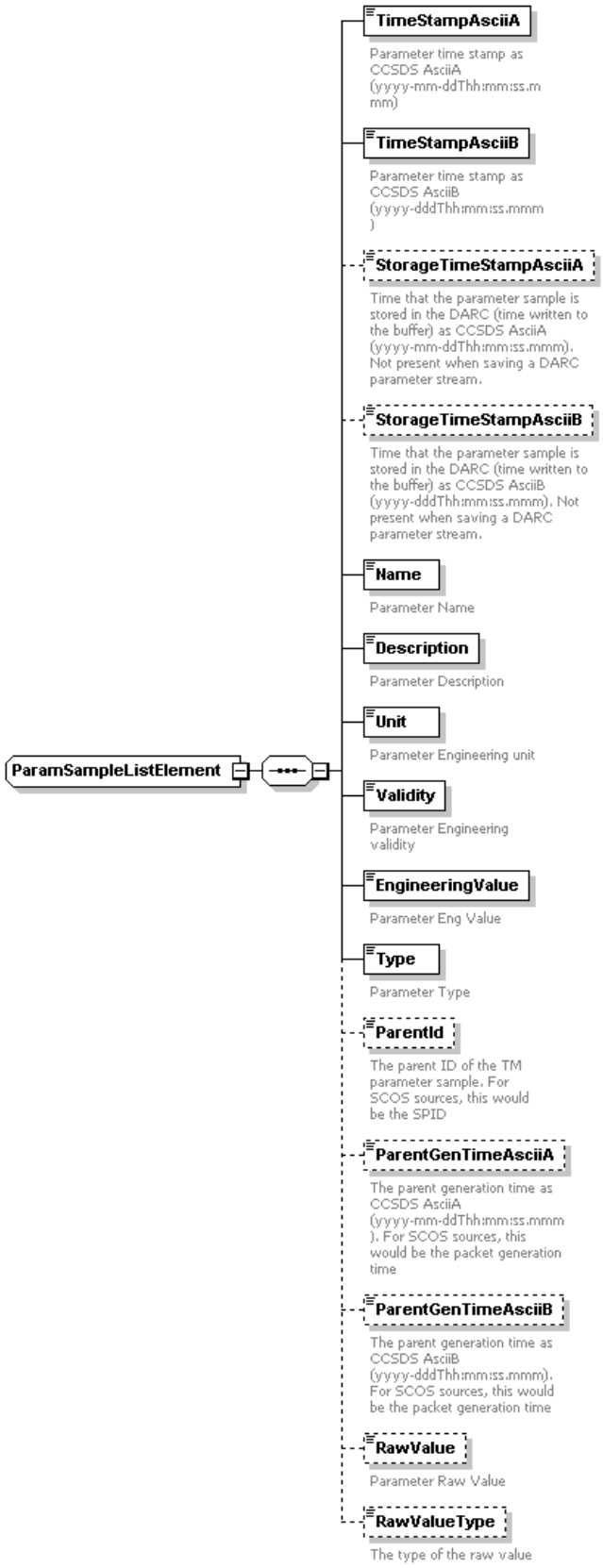
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamSampleListElement** |

| | |
|---|---|
| used by | element **ParamResponse/ParamSampleList** |
| annotation | documentation<br>Defines the list of parameter samples |

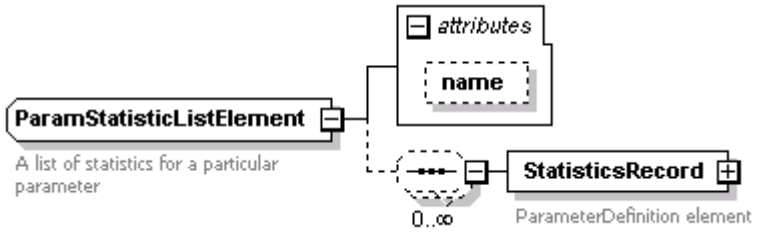
## *C.42 complexType ParamSampleListElement*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TimeStampAsciiA TimeStampAsciiB StorageTimeStampAsciiA StorageTimeStampAsciiB Name Description Unit Validity EngineeringValue Type ParentId ParentGenTimeAsciiA ParentGenTimeAsciiB RawValue** |

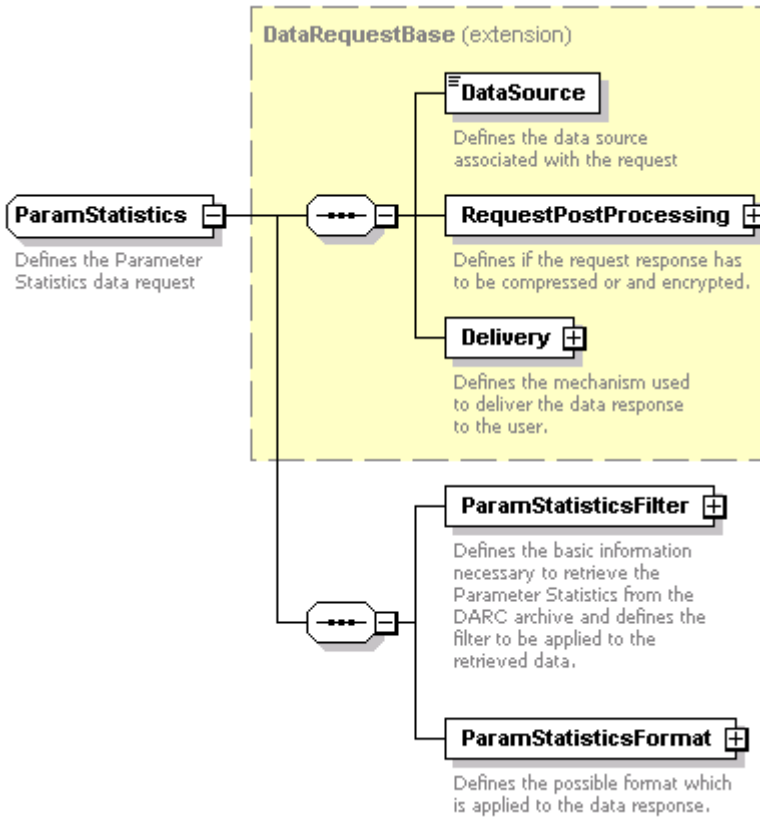
 

| | |
|---|---|
| | **RawValueType** |
| used by | elements **ParamSampleListElement ParamSampleList/ParamSampleListElement** |

## C.43 complexType ParamStatisticListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **StatisticsRecord** |
| used by | element **ParamStatisticsList/ParamStatisticListElement** |
| attributes | Name Type Use Default Fixed annotation<br>name **xs:string** |
| annotation | documentation<br>A list of statistics for a particular parameter |

## C.44 complexType ParamStatistics

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |

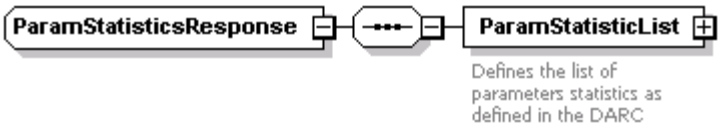
 

| | |
|---|---|
| children | **RequestPostProcessing Delivery ParamStatisticsFilter ParamStatisticsFormat** |
| used by | elements **ParamStatistics DataRequest/ParamStatistics** |
| annotation | documentation<br>Defines the Parameter Statistics data request |

## *C.45 complexType ParamStatisticsList*

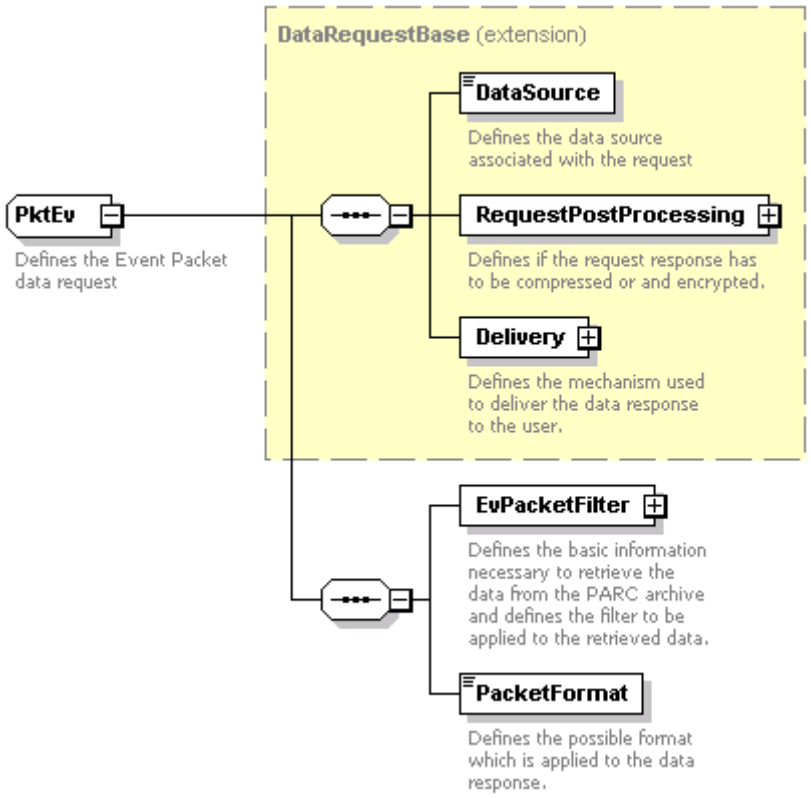
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamStatisticListElement** |
| used by | element **ParamStatisticsResponse/ParamStatisticList** |
| annotation | documentation<br>A list of parameters with all the associated statistics for the time period requested |

## *C.46 complexType ParamStatisticsResponse*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamStatisticList** |
| used by | element **Response/ParamStatisticsResponse** |

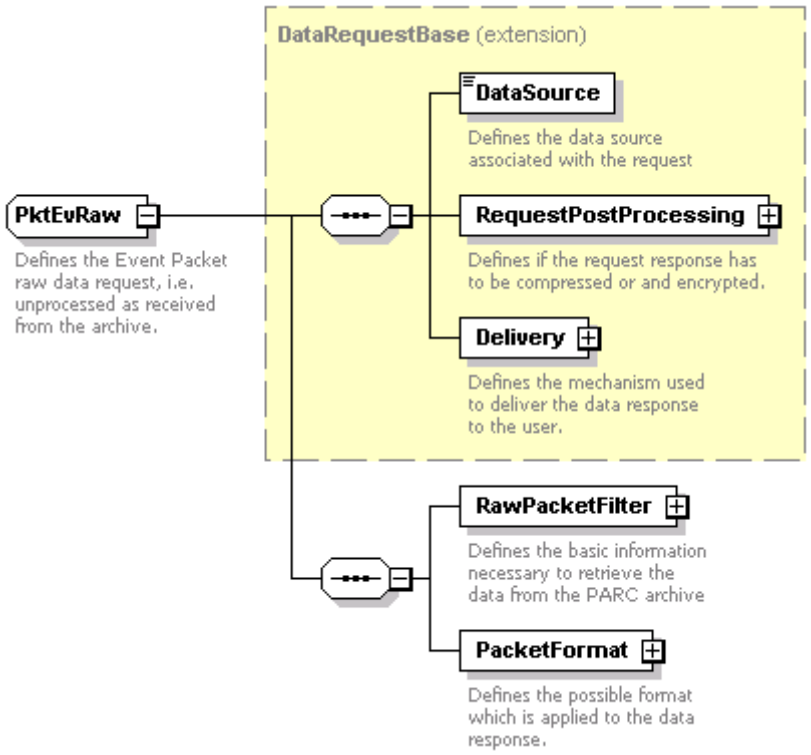
 

## *C.47 complexType PktEv*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery EvPacketFilter PacketFormat** |
| used by | elements **PktEv DataRequest/PktEv** |
| annotation | documentation<br>Defines the Event Packet data request |

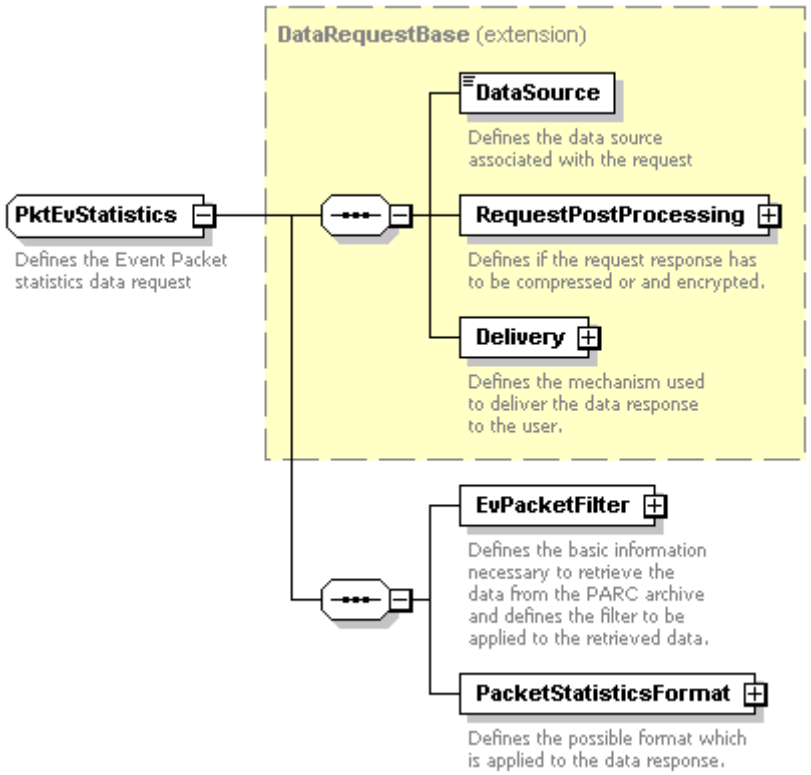
 

## C.48 complexType PktEvRaw

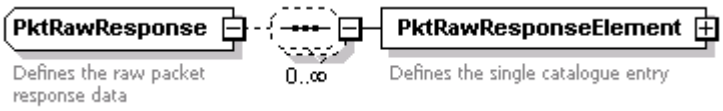
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery RawPacketFilter PacketFormat** |
| used by | elements **PktEvRaw DataRequest/PktEvRaw** |
| annotation | documentation<br>Defines the Event Packet raw data request, i.e. unprocessed as received from the archive. |

## C.49 complexType PktEvStatistics

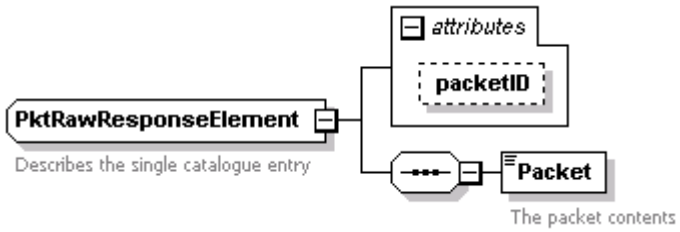
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery EvPacketFilter PacketStatisticsFormat** |
| used by | elements **PktEvStatistics DataRequest/PktEvStatistics** |
| annotation | documentation<br>Defines the Event Packet statistics data request |

## C.50 complexType PktRawResponse

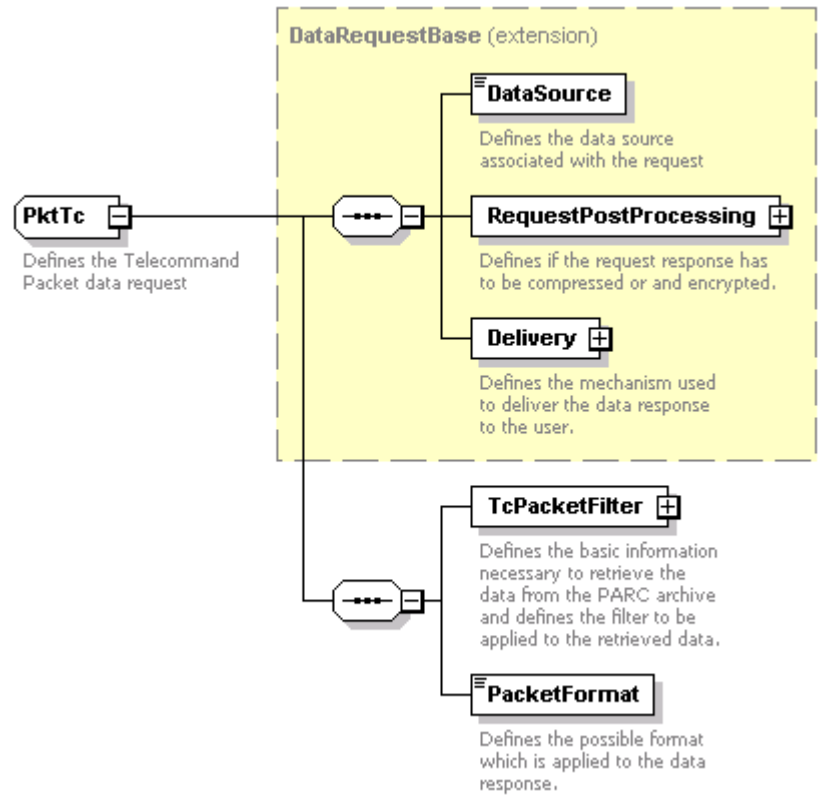
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PktRawResponseElement** |
| used by | element **Response/PktRawResponse** |
| annotation | documentation<br>Defines the raw packet response data |

## C.51 complexType PktRawResponseElement

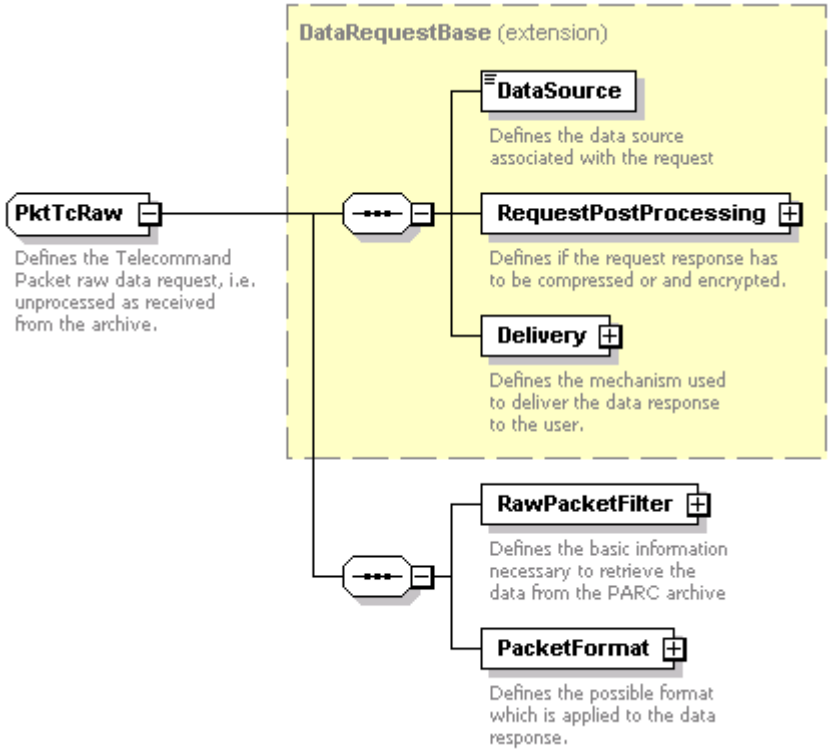
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Packet** |
| used by | elements **PktRawResponseElement PktRawResponse/PktRawResponseElement** |
| attributes | Name Type Use Default Fixed annotation<br>packetID **xs:long** |
| annotation | documentation<br>Describes the single catalogue entry |

## C.52 complexType PktTc

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery TcPacketFilter PacketFormat** |
| used by | elements **PktTc DataRequest/PktTc** |
| annotation | documentation<br>Defines the Telecommand Packet data request |

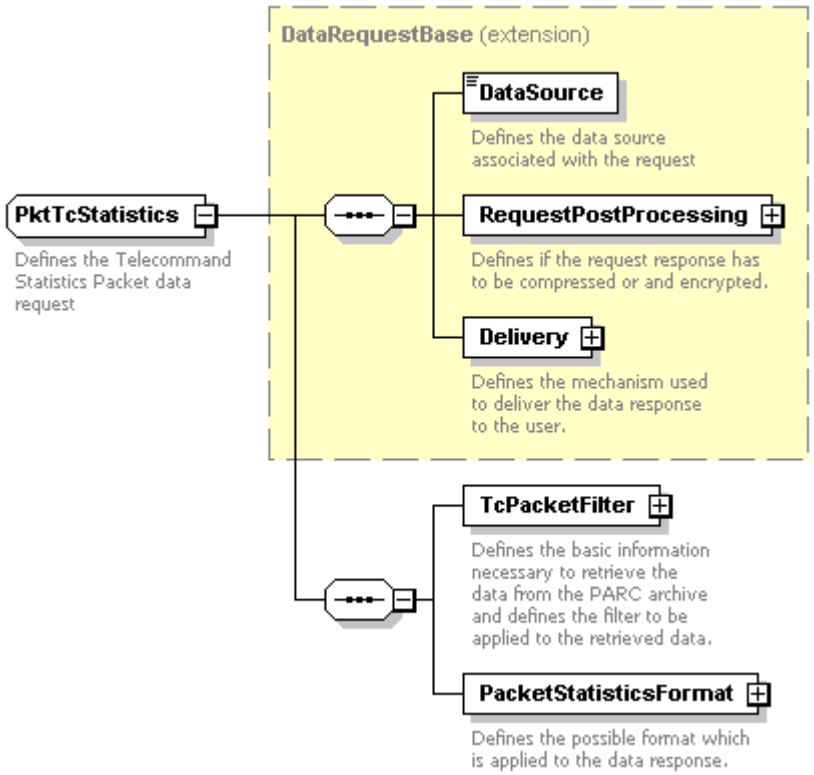
 

## C.53 complexType PktTcRaw

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery RawPacketFilter PacketFormat** |
| used by | elements **PktTcRaw DataRequest/PktTcRaw** |
| annotation | documentation<br>Defines the Telecommand Packet raw data request, i.e. unprocessed as received from the archive. |

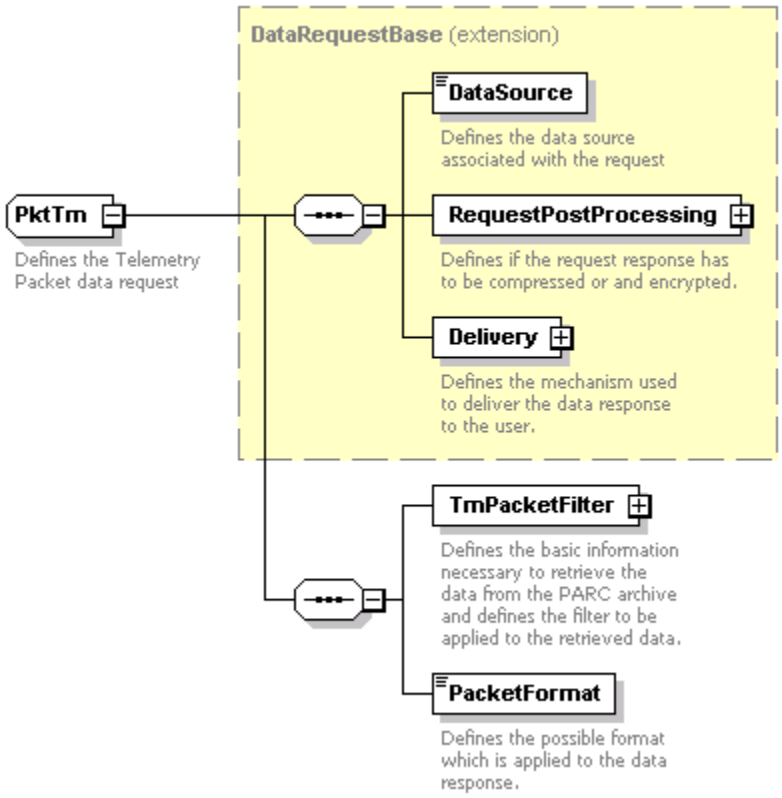
 

## C.54 complexType PktTcStatistics

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery TcPacketFilter PacketStatisticsFormat** |
| used by | elements **PktTcStatistics DataRequest/PktTcStatistics** |
| annotation | documentation<br>Defines the Telecommand Statistics Packet data request |

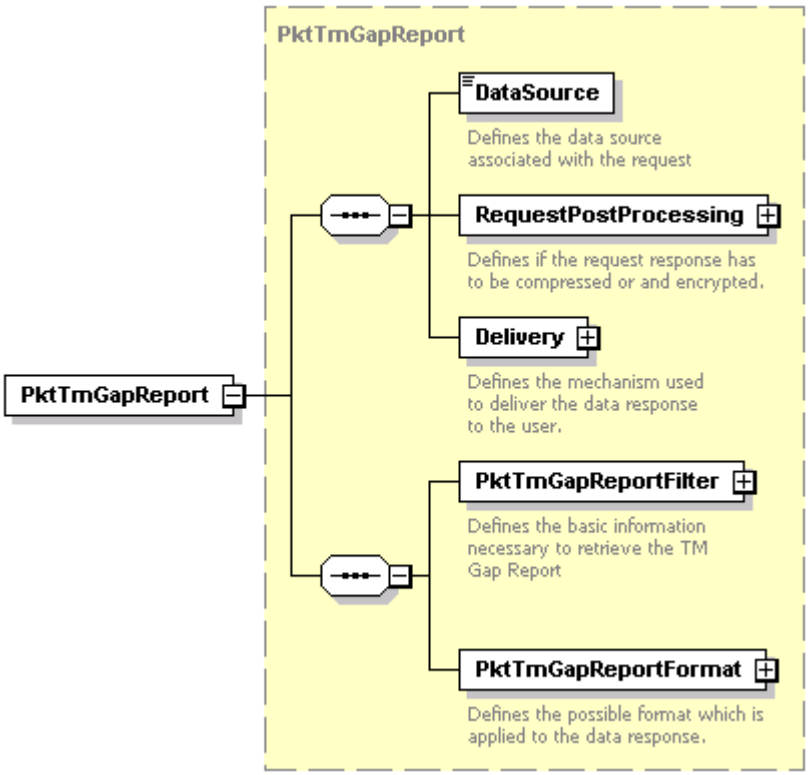
 

## *C.55 complexType PktTm*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery TmPacketFilter PacketFormat** |
| used by | elements **PktTm DataRequest/PktTm** |
| annotation | documentation<br>Defines the Telemetry Packet data request |

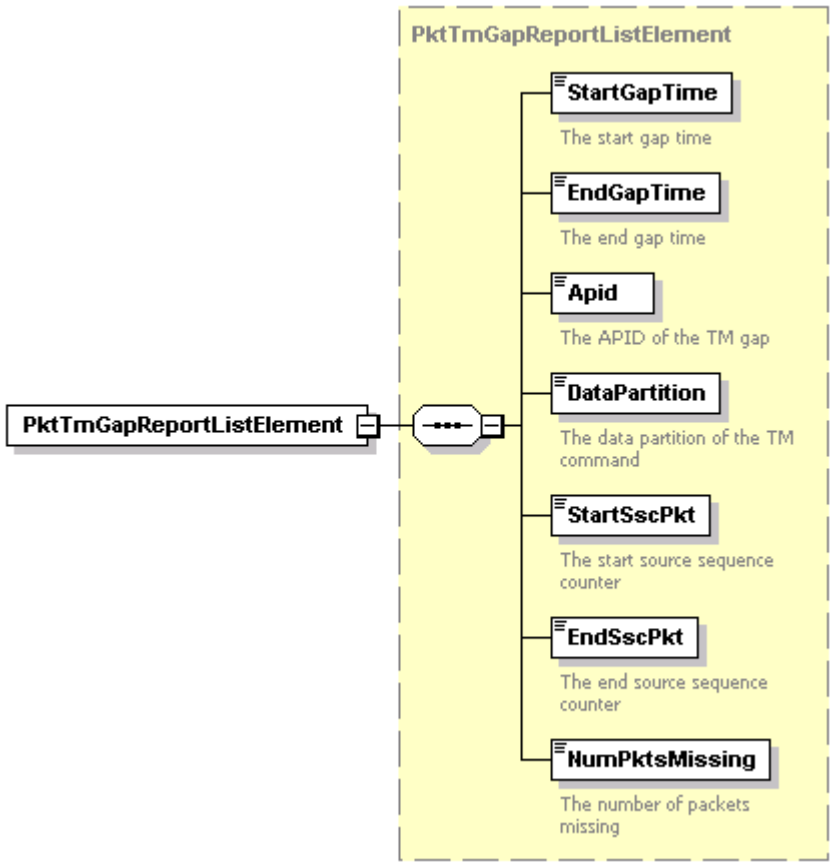
 

## C.56 complexType PktTmGapReport

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | PktTmGapReport |
| properties | content complex |
| children | DataSource RequestPostProcessing Delivery PktTmGapReportFilter PktTmGapReportFormat |

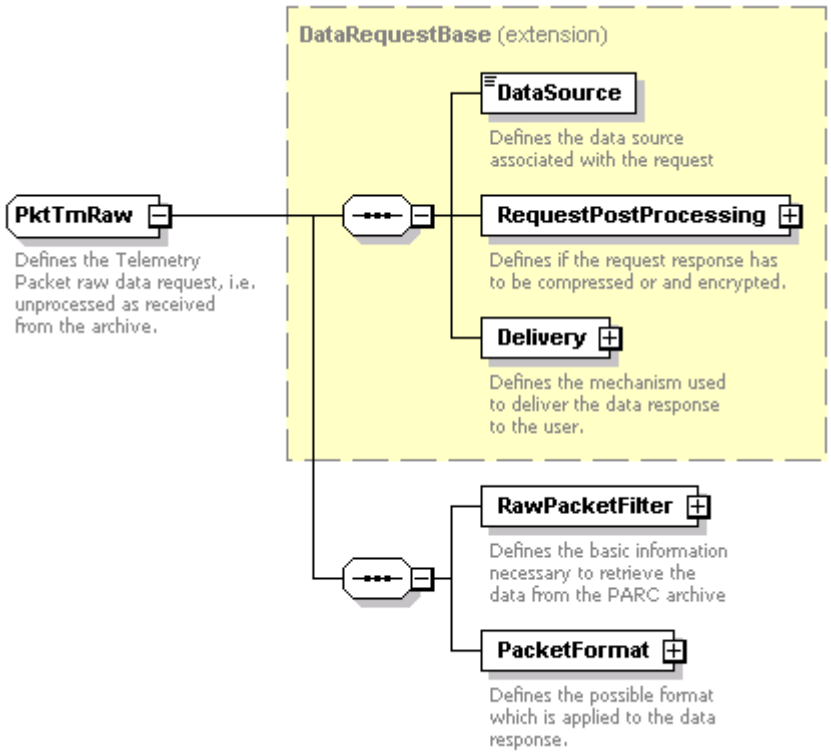
 

## C.57 complexType PktTmGapReportElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | PktTmGapReportListElement |
| properties | content complex |
| children | StartGapTime EndGapTime Apid DataPartition StartSscPkt EndSscPkt NumPktsMissing |

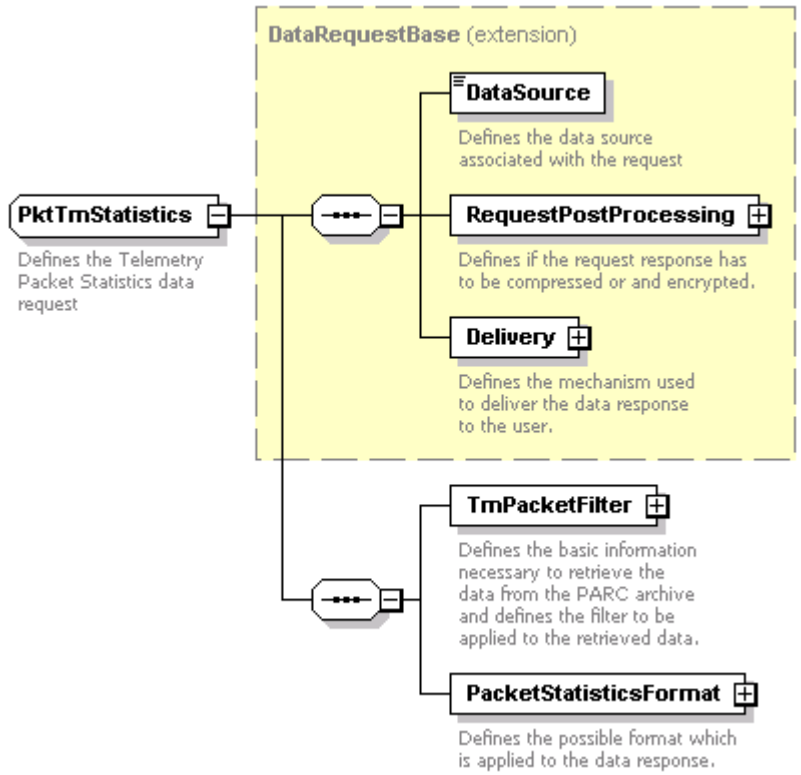
 

## *C.58 complexType PktTmRaw*

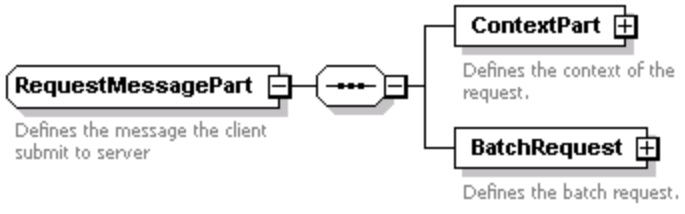
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery RawPacketFilter PacketFormat** |
| used by | elements **PktTmRaw DataRequest/PktTmRaw** |
| annotation | documentation<br>Defines the Telemetry Packet raw data request, i.e. unprocessed as received from the archive. |

## C.59 complexType PktTmStatistics

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **RequestPostProcessing Delivery TmPacketFilter PacketStatisticsFormat** |
| used by | elements **PktTmStatistics DataRequest/PktTmStatistics** |
| annotation | documentation<br>Defines the Telemetry Packet Statistics data request |

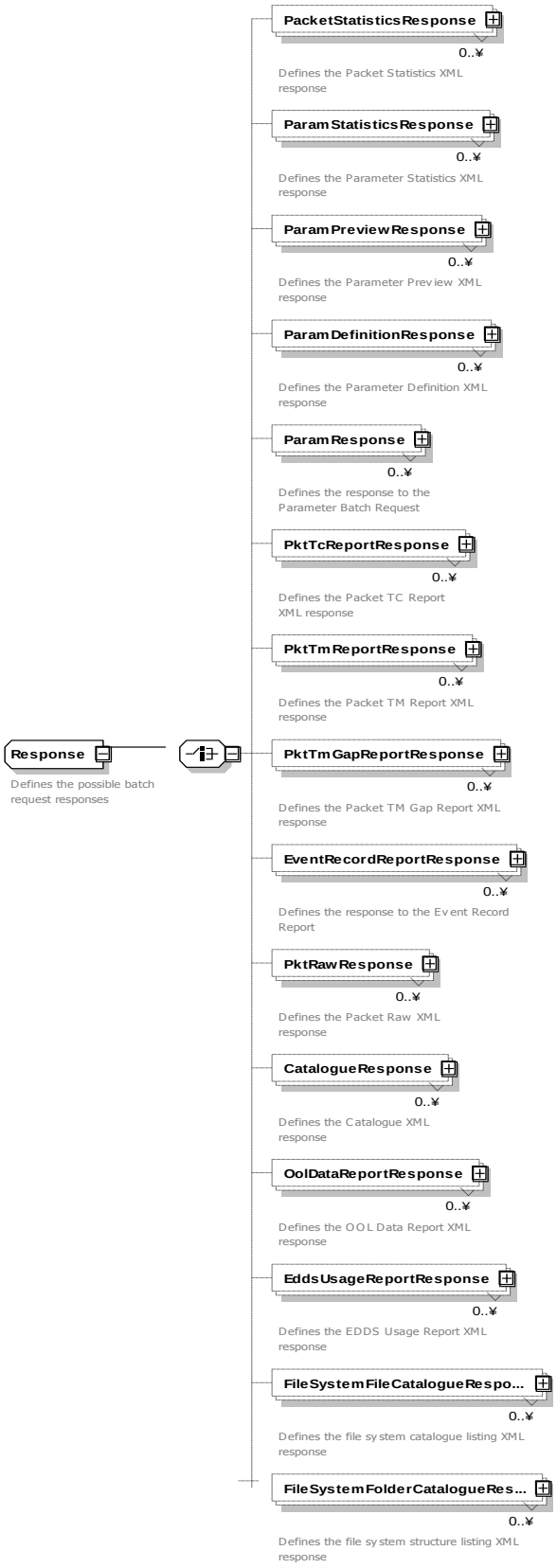
## C.60 complexType RequestMessagePart

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ContextPart BatchRequest** |
| used by | element **RequestMessagePart** |
| annotation | documentation<br>Defines the message the client submit to server |

## *C.61 complexType Response*

diagram

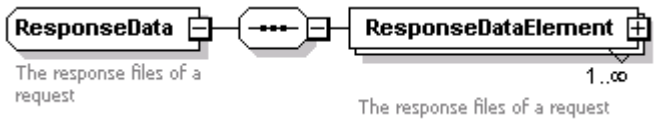



| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **PacketStatisticsResponse ParamStatisticsResponse ParamPreviewResponse ParamDefinitionResponse ParamResponse PktTcReportResponse PktTmReportResponse PktTmGapReportResponse EventRecordReportResponse PktRawResponse CatalogueResponse** |

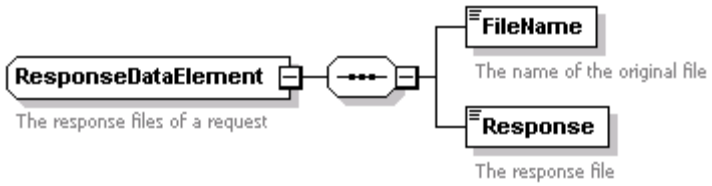
 

| | |
|---|---|
| | **OolDataReportResponse EddsUsageReportResponse FileSystemFileCatalogueResponse FileSystemFolderCatalogueResponse** |
| used by | element **ResponsePart/Response** |
| annotation | documentation<br>Defines the possible batch request responses |

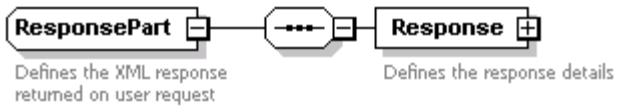
## *C.62 complexType ResponseData*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ResponseDataElement** |
| used by | element **ResponseData** |
| annotation | documentation<br>The response files of a request |

## *C.63 complexType ResponseDataElement*

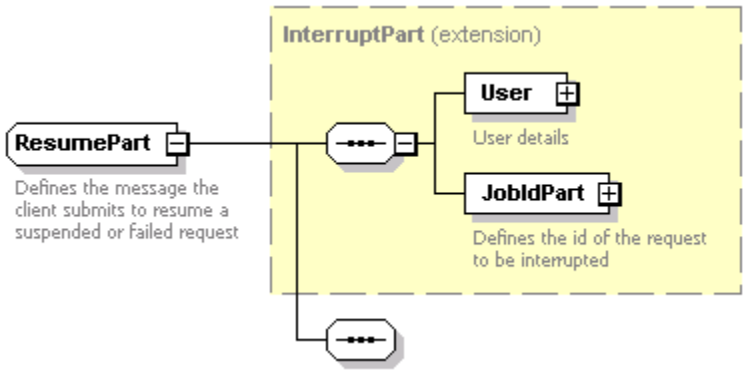
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileName Response** |
| used by | element **ResponseData/ResponseDataElement** |
| annotation | documentation<br>The response files of a request |

## *C.64 complexType ResponsePart*

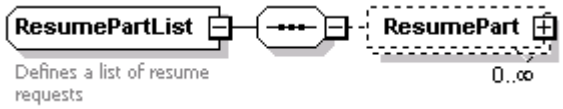
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Response** |
| used by | element **ResponsePart** |
| annotation | documentation<br>Defines the XML response returned on user request |

## C.65 complexType ResumePart

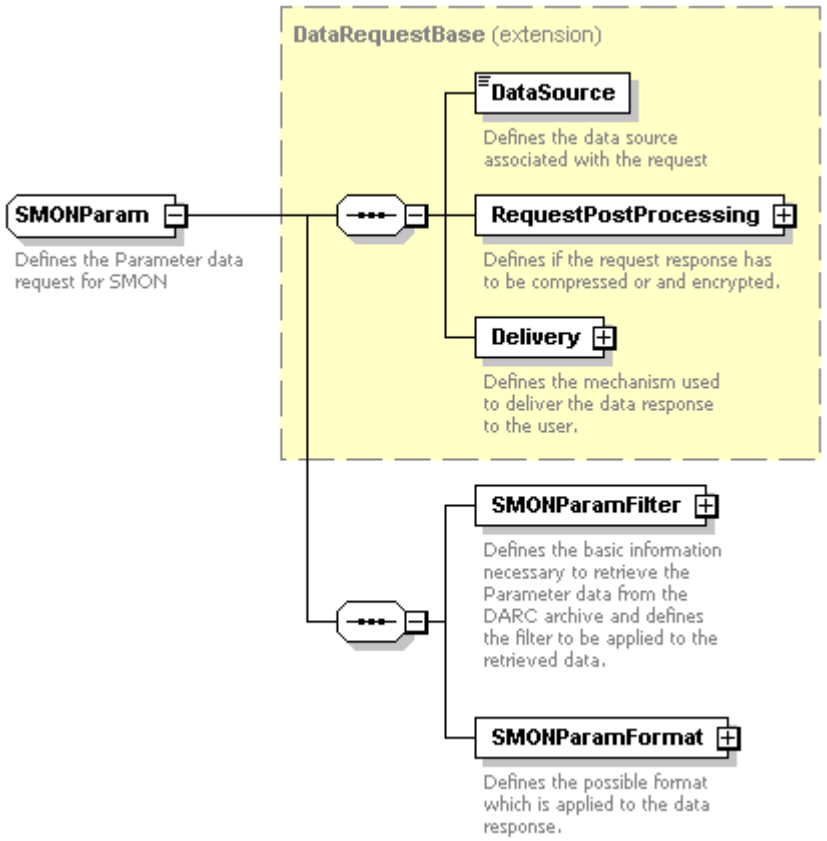
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **InterruptPart** |
| properties | base InterruptPart |
| children | **User JobIdPart** |
| used by | elements **ResumePart ResumePartList/ResumePart** |
| annotation | documentation<br>Defines the message the client submits to resume a suspended or failed request |

## C.66 complexType ResumePartList

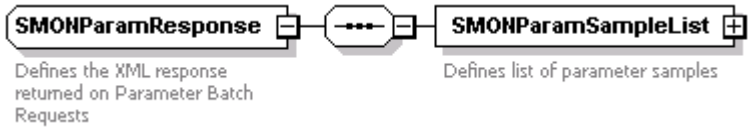
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ResumePart** |
| used by | element **ResumePartList** |
| annotation | documentation<br>Defines a list of resume requests |

## C.67 complexType SMONParam

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DataSource RequestPostProcessing Delivery SMONParamFilter SMONParamFormat** |
| used by | elements **SMONParam DataRequest/SmonParam** |
| annotation | documentation<br>Defines the Parameter data request for SMON |

## C.68 complexType SMONParamResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SMONParamSampleList** |
| annotation | documentation<br>Defines the XML response returned on Parameter Batch Requests |

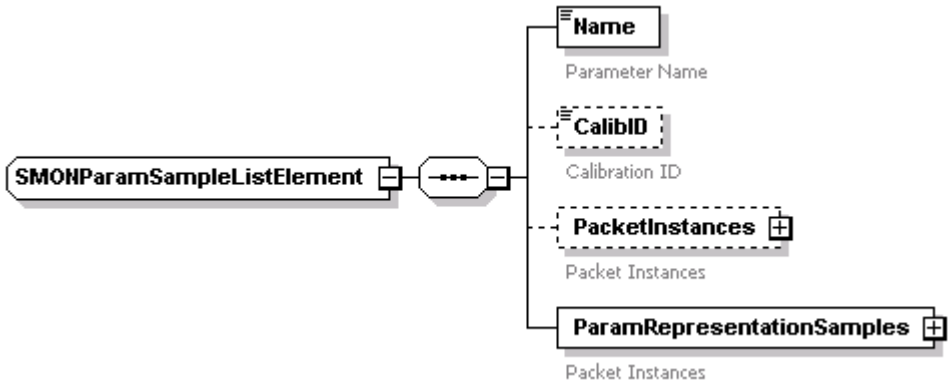
## C.69 complexType SMONParamResponseList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SMONParamSampleListElement** |

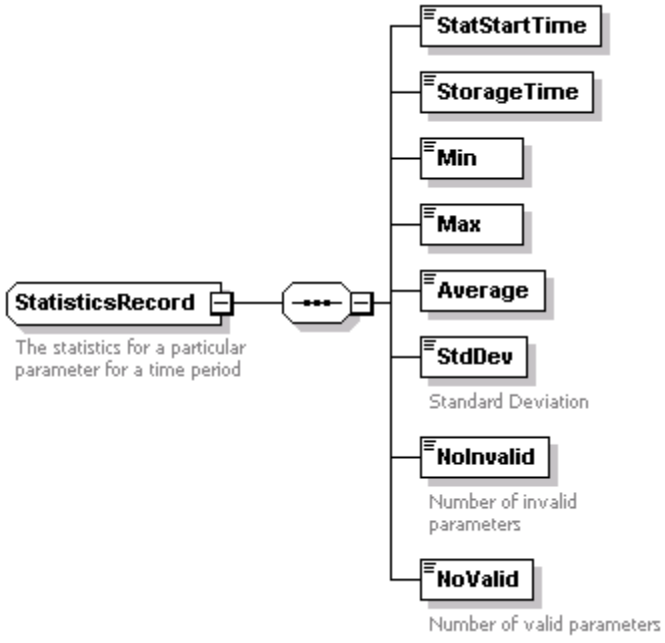
 

| | |
|---|---|
| used by | element **SMONParamResponse/SMONParamSampleList** |
| annotation | documentation<br>Defines the list of parameter samples |

## C.70 complexType SMONParamResponseListElement

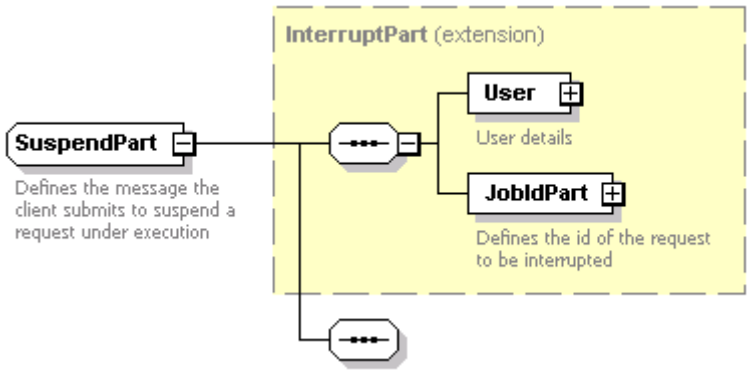
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name CalibID PacketInstances ParamRepresentationSamples** |
| used by | elements **SMONParamSampleListElement SMONParamSampleList/SMONParamSampleListElement** |

## C.71 complexType StatisticsRecord

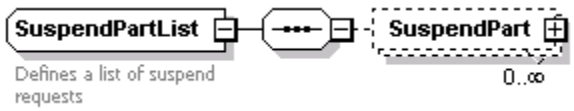
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **StatStartTime StorageTime Min Max Average StdDev NoInvalid NoValid** |
| used by | element **ParamStatisticListElement/StatisticsRecord** |
| annotation | documentation<br>The statistics for a particular parameter for a time period |

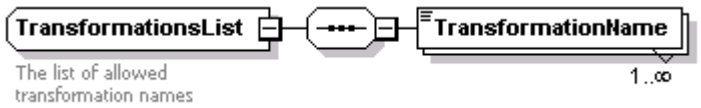
## C.72 complexType SuspendPart

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **InterruptPart** |
| properties | base InterruptPart |
| children | **User JobIdPart** |
| used by | elements **SuspendPart SuspendPartList/SuspendPart** |
| annotation | documentation<br>Defines the message the client submits to suspend a request under execution |

## C.73 complexType SuspendPartList

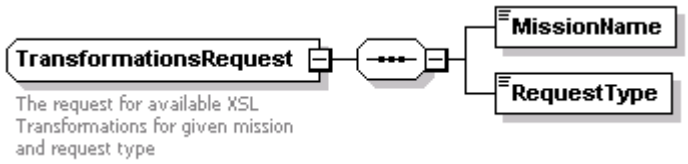
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SuspendPart** |
| used by | element **SuspendPartList** |
| annotation | documentation<br>Defines a list of suspend requests |

## C.74 complexType TransformationsList

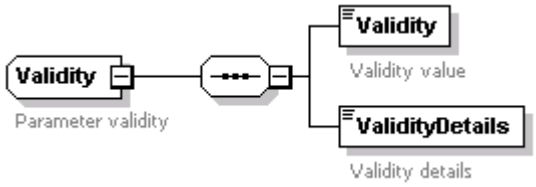
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TransformationName** |
| used by | element **TransformationsList** |
| annotation | documentation<br>The list of allowed transformation names |

## C.75 complexType TransformationsRequest

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **MissionName RequestType** |
| used by | element **TransformationsRequest** |
| annotation | documentation<br>The request for available XSL Transformations for given mission and request type |

## C.76 complexType Validity

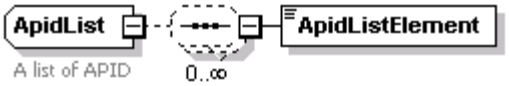
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Validity ValidityDetails** |
| used by | element **ParamRepresentationSample/Validity** |
| annotation | documentation<br>Parameter validity |

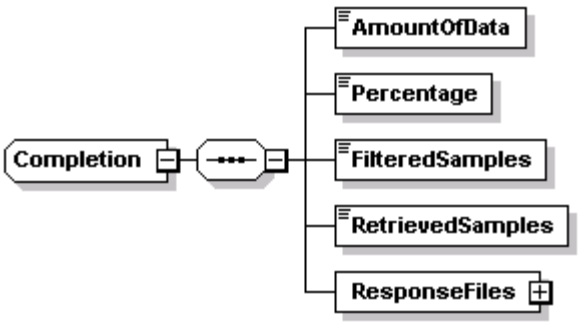
# Appendix D Common Data Types

This section of the document describes the common complex types used for all services as defined in the common.xsd file.

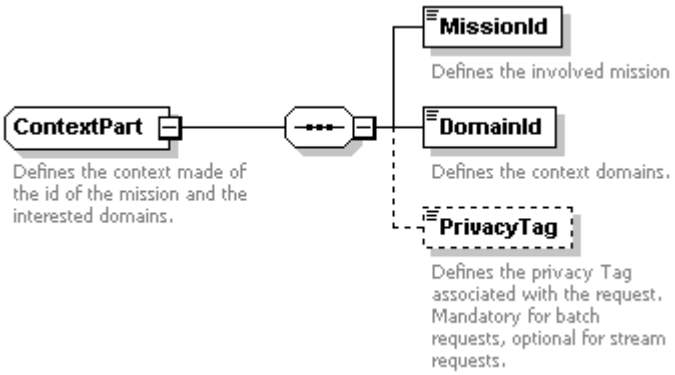
## *D.1 complexType ApidList*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ApidListElement** |
| annotation | documentation<br>A list of APID |

## *D.2 complexType Completion*

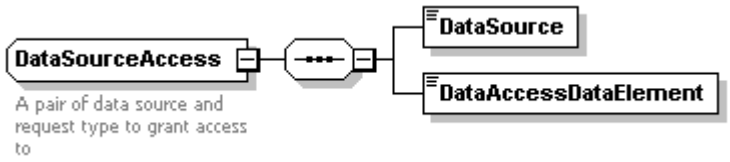
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **AmountOfData Percentage FilteredSamples RetrievedSamples ResponseFiles** |

## *D.3 complexType ContextPart*

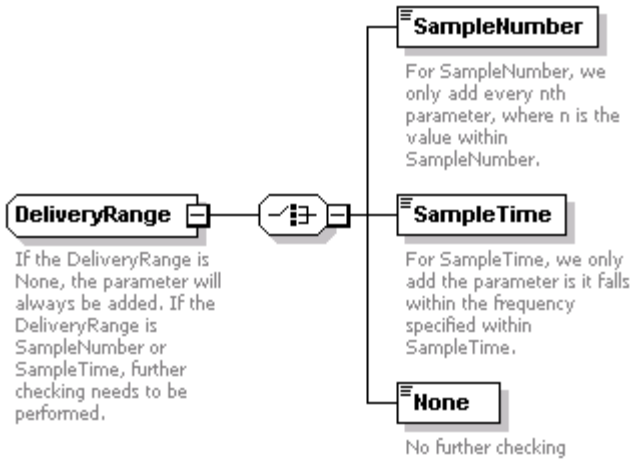
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **MissionId DomainId PrivacyTag** |
| annotation | documentation<br>Defines the context made of the id of the mission and the interested domains. |

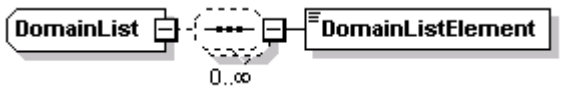
## D.4 complexType DataSourceAccess

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | DataSource DataAccessDataElement |
| annotation | documentation<br>A pair of data source and request type to grant access to |

## D.5 complexType DeliveryRange

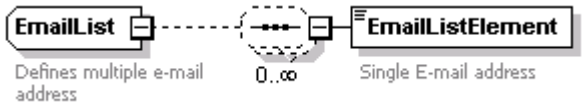
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SampleNumber SampleTime None** |
| annotation | documentation<br>If the DeliveryRange is None, the parameter will always be added. If the DeliveryRange is SampleNumber or SampleTime, further checking needs to be performed. |

## D.6 complexType DomainList

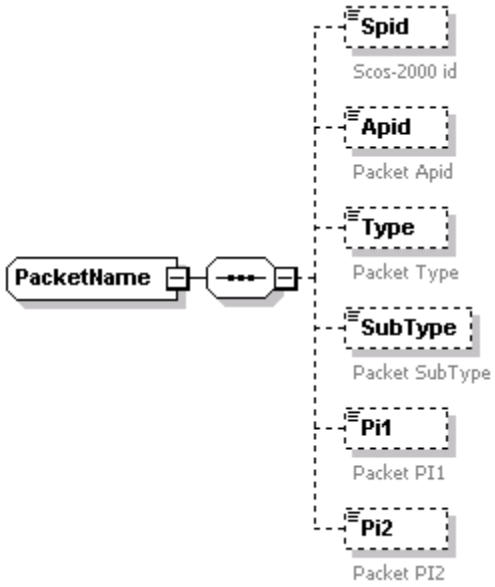
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DomainListElement** |

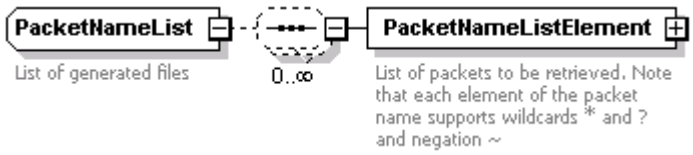
## D.7 complexType EmailList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EmailListElement** |
| annotation | documentation<br>Defines multiple e-mail address |

## D.8 complexType PacketName

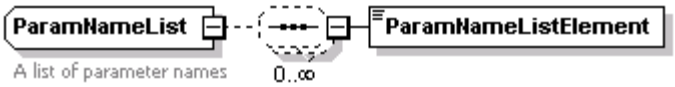
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Spid Apid Type SubType Pi1 Pi2** |
| used by | element **PacketNameList/PacketNameListElement** |

## D.9 complexType PacketNameList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PacketNameListElement** |
| annotation | documentation<br>List of generated files |

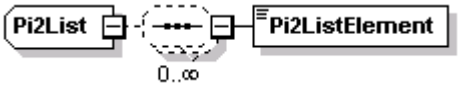
complexType **ParamNameList**

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamNameListElement** |
| annotation | documentation<br>A list of parameter names |

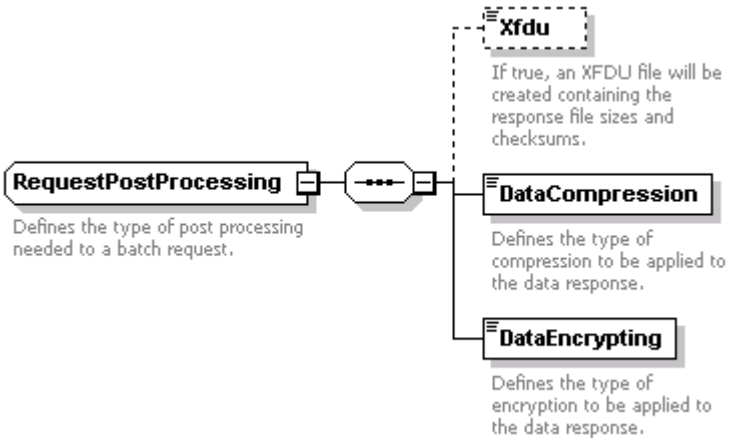
## *D.10 complexType Pi1List*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Pi1ListElement** |

## *D.11 complexType Pi2List*

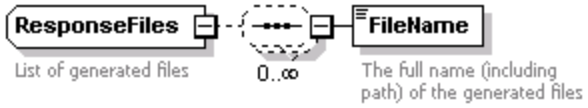
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Pi2ListElement** |

## *D.12 complexType RequestPostProcessing*

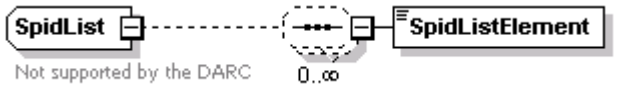
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DataCompression DataEncrypting** |
| annotation | documentation<br>Defines the type of post processing needed to a batch request. |

## D.13 complexType ResponseFiles

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileName** |
| used by | element **Completion/ResponseFiles** |
| annotation | documentation<br>List of generated files |

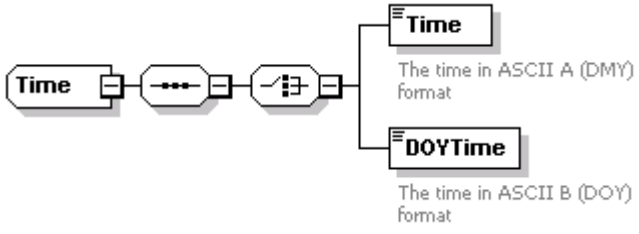
## D.14 complexType SpidList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SpidListElement** |
| annotation | documentation<br>Not supported by the DARC |

## D.15 complexType SubTypeList

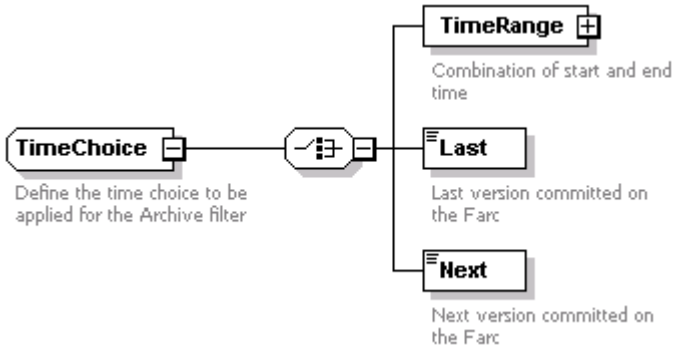
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SubTypeListElement** |
| annotation | documentation<br>A list of SubType element |

## D.16 complexType Time

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Time DOYTime** |

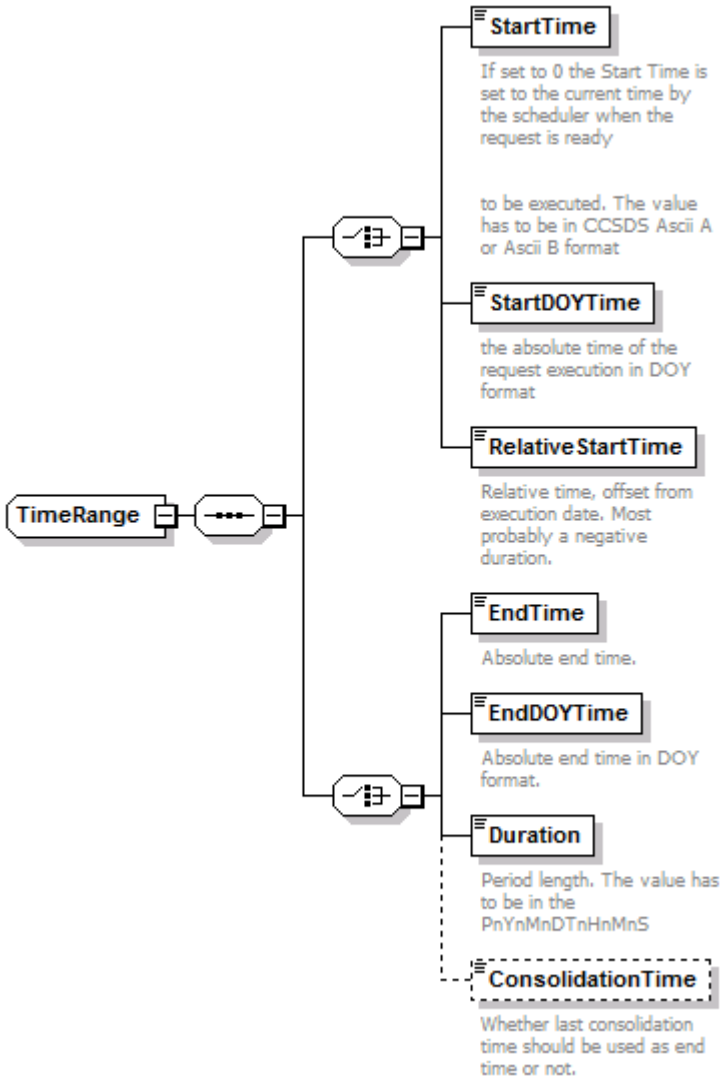
 

## *D.17 complexType TimeChoice*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TimeRange Last Next** |
| annotation | documentation<br>Define the time choice to be applied for the Archive filter |

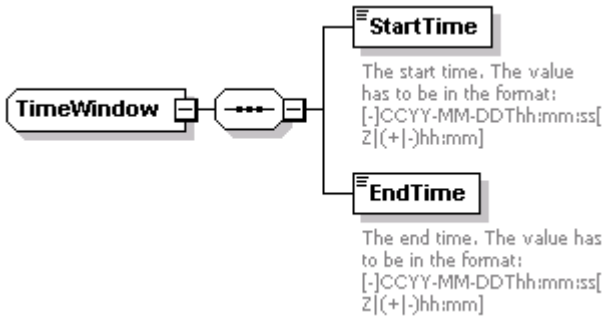
 

## *D.18 complexType TimeRange*

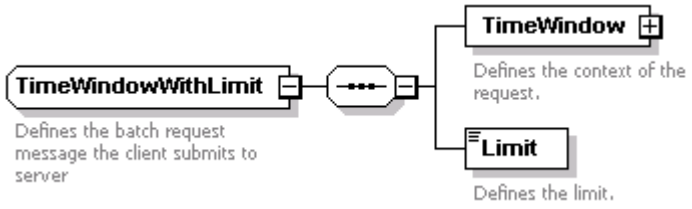
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **StartTime StartDOYTime RelativeStartTime EndTime EndDOYTime Duration ConsolidationTime** |
| used by | element **EddsUsageReportFilter/TimeRange EvPacketFilter/TimeRange ParamPreviewFilter/TimeRange ParamStatisticsFilter/TimeRange ParamTmFilter/TimeRange OolDataReportFilter/TimeRange TcPacketFilter/TimeRange TmPacketFilter/TimeRange RawPacketFilter/TimeRange TimeChoice/TimeRange** |

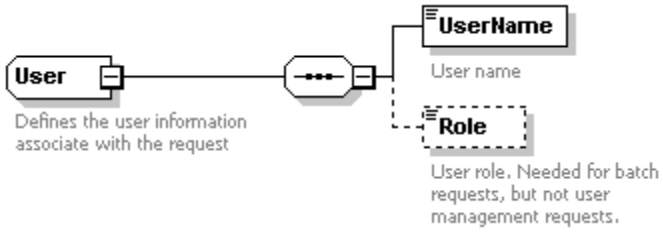
## D.19 complexType TimeWindow

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **StartTime EndTime** |
| used by | element **TimeWindow** |

## D.20 complexType TimeWindowWithLimit

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TimeWindow Limit** |
| used by | element **TimeWindowWithLimit** |
| annotation | documentation<br>Defines the batch request message the client submits to server |

## D.21 complexType User

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **UserName Role** |
| annotation | documentation<br>Defines the user information associate with the request |

## D.22 simpleType DataAccessDataElement

| | |
|---|---|
| namespace | http://edds.egos.esa/model |

| | |
|---|---|
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration Param<br>enumeration ParamStatistics<br>enumeration ParamDefinition<br>enumeration ParamPreview<br>enumeration SmonParam<br>enumeration PktEv<br>enumeration PktTm<br>enumeration PktTc<br>enumeration PktTmStatistics<br>enumeration PktTcStatistics<br>enumeration PktEvStatistics<br>enumeration PktEvRaw<br>enumeration PktTmRaw<br>enumeration PktTcRaw<br>enumeration PktTmReport<br>enumeration PktTcReport<br>enumeration PktTmGapReport<br>enumeration EventRecordReport<br>enumeration ArchiveCatalogue<br>enumeration ArchiveFile<br>enumeration ArchiveSubscription<br>enumeration OolRecordReport<br>enumeration EddsUsageReport<br>enumeration ParamStream<br>enumeration PktEvStream<br>enumeration PktTmStream<br>enumeration PktTcStream<br>enumeration OolStream<br>enumeration FileSystemFileCatalogue<br>enumeration FileSystemFolderCatalogue<br>enumeration FileSystemFile<br>enumeration FileSystemSubscription |

## *D.23 simpleType DataCompression*

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **RequestPostProcessing/DataCompression** |
| facets | Kind Value annotation<br>enumeration ZIP<br>enumeration TAR<br>enumeration TARGZ<br>enumeration NONE |
| annotation | documentation<br>Defines the possible compression algorithm which can be applied to the data responses. |

## D.24 simpleType DataEncrypting

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **RequestPostProcessing/DataEncrypting** |
| facets | Kind Value annotation<br>enumeration NONE<br>enumeration AES |
| annotation | documentation<br>Defines the data encryption to be applied to the data responses. The implementation of the encryption algorithm is mission specific. |

## D.25 simpleType DataSource

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration FARC<br>enumeration DARC<br>enumeration PARC<br>enumeration EDDS<br>enumeration SMON<br>enumeration FileSystem<br>enumeration DataProvisionService |
| annotation | documentation<br>Defines data source accociated with the request |

## D.26 simpleType Direction

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration ASC<br>enumeration DESC |
| annotation | documentation<br>Defines whether to retrieve ascending or descending. If not set, the default is descending. |

## D.27 simpleType DOYDateTime

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **EddsUsageReportFilterKeyword/CompletionDOYTime Time/DOYTime TimeRange/EndDOYTime EddsUsageReportFilterKeyword/ExecutionDOYTime** |

| | |
|---|---|
| | **PktTcFilterKeyword/ExecutionDOYTime PktTmFilterKeyword/ExtractionDOYTime PktTmStreamFilterKeyword/ExtractionDOYTime PktEvFilterKeyword/GenerationDOYTime PktTmFilterKeyword/GenerationDOYTime ParamFilterKeyword/OnBoardDOYTime PktTcFilterKeyword/ReleaseDOYTime TimeRange/StartDOYTime EddsUsageReportFilterKeyword/SubmissionDOYTime** |
| facets | Kind Value annotation<br>pattern \d{4}-(00[1-9]\|0[1-9]\d\|[12]\d{2}\|3([0-5]\d\|6[0-6]))T([01]\d\|2[0-3]):[0-5]\d:[0-5]\d(\.\d{1,6})?(Z)? |
| annotation | documentation<br>Defines the YYYY-DDD'T'HH:MM:SS[.SSSSSSZ] format with rules for days: 001-366, hours:00-23, minutes: 00-59, seconds: 00-59, optional fraction of seconds .0-.999999 and optional Zulu time indicator |

## *D.28 simpleType NamePrefixSuffixElement*

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration default<br>enumeration filename<br>enumeration prefix<br>enumeration suffix |
| annotation | documentation<br>Defines the possible ways to use the file text. |

## *D.29 simpleType BehaviourState*

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration Param<br>enumeration LIMIT_HIGH<br>enumeration LIMIT_HIGH_HIGH<br>enumeration LIMIT_LOW<br>enumeration LIMIT_LOW_LOW<br>enumeration LIMIT_WITHIN_RANGE |

## *D.30 simpleType OolParameterState*

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration NOMINAL<br>enumeration WARNING<br>enumeration OUT_OF_LIMITS<br>enumeration SCC<br>enumeration SCC_DISABLE<br>enumeration SCC_OFF<br>enumeration SCC_UNINIT |

| | | | |
|---|---|---|---|
| | enumeration | VIOLATION | |
| | enumeration | NO_VALUE | documentation<br>NO_VALUE is used if a value is returned from the archive that doesn't match a value from this enumerated list |

## D.31 simpleType OolRecordType

| | | | |
|---|---|---|---|
| namespace | http://edds.egos.esa/model | | |
| type | restriction of **xs:string** | | |
| properties | base xs:string | | |
| facets | Kind | Value | annotation |
| | enumeration | LIMIT | |
| | enumeration | STATE | |
| | enumeration | STATUS_CONSISTENCY | |
| | enumeration | SOFT_HARD_LIMIT | |
| | enumeration | LIMIT_MO | |
| | enumeration | DELTA | |
| | enumeration | NO_VALUE | documentation<br>NO_VALUE is used if a value is returned from the archive that doesn't match a value from this enumerated list |

## D.32 simpleType OolState

| | | | |
|---|---|---|---|
| namespace | http://edds.egos.esa/model | | |
| type | restriction of **xs:string** | | |
| properties | base xs:string | | |
| facets | Kind | Value | annotation |
| | enumeration | INCONSISTENT_STATUS | |
| | enumeration | NOMINAL | |
| | enumeration | OUT_OF_LIMIT | |
| | enumeration | UNCHECKED | |
| | enumeration | UNDEFINED | |
| | enumeration | VIOLATED | |
| | enumeration | WARNING | |

## D.33 simpleType Operation

| | | | |
|---|---|---|---|
| namespace | http://edds.egos.esa/model | | |
| type | restriction of **xs:string** | | |
| properties | base xs:string | | |
| facets | Kind | Value | annotation |
| | enumeration | OP_EQ | |
| | enumeration | OP_NEQ | |
| | enumeration | OP_GT | |
| | enumeration | OP_GTE | |
| | enumeration | OP_LT | |
| | enumeration | OP_LTE | |
| | enumeration | OP_NOT | |
| | enumeration | OP_MATCH | |
| | enumeration | OP_CONTAINS | documentation |

| | |
|---|---|
| | Used for container objects; matches lists containing the specified filter item, but the container is allowed to contain other items not specified. |

## D.34 simpleType OrderBy

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration creation_time ASC<br>enumeration creation_time DESC<br>enumeration scheduled_execution_time ASC<br>enumeration scheduled_execution_time DESC<br>enumeration username ASC<br>enumeration username DESC |
| annotation | documentation<br>Defines the possible compression algorithm which can be applied to the data responses. |

## D.35 simpleType ParamValidityStatus

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration VALID<br>enumeration INVALID<br>enumeration UNKNOWN<br>enumeration EXPIRED |
| annotation | documentation<br>The possible validity states of a parameter |

## D.36 simpleType PrivacyTag

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ContextPart/PrivacyTag** |
| facets | Kind Value annotation<br>enumeration PRIVATE<br>enumeration ROLE<br>enumeration MISSION<br>enumeration PUBLIC |
| annotation | documentation<br>Defines privacy tag values which can be associated to a request |

## D.37 simpleType SpidsSpecifier

| | |
|---|---|
| namespace | http://edds.egos.esa/model |

| | |
|---|---|
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **PacketName/Apid PacketName/Pi1 PacketName/Pi2 PacketName/Spid PacketName/SubType PacketName/Type** |
| facets | Kind Value annotation<br>pattern (\s*((\d+\s*-\s*\d+)\|[^-,\s]+)\s*(,\s*((\d+\s*-\s*\d+)\|[^-,\s]+)\s*)*)\|\s* |
| annotation | documentation<br>A string with regex restriction to allow for a comma separated list of both string values and numeric value ranges. |

## *D.38 simpleType State*

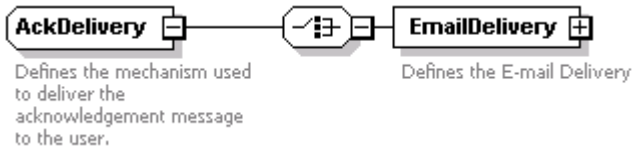
| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration SUBMITTED documentation<br>The request reached the web server and has been saved into the DB<br>enumeration CANCELED documentation<br>The request has been cancelled<br>enumeration SUSPENDED documentation<br>The request has been suspended<br>enumeration QUEUED documentation<br>A submitted request is taken from the DB and queued for execution in the edds-server<br>enumeration COMPLETED_NO_RESULTS documentation<br>The edds-server completed the elaboration of a request and no results were received from the archive<br>enumeration SERVER_COMPLETED documentation<br>The edds-server completed the elaboration of a request and dispatch the result to the delivery-manager<br>enumeration DELIVERED documentation<br>The request execution is completed<br>enumeration DELIVERED_RESP_DELETED documentation<br>The request execution is completed and the data on EDDS file server is deleted<br>enumeration DELIVERED_PARTIAL_RESULTS documentation<br>The request execution is completed, but not all of the requested data could be retrieved<br>enumeration ERROR_LOCALLY_DELIVERED documentation<br>The request execution is completed, but the delivery manager was not able to dispatch the result through FTP. THe file is available in the EDDS Server FTP directory<br>enumeration ERROR_ACCESS_DENIED documentation<br>The user does not have the right privileges to execute the request<br>enumeration ERROR_INVALID_REQUEST documentation<br>The request is not valid<br>enumeration ERROR_LIMIT_EXCEEDED documentation<br>The quota associated with the user has been exceeded<br>enumeration ERROR_SERVER_NOT_AVAILABLE documentation<br>The needed data provider is not available<br>enumeration ERROR_DELIVERY documentation<br>The delivery manager was not able to deliver the file<br>enumeration ERROR_UNKNOWN documentation<br>Not predictable error in the request processing |
| annotation | documentation<br>Request execution statuses |

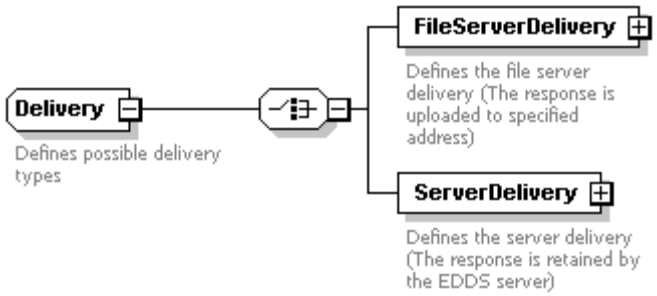
# Appendix E Delivery Data Type

This section of the document describes the complex types used for delivery as defined in the delivery.xsd file.

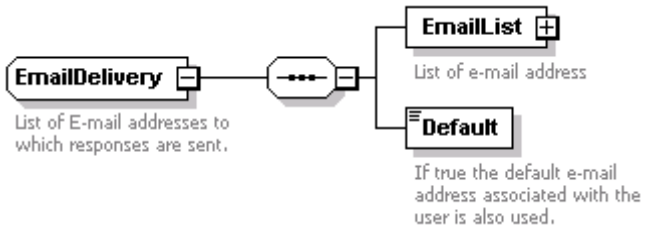
## *E.1 complexType AckDelivery*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EmailDelivery** |
| annotation | documentation<br>Defines the mechanism used to deliver the acknowledgement message to the user. |

## *E.2 complexType Delivery*

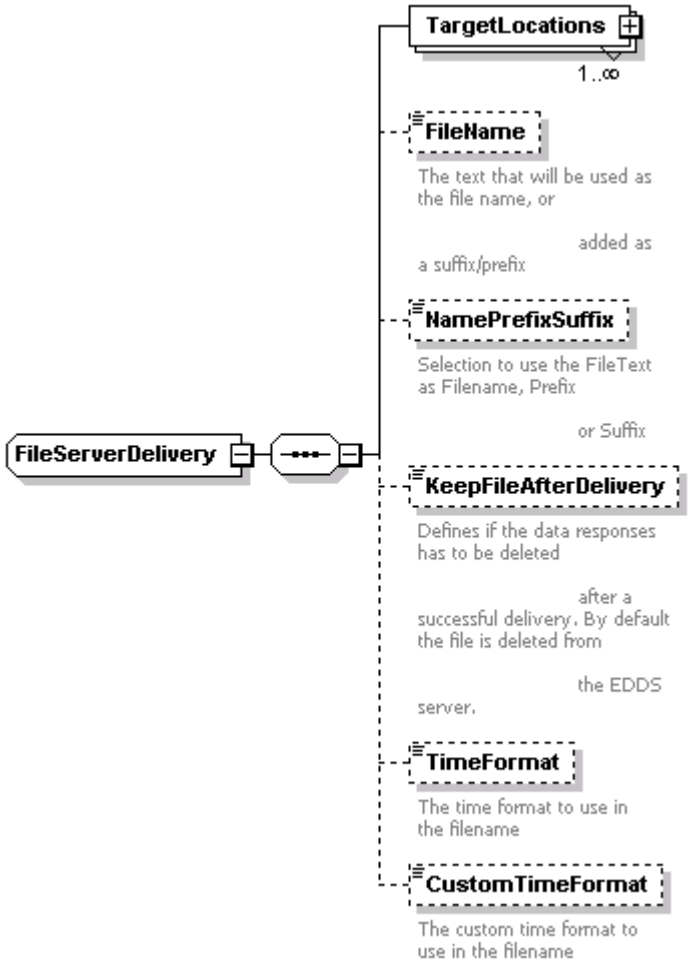
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileServerDelivery ServerDelivery** |
| annotation | documentation<br>Defines possible delivery types |

## *E.3 complexType EmailDelivery*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EmailList Default** |
| used by | element **AckDelivery/EmailDelivery** |
| annotation | documentation<br>List of E-mail addresses to which responses are sent. |

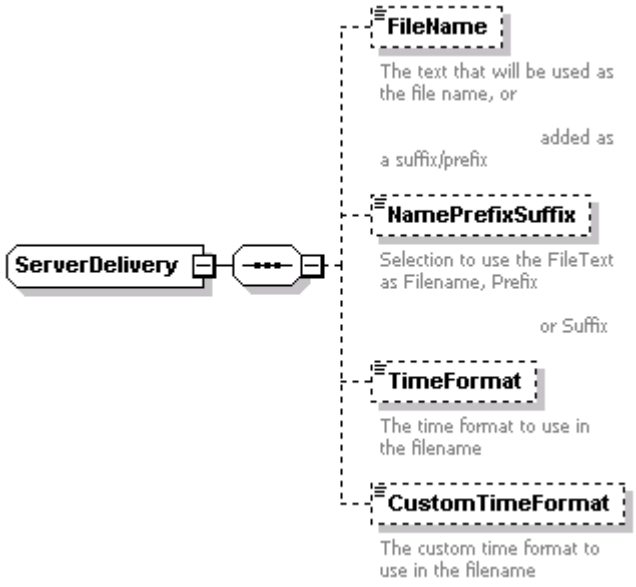
 

## *E.4 complexType FileServerDelivery*

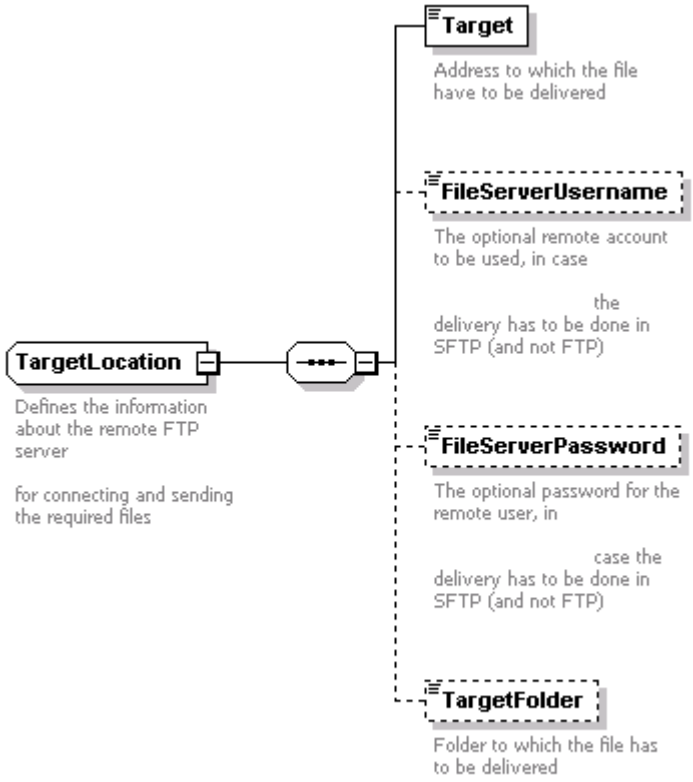
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TargetLocations FileName NamePrefixSuffix KeepFileAfterDelivery TimeFormat CustomTimeFormat** |
| used by | element **Delivery/FileServerDelivery** |

## E.5 complexType ServerDelivery

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileName NamePrefixSuffix TimeFormat CustomTimeFormat** |
| used by | element **Delivery/ServerDelivery** |

## E.6 complexType TargetLocation

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Target FileServerUsername FileServerPassword TargetFolder** |

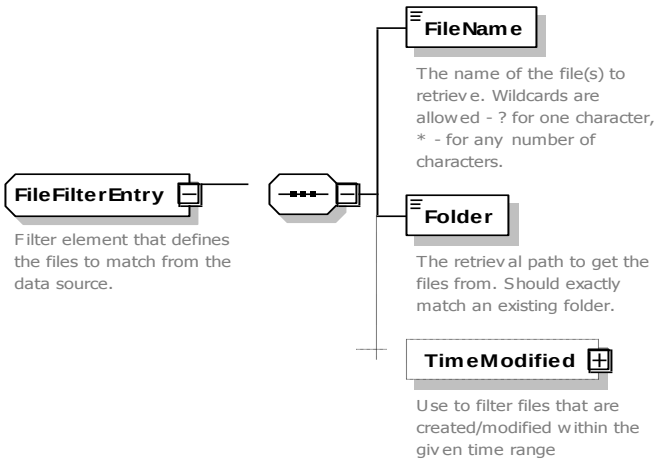
 

| | |
|---|---|
| used by | element **FileServerDelivery/TargetLocations** |
| annotation | documentation<br>Defines the information about the remote FTP server<br>for connecting and sending the required files |

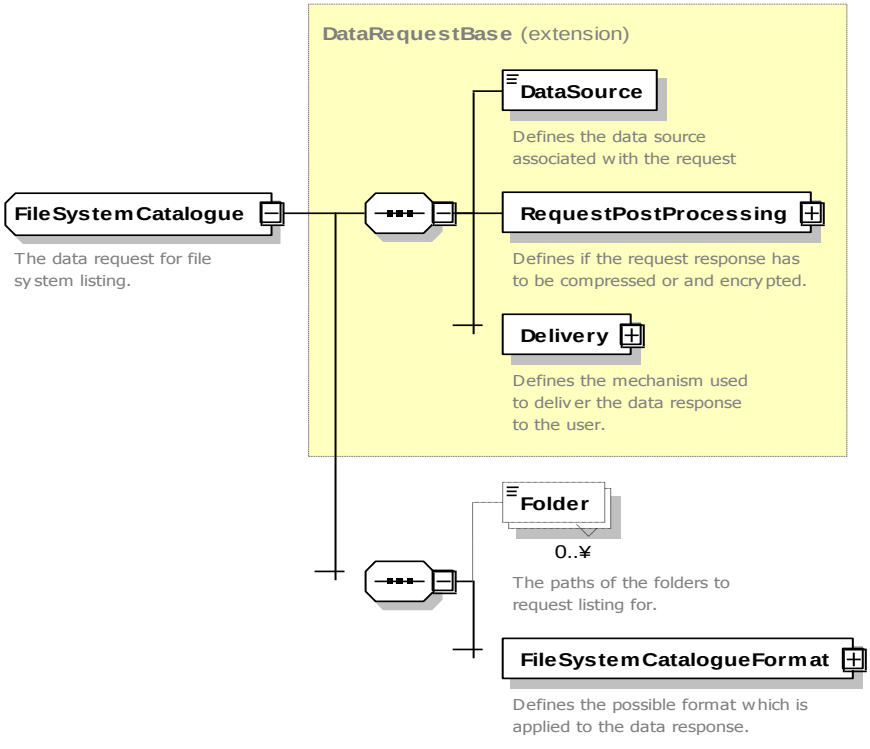
 

# Appendix FFile System Data Types

## F.1 complexType FileFilterEntry

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileName Folder TimeModified** |
| used by | element **FileSystemFile/FileFilterEntry** |
| annotation | documentation<br>Filter element that defines the files to match from the data source. |

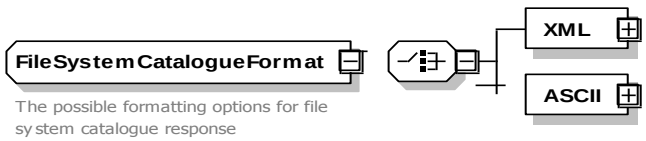
## F.2 complexType FileSystemCatalogue

| | |
|---|---|
| diagram |  |

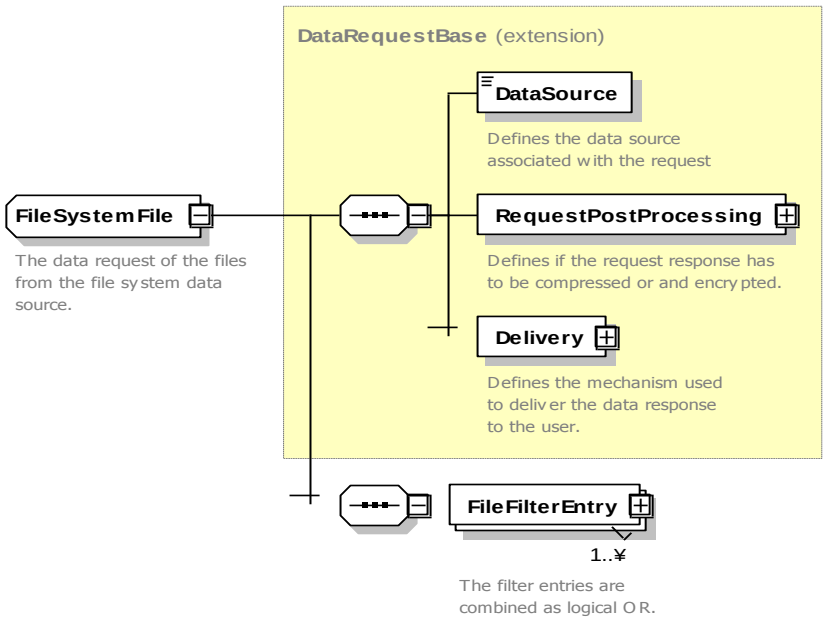
 

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase<br>abstract true |
| children | **DataSource RequestPostProcessing Delivery Folder FileSystemCatalogueFormat** |
| used by | complexTypes **FileSystemFileCatalogue FileSystemFolderCatalogue** |
| annotation | documentation<br>The data request for file system listing. |

## F.3 complexType FileSystemCatalogueFormat

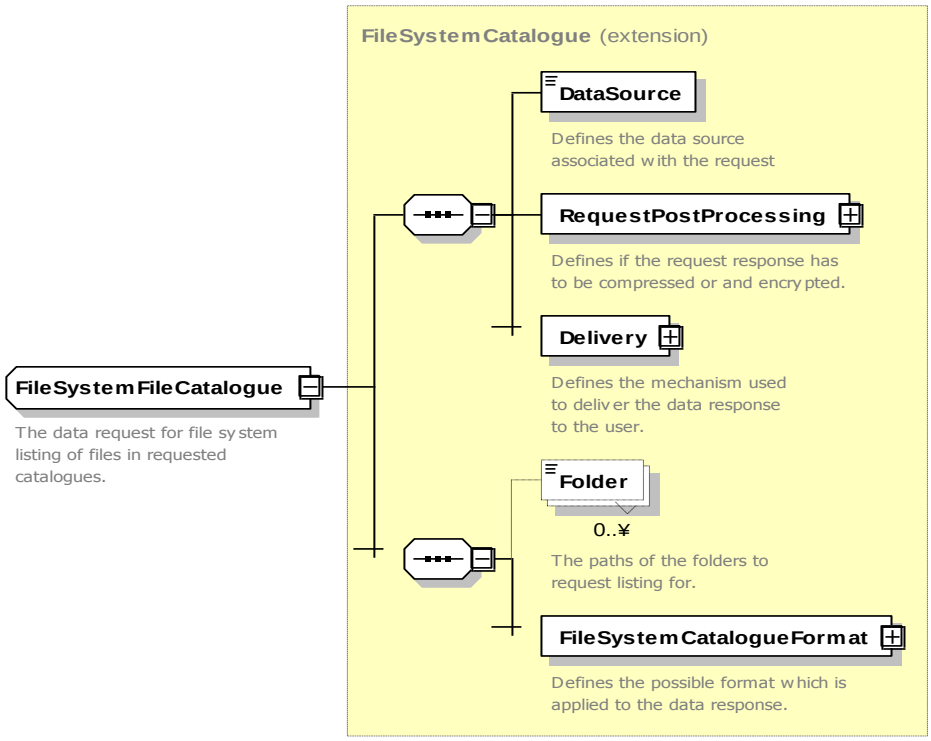
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **XML ASCII** |
| used by | element **FileSystemCatalogue/FileSystemCatalogueFormat** |
| annotation | documentation<br>The possible formatting options for file system catalogue response |

## F.4 complexType FileSystemFile

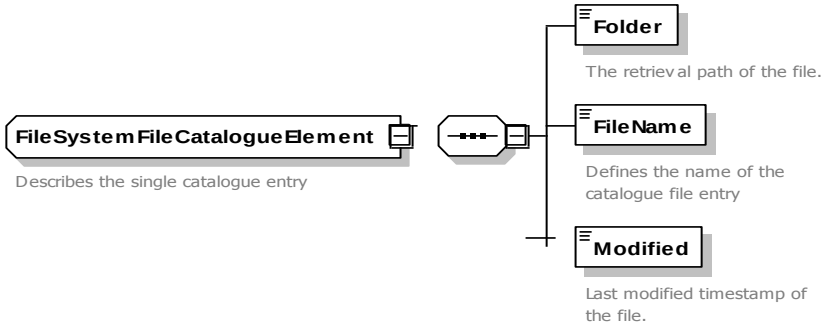
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **DataSource RequestPostProcessing Delivery FileFilterEntry** |
| annotation | documentation<br>The data request of the files from the file system data source. |

## F.5 complexType FileSystemFileCatalogue

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of FileSystemCatalogue |
| properties | base FileSystemCatalogue |
| children | **DataSource RequestPostProcessing Delivery Folder FileSystemCatalogueFormat** |
| annotation | documentation<br>The data request for file system listing of files in requested catalogues. |

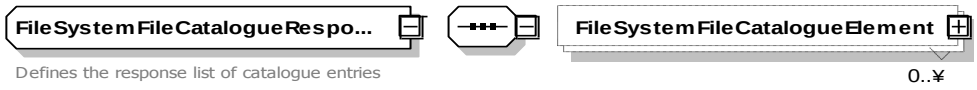
## F.6 complexType FileSystemFileCatalogueElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Folder FileName Modified** |
| used by | elements **FileSystemFileCatalogueElement**<br>**FileSystemFileCatalogueResponse/FileSystemFileCatalogueElement** |

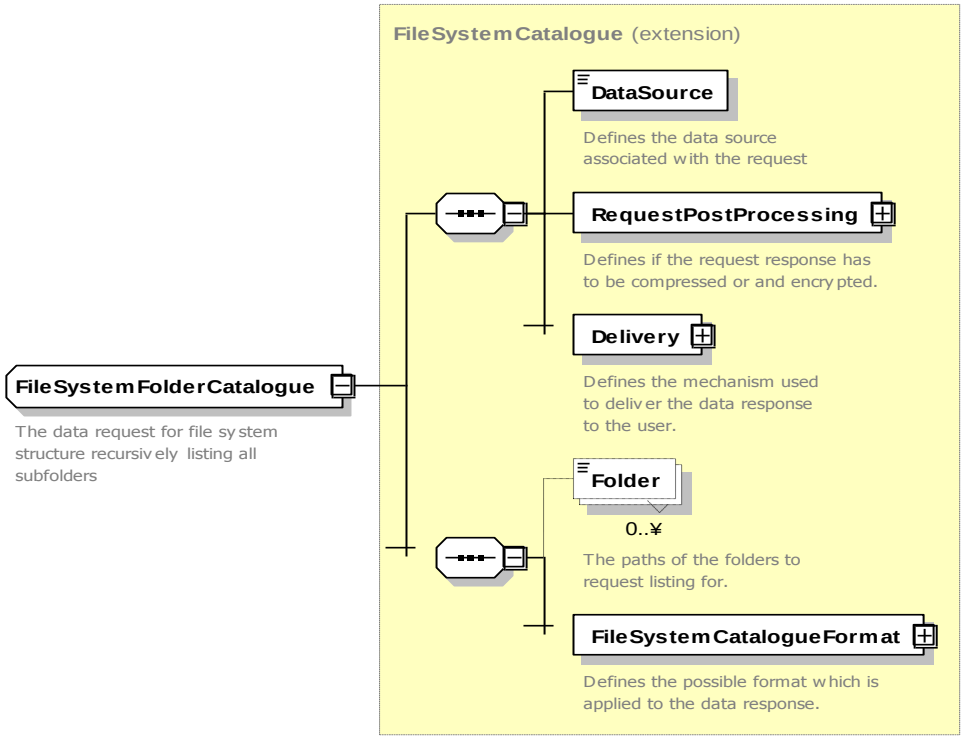
 

| | |
|---|---|
| annotation | documentation<br>Describes the single catalogue entry |

## F.7 complexType FileSystemFileCatalogueResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileSystemFileCatalogueElement** |
| annotation | documentation<br>Defines the response list of catalogue entries |

## F.8 complexType FileSystemFolderCatalogue

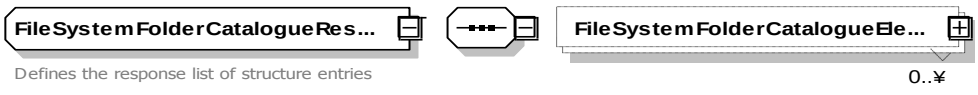
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **FileSystemCatalogue** |
| properties | base FileSystemCatalogue |
| children | **DataSource RequestPostProcessing Delivery Folder FileSystemCatalogueFormat** |
| annotation | documentation<br>The data request for file system structure recursively listing all subfolders |

## F.9 complexType FileSystemFolderCatalogueElement

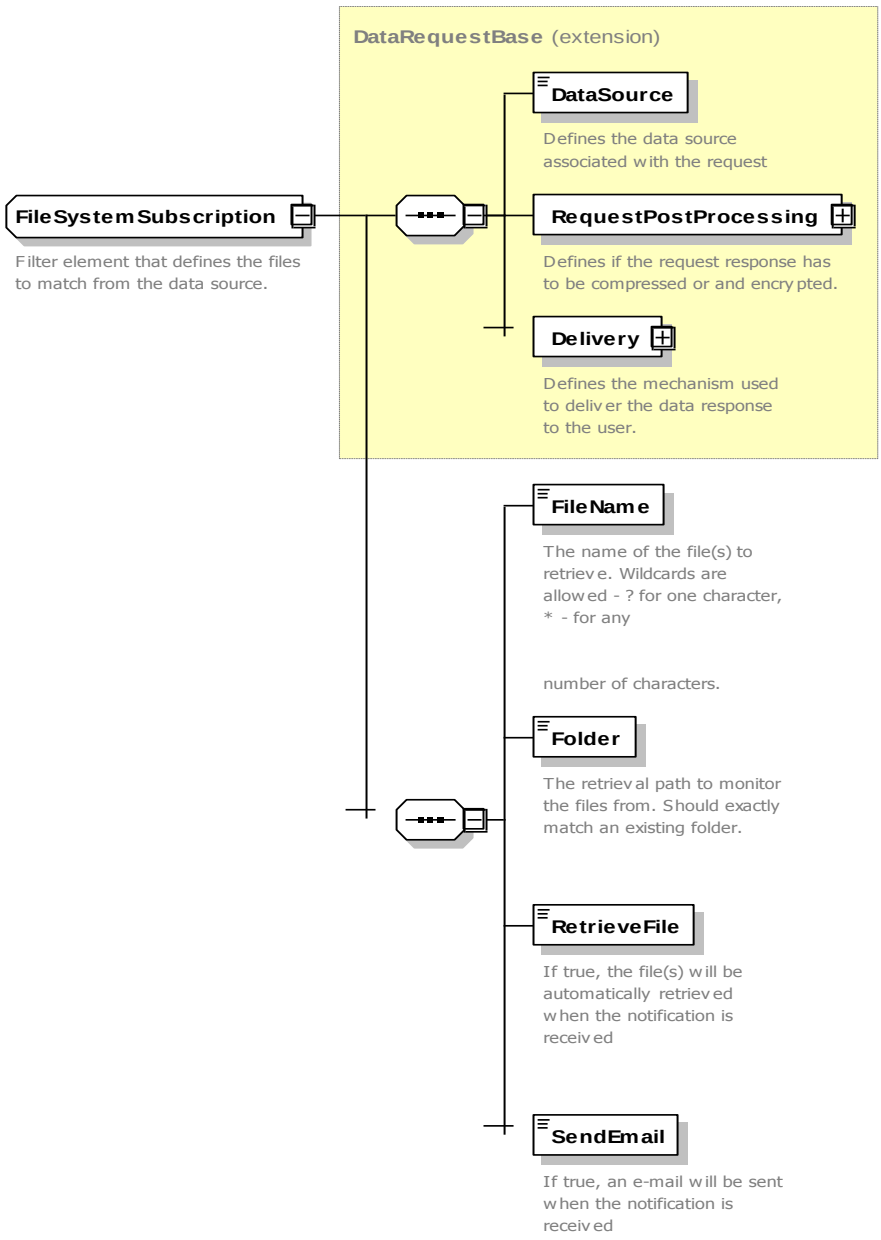
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Folder** |
| used by | elements **FileSystemFolderCatalogueElement**<br>**FileSystemFolderCatalogueResponse/FileSystemFolderCatalogueElement** |
| annotation | documentation<br>Describes the single structure response entry |

## F.10 complexType FileSystemFolderCatalogueResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FileSystemFolderCatalogueElement** |
| annotation | documentation<br>Defines the response list of structure entries |

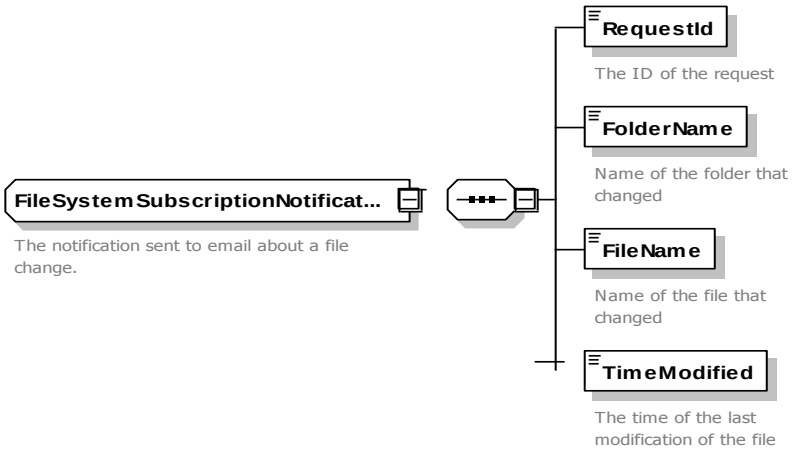
## F.11 complexType FileSystemSubscription




| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **DataSource RequestPostProcessing Delivery FileName Folder RetrieveFile SendEmail** |
| annotation | documentation<br>Filter element that defines the files to match from the data source. |

## *F.12 complexType FileSystemSubscriptionNotification*

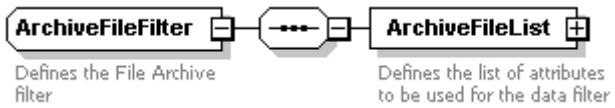
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **RequestId FolderName FileName TimeModified** |
| used by | element **FileSystemSubscriptionNotification** |
| annotation | documentation<br>The notification sent to email about a file change. |

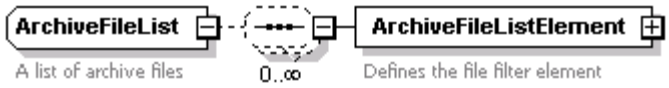
# Appendix G Filter Data Type

This section of the document describes the filter complex types as defined in the filter.xsd file.

## *G.1 complexType ArchiveFileFilter*

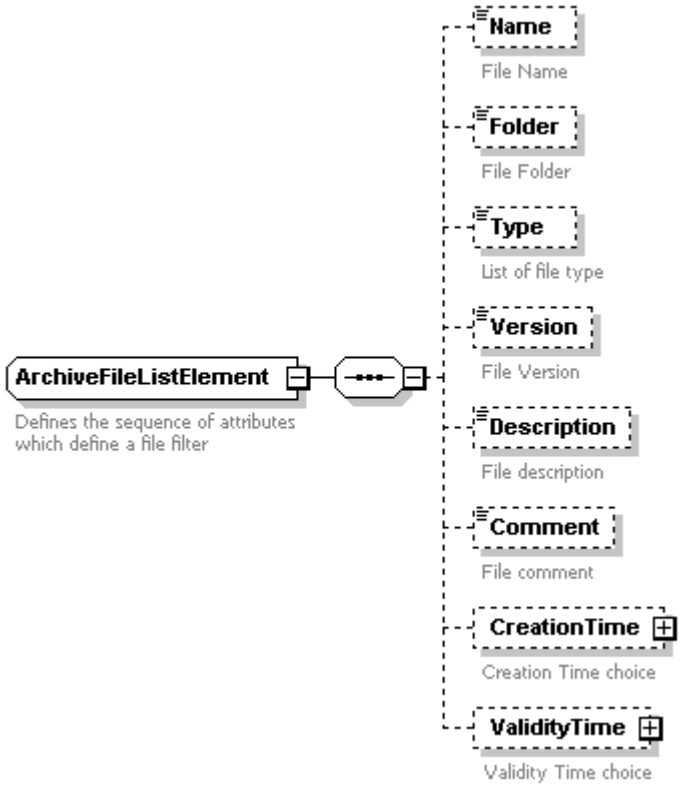
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ArchiveFileList** |
| annotation | documentation<br>Defines the File Archive filter |

## *G.2 complexType ArchiveFileList*

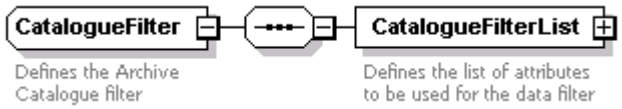
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ArchiveFileListElement** |
| used by | element **ArchiveFileFilter/ArchiveFileList** |
| annotation | documentation<br>A list of archive files |

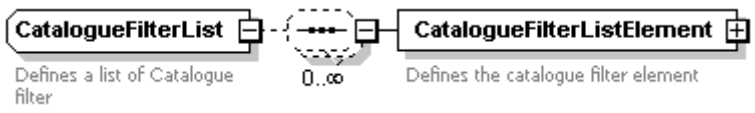
## G.3 complexType ArchiveFileListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Folder Type Version Description Comment CreationTime ValidityTime** |
| used by | element **ArchiveFileList/ArchiveFileListElement** |
| annotation | documentation<br>Defines the sequence of attributes which define a file filter |

## G.4 complexType CatalogueFilter

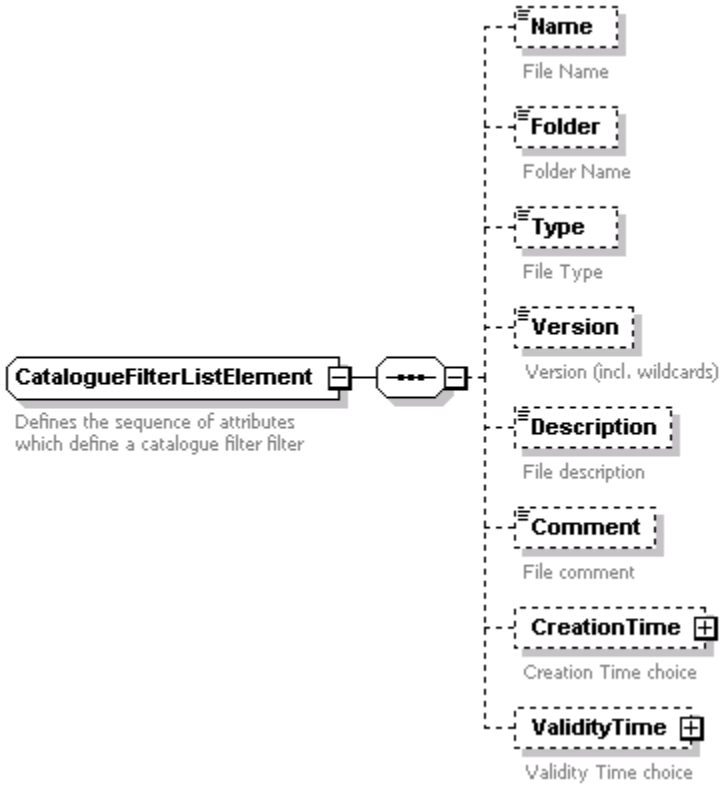
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **CatalogueFilterList** |
| annotation | documentation<br>Defines the Archive Catalogue filter |

## G.5 complexType CatalogueFilterList

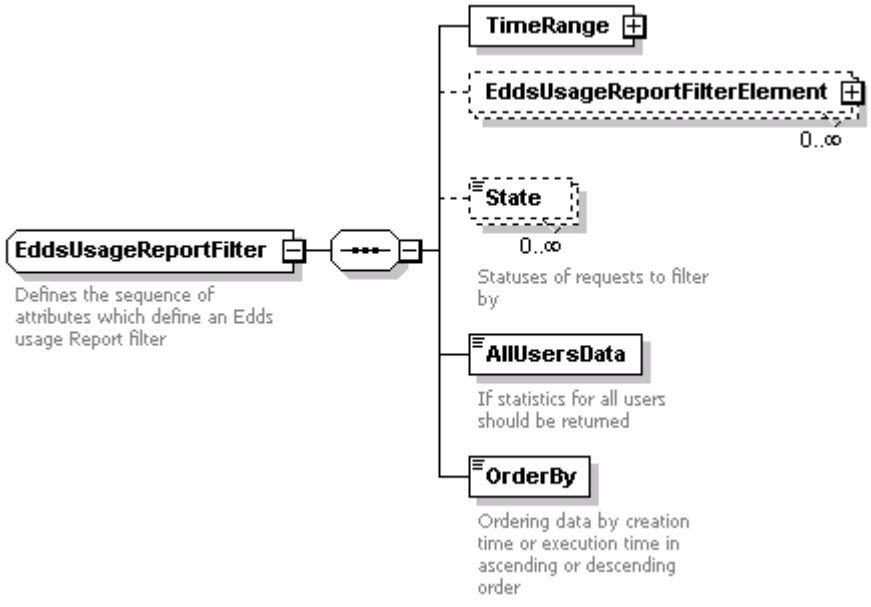
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **CatalogueFilterListElement** |
| used by | element **CatalogueFilter/CatalogueFilterList** |
| annotation | documentation<br>Defines a list of Catalogue filter |

## G.6 complexType CatalogueFilterListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Folder Type Version Description Comment CreationTime ValidityTime** |
| used by | element **CatalogueFilterList/CatalogueFilterListElement** |
| annotation | documentation<br>Defines the sequence of attributes which define a catalogue filter filter |

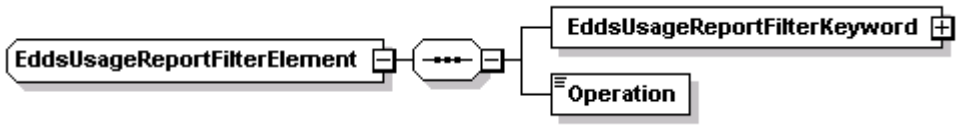
## G.7 complexType EddsUsageReportFilter

| | |
|---|---|
| diagram |  |

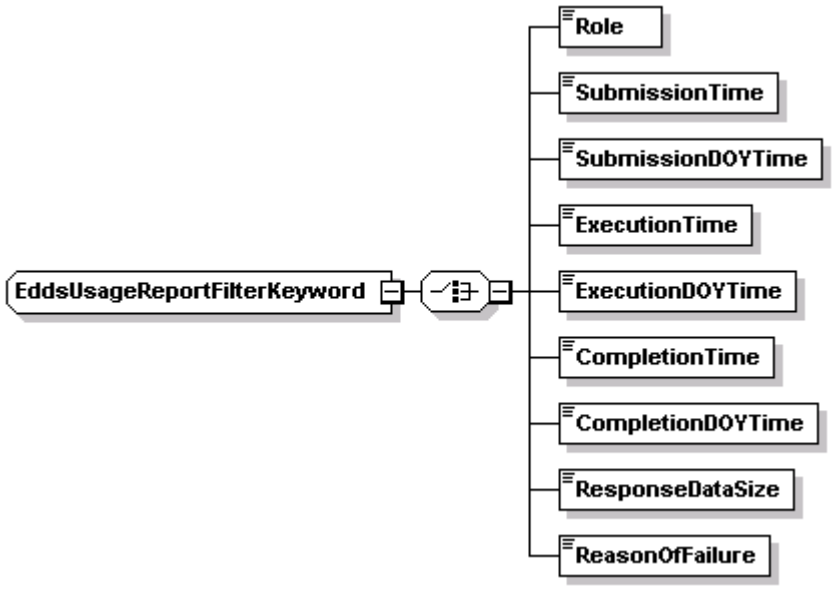
 

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **TimeRange EddsUsageReportFilterElement State AllUsersData OrderBy** |
| annotation | documentation<br>Defines the sequence of attributes which define an Edds usage Report filter |

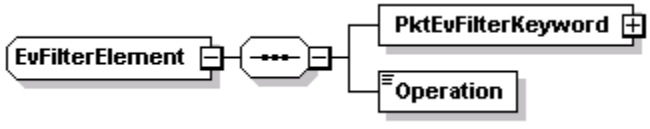
## G.8 complexType EddsUsageReportFilterElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EddsUsageReportFilterKeyword Operation** |
| used by | element **EddsUsageReportFilter/EddsUsageReportFilterElement** |

## G.9 complexType EddsUsageReportFilterKeyword

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Role SubmissionTime SubmissionDOYTime ExecutionTime ExecutionDOYTime CompletionTime CompletionDOYTime ResponseDataSize ReasonOfFailure** |
| used by | element **EddsUsageReportFilterElement/EddsUsageReportFilterKeyword** |

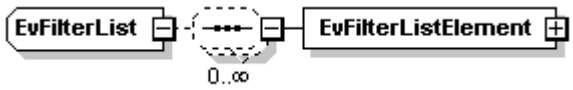
## G.10 complexType EvFilterElement

| | |
|---|---|
| diagram |  |

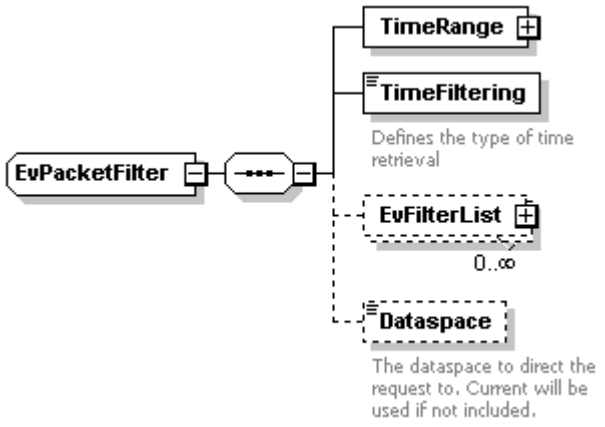
 

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **PktEvFilterKeyword Operation** |
| used by | element **EvFilterList/EvFilterListElement** |

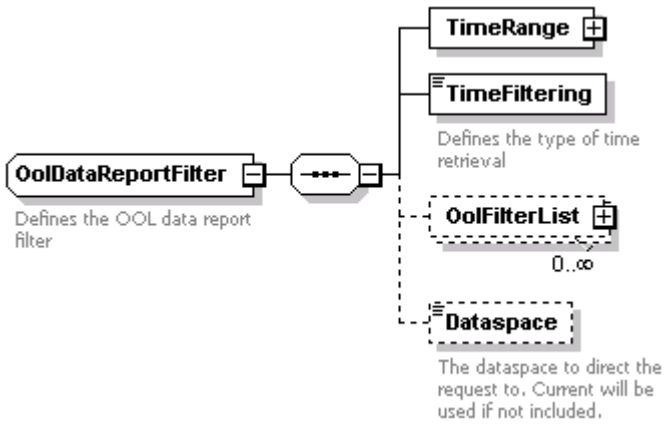
## G.11 complexType EvFilterList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EvFilterListElement** |
| used by | element **EvPacketFilter/EvFilterList** |

## G.12 complexType EvPacketFilter

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TimeRange TimeFiltering EvFilterList Dataspace** |

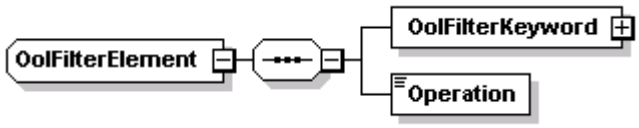
## G.13 complexType OolDataReportFilter

| | |
|---|---|
| diagram |  |

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **TimeRange TimeFiltering OolFilterList Dataspace** |
| annotation | documentation<br>Defines the OOL data report filter |

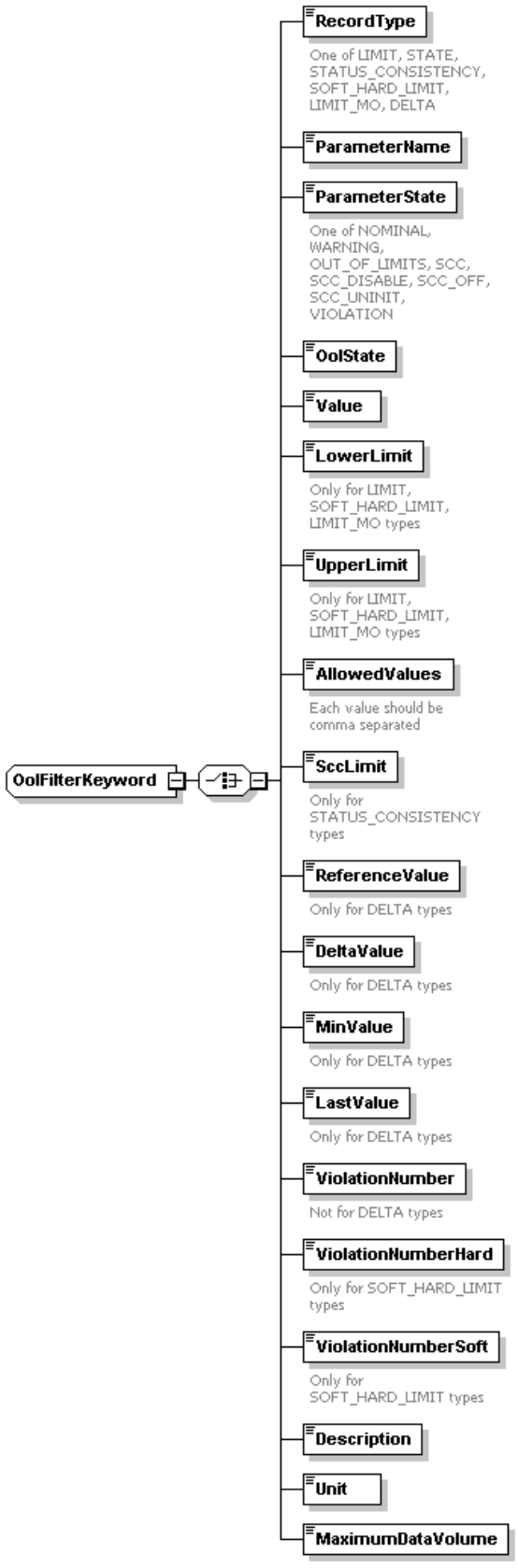
## *G.14 complexType OolFilterElement*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **OolFilterKeyword Operation** |
| used by | element **OolFilterList/OolFilterListElement** |

## *G.15 complexType OolFilterKeyword*

diagram

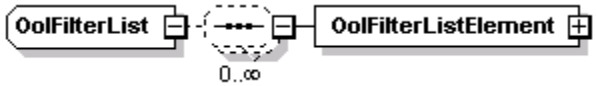



| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **RecordType ParameterName ParameterState OolState Value LowerLimit UpperLimit AllowedValues SccLimit ReferenceValue DeltaValue MinValue LastValue ViolationNumber ViolationNumberHard ViolationNumberSoft** |

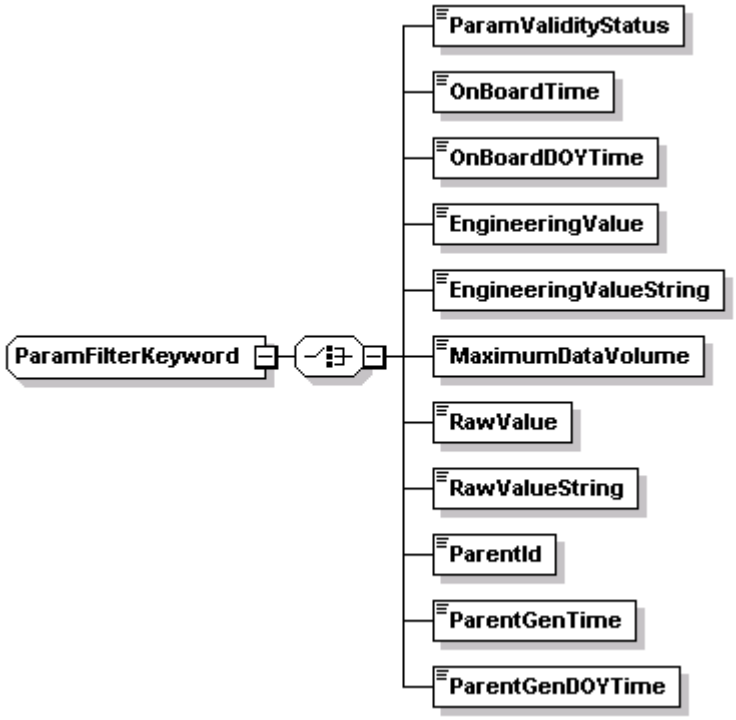
 

| | |
|---|---|
| | **Description Unit MaximumDataVolume** |
| used by | element **OolFilterElement/OolFilterKeyword** |

## G.16 complexType OolFilterList

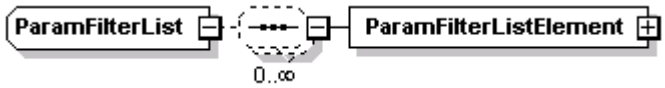
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **OolFilterListElement** |
| used by | element **OolDataReportFilter/OolFilterList** |

## G.17 complexType ParamFilterKeyword

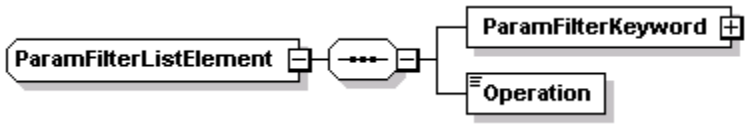
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamValidityStatus OnBoardTime OnBoardDOYTime EngineeringValue EngineeringValueString MaximumDataVolume RawValue RawValueString ParentId ParentGenTime ParentGenDOYTime** |
| used by | element **ParamFilterListElement/ParamFilterKeyword** |

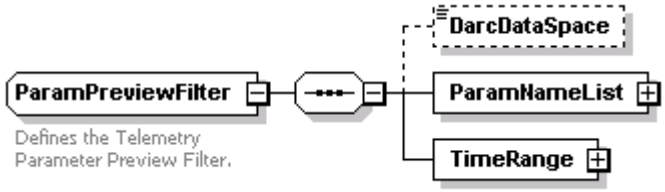
## G.18 complexType ParamFilterList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamFilterListElement** |
| used by | element **ParamTmFilter/ParamFilterList** |

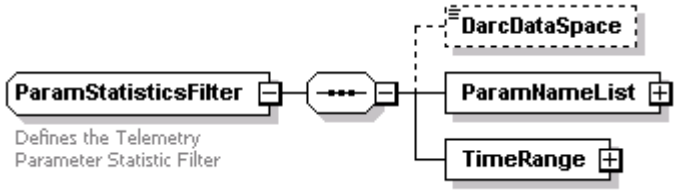
## G.19 complexType ParamFilterListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamFilterKeyword Operation** |
| used by | element **ParamFilterList/ParamFilterListElement** |

## G.20 complexType ParamPreviewFilter

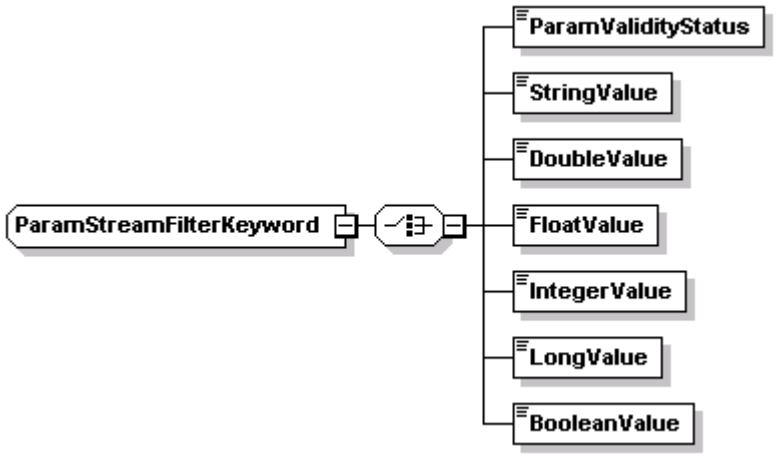
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DarcDataSpace ParamNameList TimeRange** |
| annotation | documentation<br>Defines the Telemetry Parameter Preview Filter. |

## G.21 complexType ParamStatisticsFilter

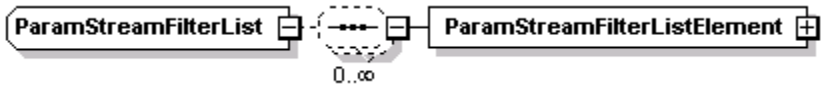
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DarcDataSpace ParamNameList TimeRange** |
| annotation | documentation<br>Defines the Telemetry Parameter Statistic Filter |

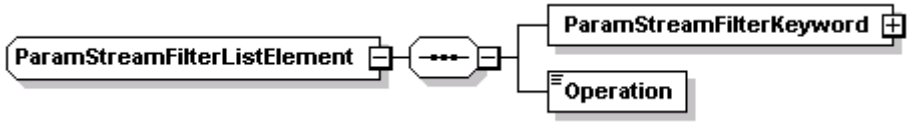
## G.22 complexType ParamStreamFilterKeyword

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamValidityStatus StringValue DoubleValue FloatValue IntegerValue LongValue BooleanValue** |
| used by | element **ParamStreamFilterListElement/ParamStreamFilterKeyword** |

## G.23 complexType ParamStreamFilterList

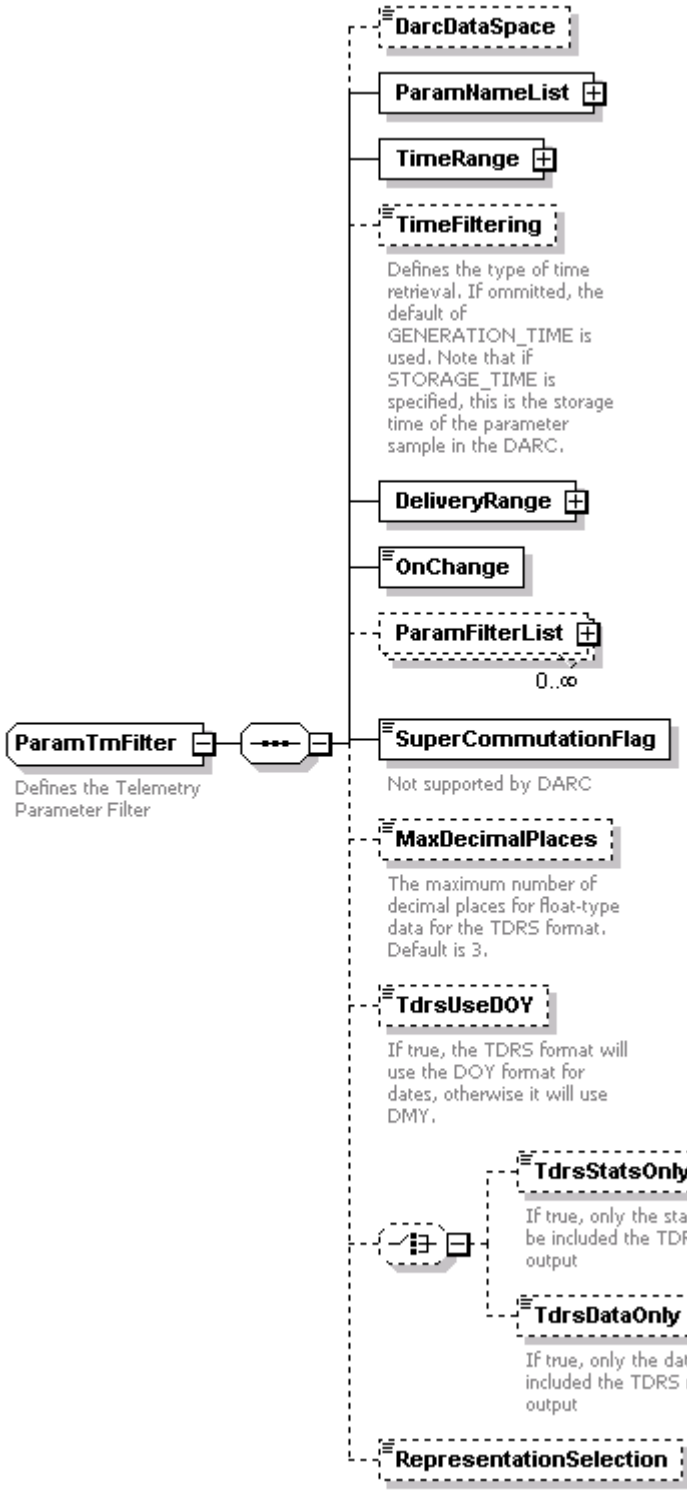
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamStreamFilterListElement** |

## G.24 complexType ParamStreamFilterListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamStreamFilterKeyword Operation** |
| used by | element **ParamStreamFilterList/ParamStreamFilterListElement** |

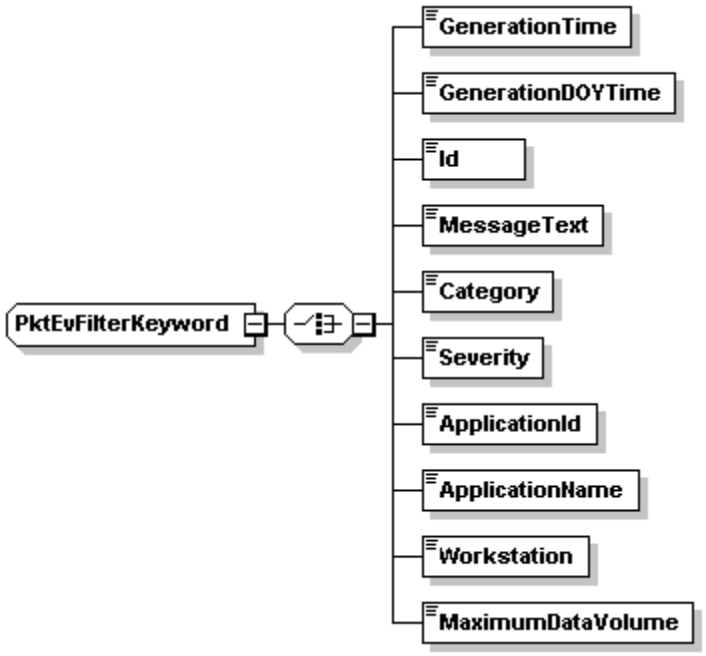
 

## *G.25 complexType ParamTmFilter*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DarcDataSpace ParamNameList TimeRange TimeFiltering DeliveryRange OnChange ParamFilterList SuperCommutationFlag MaxDecimalPlaces TdrsUseDOY TdrsStatsOnly TdrsDataOnly RepresentationSelection** |
| annotation | documentation<br>Defines the Telemetry Parameter Filter |

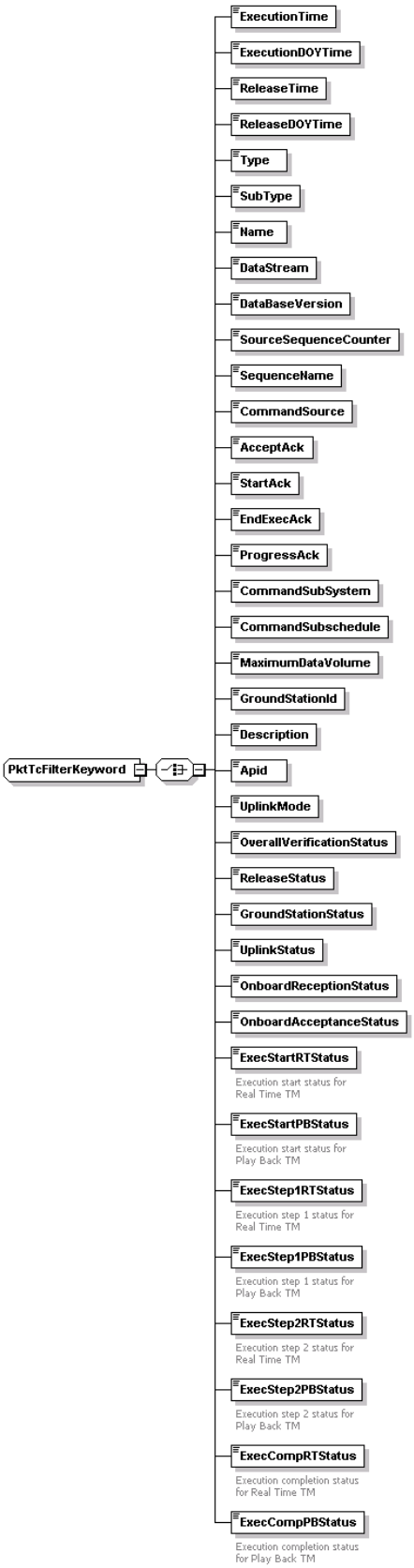
 

## G.26 complexType PktEvFilterKeyword

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | GenerationTime GenerationDOYTime Id MessageText Category Severity ApplicationId ApplicationName Workstation MaximumDataVolume |
| used by | element **EvFilterElement/PktEvFilterKeyword** |

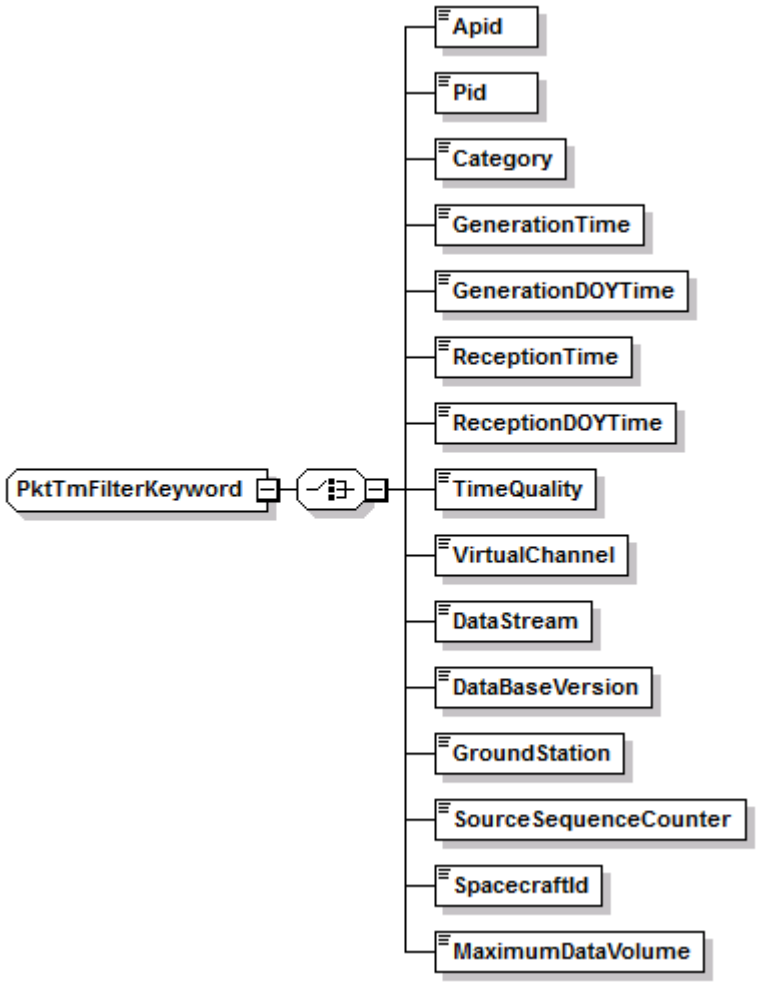
## *G.27 complexType PktTcFilterKeyword*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |

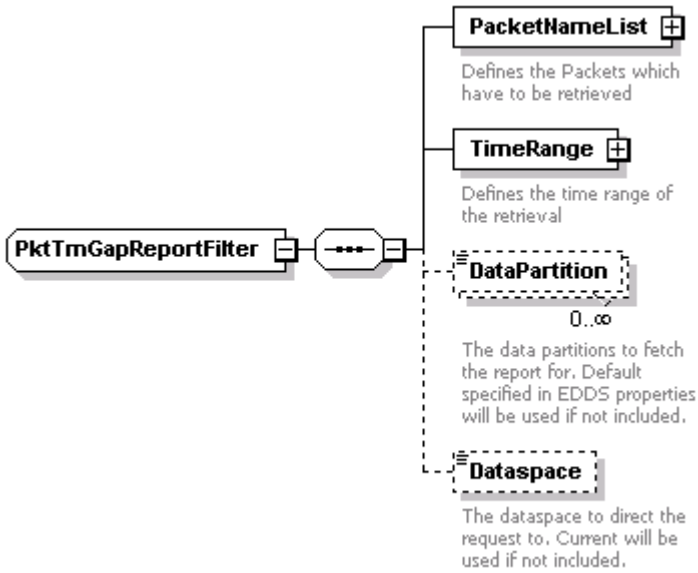
| | |
|---|---|
| children | ExecutionTime ExecutionDOYTime ReleaseTime ReleaseDOYTime Type SubType Name DataStream DataBaseVersion SourceSequenceCounter SequenceName CommandSource AcceptAck StartAck EndExecAck ProgressAck CommandSubSystem CommandSubschedule MaximumDataVolume GroundStationId Description Apid UplinkMode OverallVerificationStatus ReleaseStatus GroundStationStatus UplinkStatus OnboardReceptionStatus OnboardAcceptanceStatus ExecStartRTStatus ExecStartPBStatus ExecStep1RTStatus ExecStep1PBStatus ExecStep2RTStatus ExecStep2PBStatus ExecCompRTStatus ExecCompPBStatus |
| used by | element **TcFilterElement/PktTcFilterKeyword** |

## G.28 complexType PktTmFilterKeyword

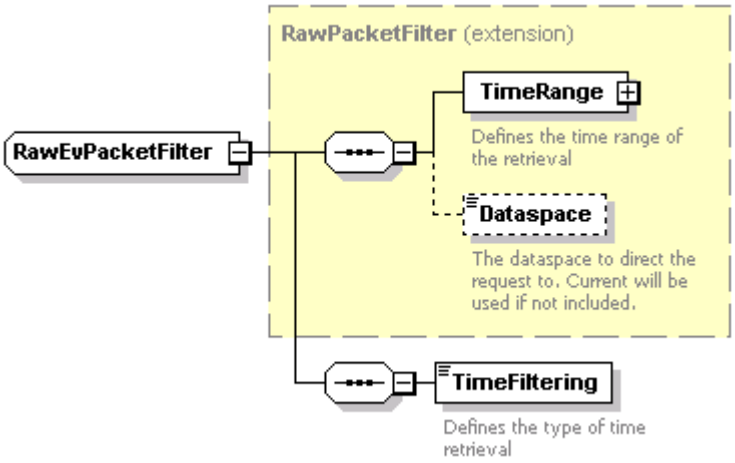
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Apid Pid Category GenerationTime GenerationDOYTime ReceptionTime ReceptionDOYTime TimeQuality VirtualChannel DataStream DataBaseVersion GroundStation SourceSequenceCounter SpacecraftId MaximumDataVolume** |
| used by | element **TmFilterElement/PktTmFilterKeyword** |

## G.29 complexType PktTmGapReportFilter

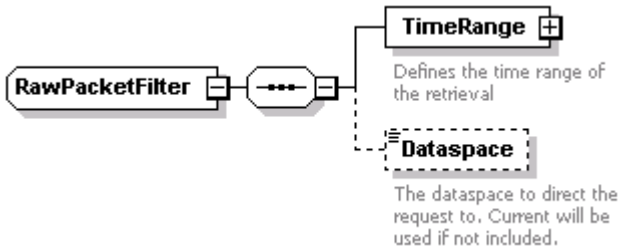
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | PacketNameList TimeRange DataPartition Dataspace |

## G.30 complexType RawEvPacketFilter

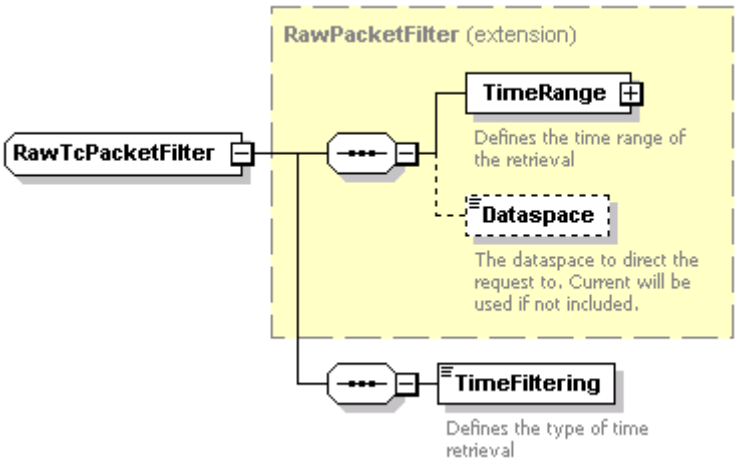
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **RawPacketFilter** |
| properties | base RawPacketFilter |
| children | **TimeRange Dataspace TimeFiltering** |
| used by | complexType **RawTmPacketFilter** |

## G.31 complexType RawPacketFilter

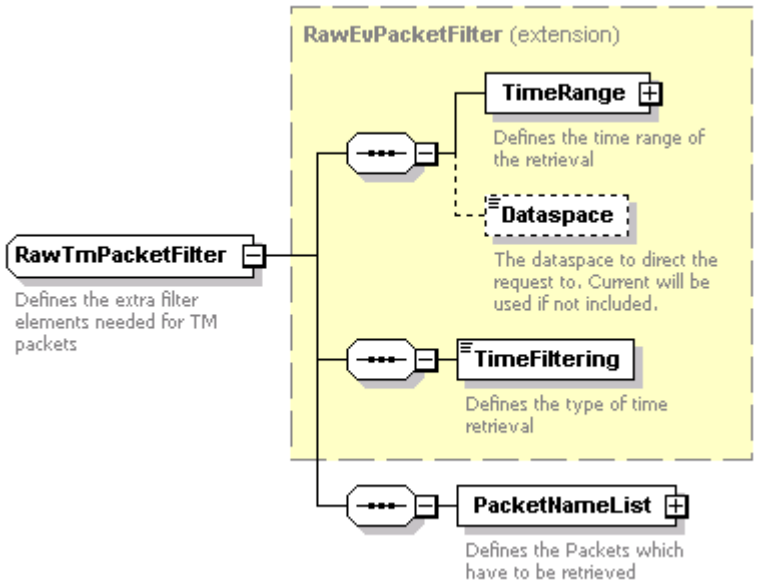
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| properties | abstract true |
| children | **TimeRange Dataspace** |
| used by | complexTypes **RawEvPacketFilter RawTcPacketFilter** |

## G.32 complexType RawTcPacketFilter

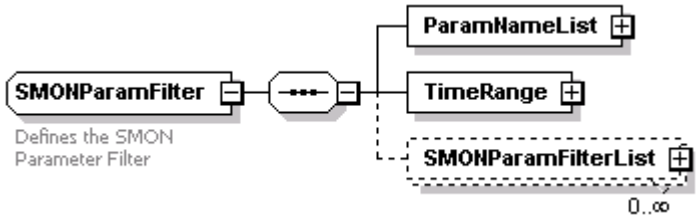
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **RawPacketFilter** |
| properties | base RawPacketFilter |
| children | **TimeRange Dataspace TimeFiltering** |

## G.33 complexType RawTmPacketFilter

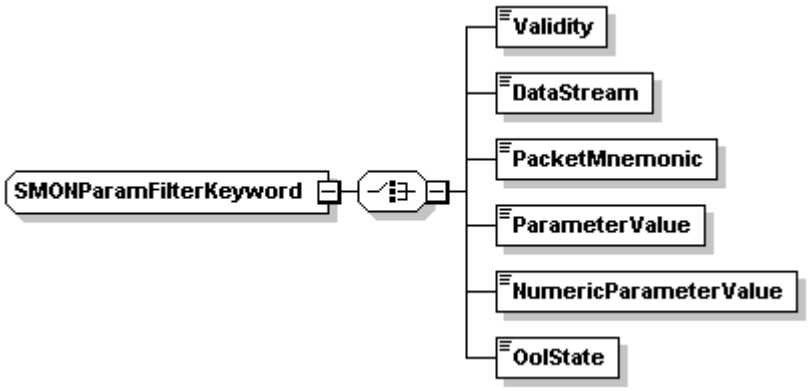
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **RawEvPacketFilter** |
| properties | base RawEvPacketFilter |
| children | **TimeRange Dataspace TimeFiltering PacketNameList** |
| annotation | documentation<br>Defines the extra filter elements needed for TM packets |

## G.34 complexType SMONParamFilter

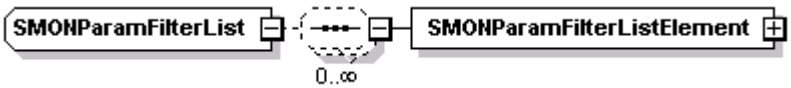
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParamNameList TimeRange SMONParamFilterList** |
| used by | element **SMONParam/SMONParamFilter** |
| annotation | documentation<br>Defines the SMON Parameter Filter |

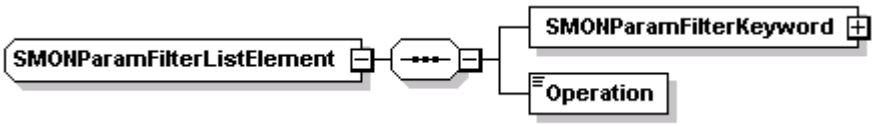
## G.35 complexType SMONParamFilterKeyword

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Validity DataStream PacketMnemonic ParameterValue NumericParameterValue OolState** |
| used by | element **SMONParamFilterListElement/SMONParamFilterKeyword** |

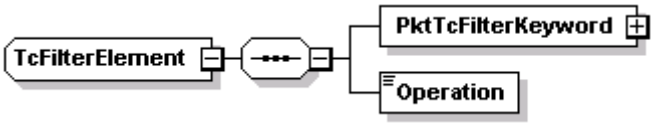
## G.36 complexType SMONParamFilterList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SMONParamFilterListElement** |
| used by | element **SMONParamFilter/SMONParamFilterList** |

## G.37 complexType SMONParamFilterListElement

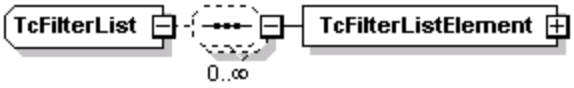
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SMONParamFilterKeyword Operation** |
| used by | element **SMONParamFilterList/SMONParamFilterListElement** |

## G.38 complexType TcFilterElement

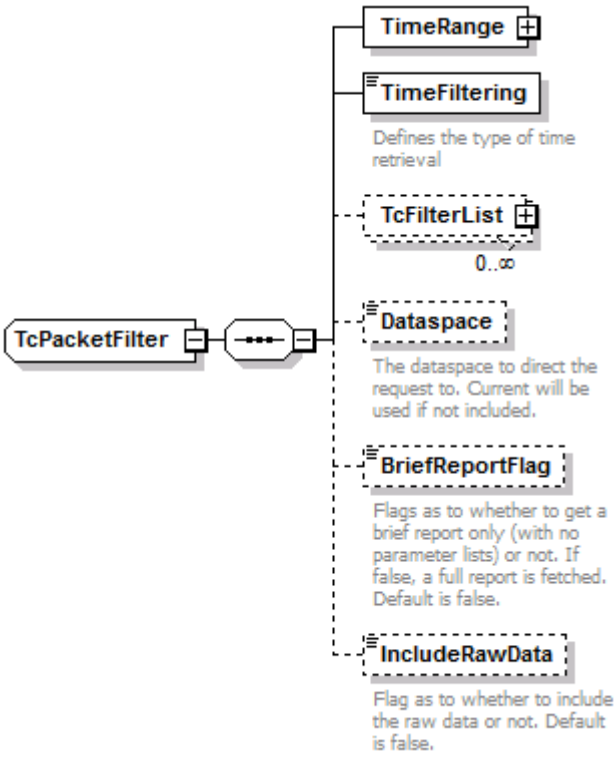
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PktTcFilterKeyword Operation** |
| used by | element **TcFilterList/TcFilterListElement** |

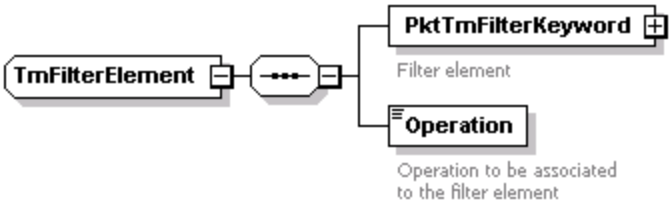
## G.39 complexType TcFilterList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TcFilterListElement** |
| used by | element **TcPacketFilter/TcFilterList** |

## G.40 complexType TcPacketFilter

| | |
|---|---|
| diagram |  |
| namespace | **http://edds.egos.esa/model** |
| children | **TimeRange TimeFiltering TcFilterList Dataspace BriefReportFlag IncludeRawData** |

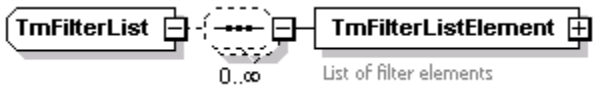
## G.41 complexType TmFilterElement

| | |
|---|---|
| diagram |  |

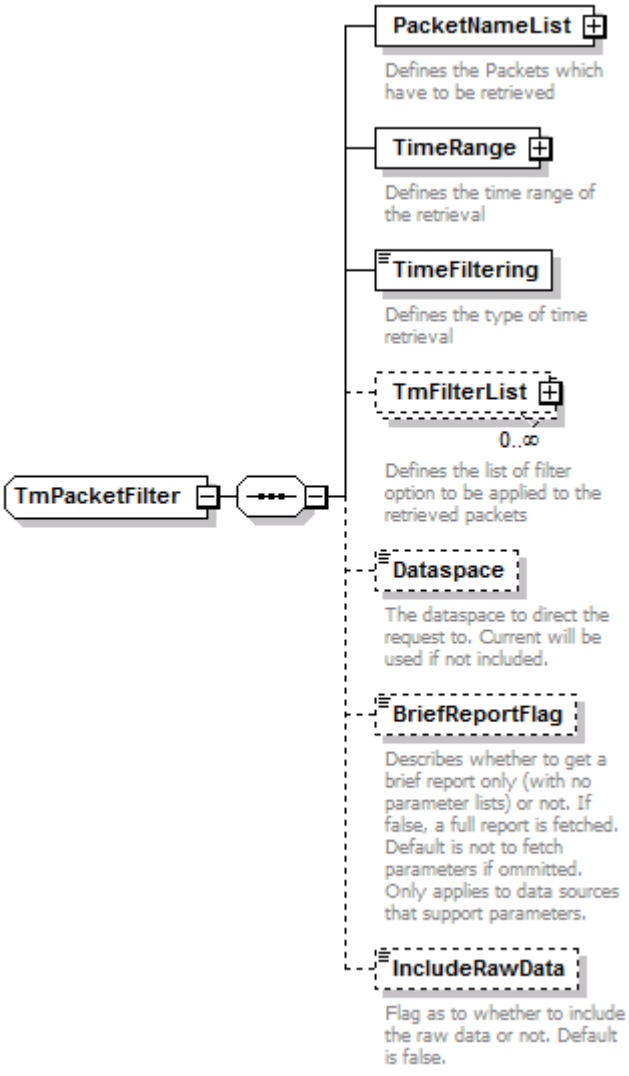
 

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **PktTmFilterKeyword Operation** |
| used by | element **TmFilterList/TmFilterListElement** |

## G.42 complexType TmFilterList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TmFilterListElement** |
| used by | element **TmPacketFilter/TmFilterList** |

## G.43 complexType TmPacketFilter

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |

| | |
|---|---|
| children | **PacketNameList TimeRange TimeFiltering TmFilterList Dataspace BriefReportFlag IncludeRawData** |

## G.44 simpleType CommandSource

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **PktTcFilterKeyword/CommandSource** |
| facets | Kind Value annotation<br>enumeration MANUAL_STACK<br>enumeration AUTO_STACK<br>enumeration EXT_SOURCE<br>enumeration TC_SPACON<br>enumeration OBQM_DISP<br>enumeration SMF_SOURCE<br>enumeration NAVPRS_STACK<br>enumeration MKMF_STACK<br>enumeration PKMF_STACK<br>enumeration SKMF_STACK |

## G.45 simpleType StageStatus

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **PktTcFilterKeyword/ExecCompPBStatus PktTcFilterKeyword/ExecCompRTStatus PktTcFilterKeyword/ExecStartPBStatus PktTcFilterKeyword/ExecStartRTStatus PktTcFilterKeyword/ExecStep1PBStatus PktTcFilterKeyword/ExecStep1RTStatus PktTcFilterKeyword/ExecStep2PBStatus PktTcFilterKeyword/ExecStep2RTStatus PktTcFilterKeyword/GroundStationStatus PktTcFilterKeyword/OnboardAcceptanceStatus PktTcFilterKeyword/OnboardReceptionStatus PktTcFilterKeyword/OverallVerificationStatus PktTcFilterKeyword/ReleaseStatus PktTcFilterKeyword/UplinkStatus** |
| facets | Kind Value annotation<br>enumeration documentation<br>Not applicable<br>enumeration I documentation<br>I for idle<br>enumeration P documentation<br>P for pending<br>enumeration S documentation<br>S for success<br>enumeration F documentation<br>F for failed<br>enumeration U documentation<br>U for unverified<br>enumeration X documentation<br>X for unknown<br>enumeration T documentation<br>T for timeout<br>enumeration E documentation<br>E for superseded<br>enumeration N documentation<br>N for uncertain failed<br>enumeration V documentation<br>V for uncertain successful<br>enumeration C documentation<br>C for affected<br>enumeration D documentation |

| | | | |
|---|---|---|---|
| | | | D for disabled |
| | enumeration | A | documentation<br>A for assumed passed |
| | enumeration | SCC | documentation<br>SCC for Status Consistency Check |

## G.46 simpleType TcTimeFiltering

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **TcPacketFilter/TimeFiltering RawTcPacketFilter/TimeFiltering** |
| facets | Kind Value annotation<br>enumeration RELEASE_TIME documentation<br>Command release time of the packet (Primary Key)<br>enumeration EXECUTION_TIME documentation<br>Predicted or actual execution time of the packet (Secondary Key) |

## G.47 simpleType TimeFiltering

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **EvPacketFilter/TimeFiltering OolDataReportFilter/TimeFiltering TmPacketFilter/TimeFiltering RawEvPacketFilter/TimeFiltering** |
| facets | Kind Value annotation<br>enumeration GENERATION_TIME documentation<br>On board Time of the packet (Primary Key)<br>enumeration STORAGE_TIME documentation<br>Reception time of the packet into the archive (Secondary Key) |

## G.48 simpleType UplinkMode

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **PktTcFilterKeyword/UplinkMode** |
| facets | Kind Value annotation<br>enumeration A documentation<br>AD transmission mode<br>enumeration B documentation<br>BD transmission mode |

## G.49 simpleType Severity

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | **Severity** |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **PktEvFilterKeyword/Severity** |
| facets | Kind Value annotation |

| | |
|---|---|
| | enumeration Warning<br>enumeration Error<br>enumeration Information<br>enumeration Fatal |

## G.50 simpleType Category

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | **Category** |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | elements **PktEvFilterKeyword/Category** |
| facets | Kind Value annotation<br>enumeration Log<br>enumeration Software<br>enumeration System<br>enumeration MIB |

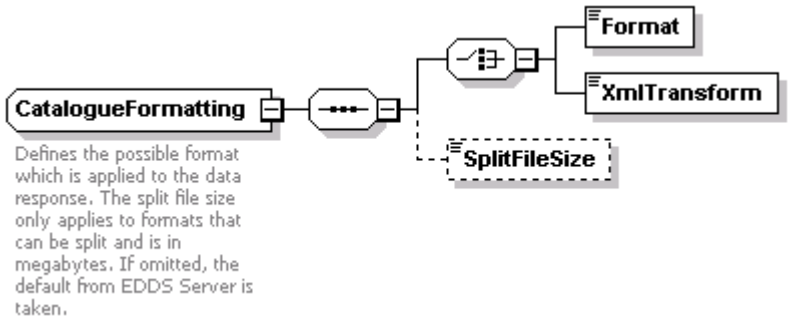
# Appendix H Format Data Type

## H.1 group SplittableFormat

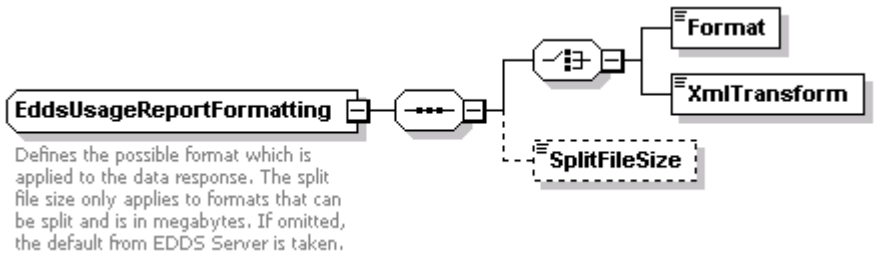
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **SplitFileSize** |
| annotation | documentation<br>Defines the base properties for splittable formats. |

This section of the document describes the format types as defined in the format.xsd file.

## H.2 complexType CatalogueFormatting

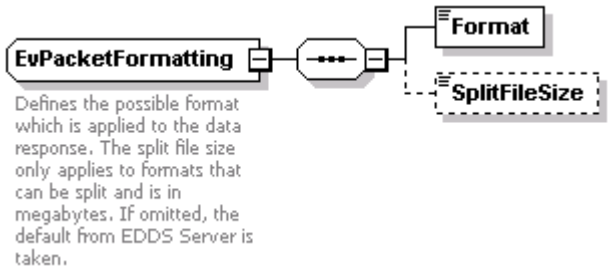
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

## H.3 complexType EddsUsageReportFormatting

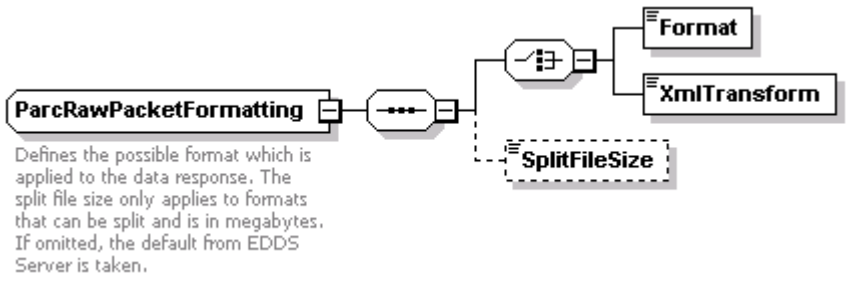
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

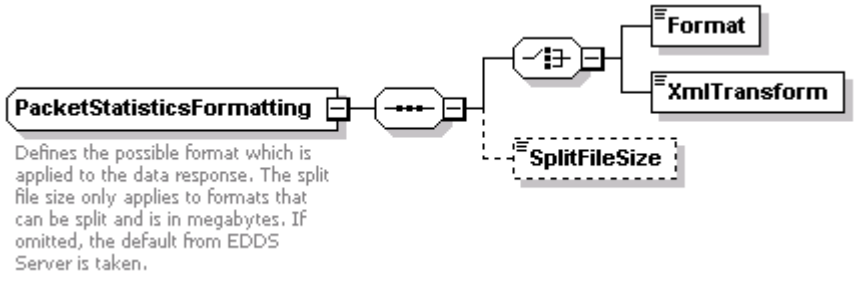
## H.4 complexType EvPacketFormatting

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. The split file size only applies to formats that can be split and is in megabytes. If omitted, the default from EDDS Server is taken. |

## H.5 complexType PacketFormatting

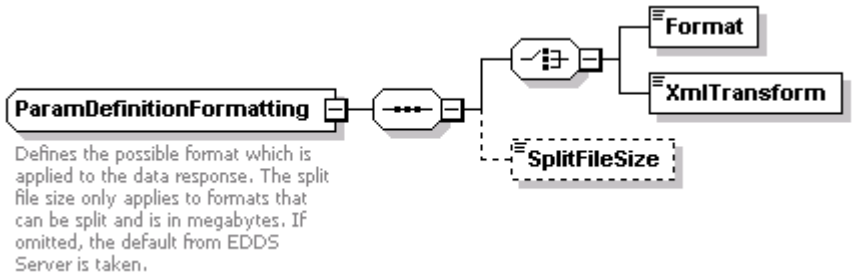
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. The split file size only applies to formats that can be split and is in megabytes. If omitted, the default from EDDS Server is taken. |

## H.6 complexType PacketStatisticsFormatting

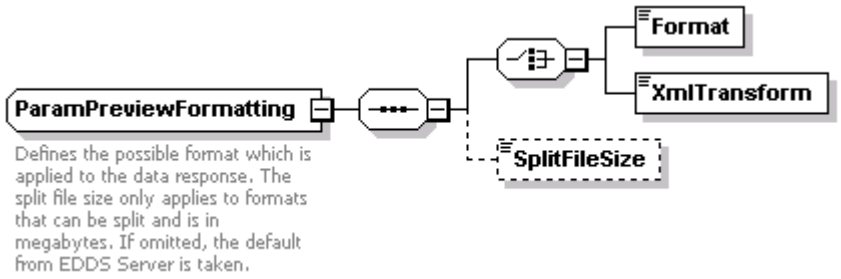
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

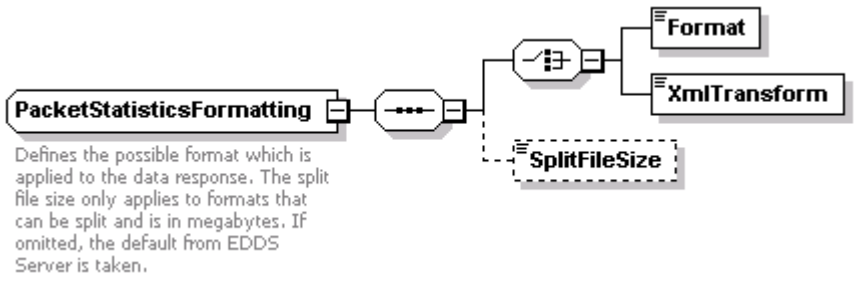
## H.7 complexType ParamDefinitionFormatting

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

## H.8 complexType ParamPreviewFormatting

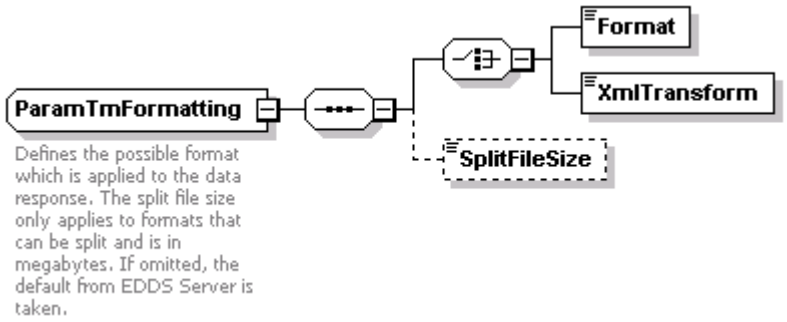
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

## H.9 complexType ParamStatisticsFormatting

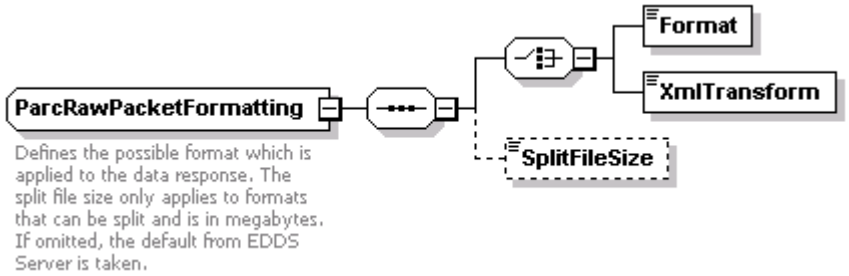
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

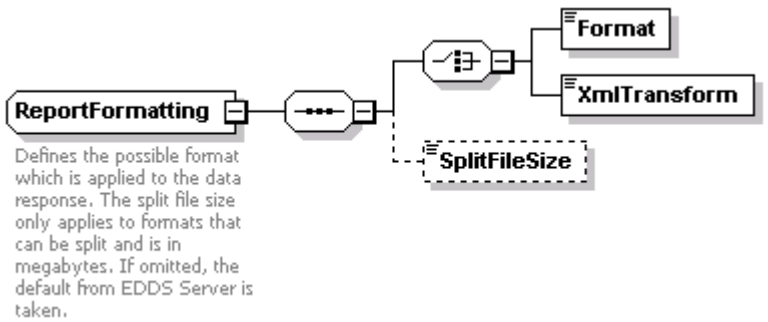
## H.10 complexType ParamTmFormatting

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

## H.11 complexType ParcRawPacketFormatting

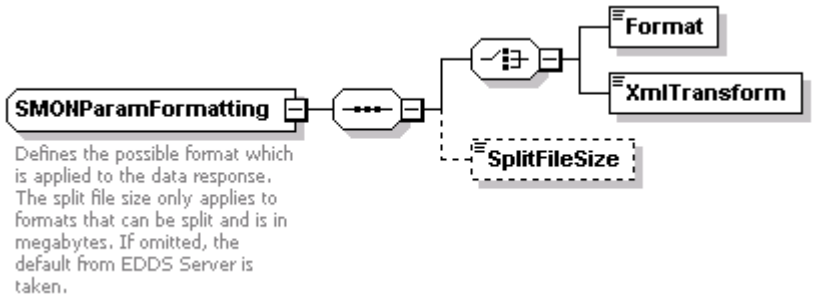
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

## H.12 complexType ReportFormatting

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

## H.13 complexType SMONParamFormatting

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Format XmlTransform SplitFileSize** |
| annotation | documentation<br>Defines the possible format which is applied to the data response. |

## H.14 simpleType ArchiveFileFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration BINARY |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.15 simpleType CatalogueFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **CatalogueFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML<br>enumeration ASCII |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.16 simpleType EddsUsageReportFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **EddsUsageReportFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.17 simpleType EvPacketFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration EDDS_RAW |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.18 simpleType PacketFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| facets | Kind Value annotation<br>enumeration EDDS_RAW<br>enumeration SFDU<br>enumeration GDDS_BINARY |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.19 simpleType PacketStatisticsFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **PacketStatisticsFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.20 simpleType ParamDefinitionFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ParamDefinitionFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML<br>enumeration BINARY |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.21 simpleType ParamPreviewFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ParamPreviewFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML<br>enumeration ASCII |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.22 simpleType ParamStatisticsFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ParamStatisticsFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML<br>enumeration ASCII |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.23 simpleType ParamTmFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ParamTmFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML documentation<br>XML format<br>enumeration TDRS documentation<br>TDRS spreadsheet format |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## H.24 simpleType ParcRawPacketFormat

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ParcRawPacketFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML<br>enumeration BINARY |

| | |
|---|---|
| annotation | documentation<br>Defines the list of supported format of the data response. |

## *H.25 simpleType ReportFormat*

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **ReportFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML<br>enumeration ASCII<br>enumeration BINARY |
| annotation | documentation<br>Defines the list of supported format of the data response. |

## *H.26 simpleType SMONParamFormat*

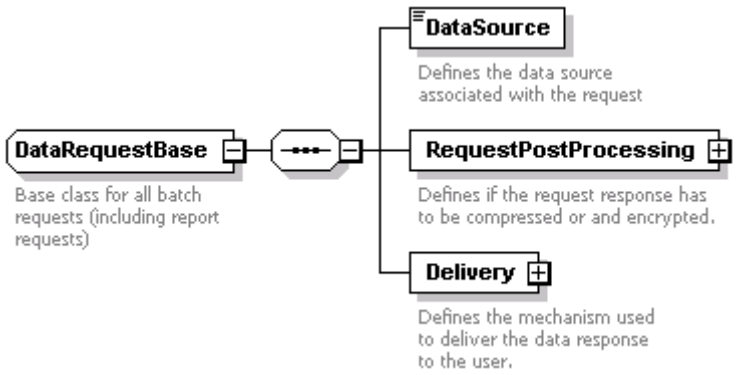
| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **SMONParamFormatting/Format** |
| facets | Kind Value annotation<br>enumeration XML documentation<br>XML format<br>enumeration DARC_XML documentation<br>DARC XML format<br>enumeration DARC_BINARY documentation<br>DARC binary format<br>enumeration TDRS documentation<br>TDRS spreadsheet format<br>enumeration BINARY documentation<br>Binary format |
| annotation | documentation<br>Defines the list of supported format of the data response. |

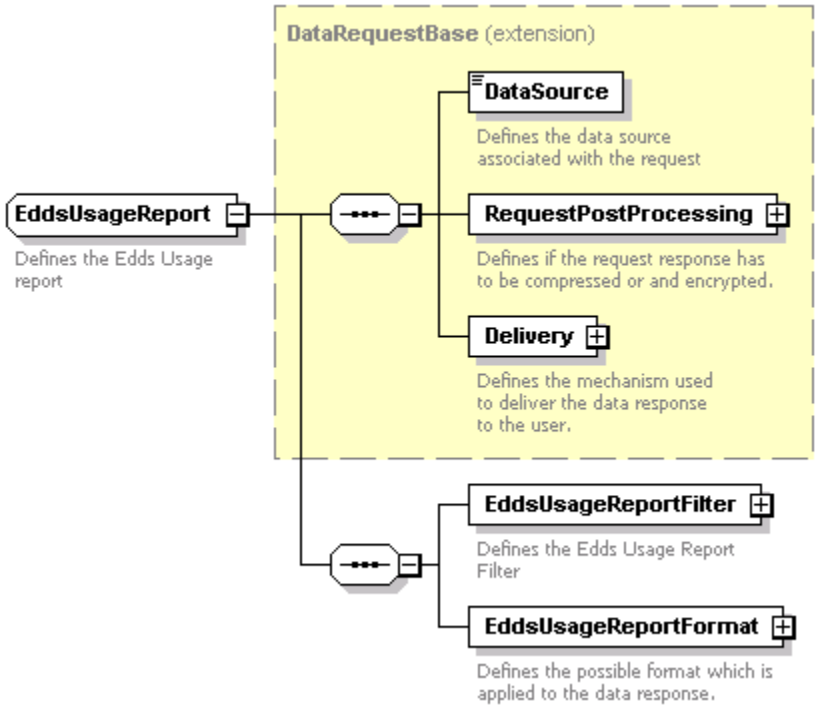
# Appendix I Report Data Type

This section of the document describes the report complex types as defined in the report.xsd file.

## *I.1 complexType DataRequestBase*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DataSource RequestPostProcessing Delivery** |
| used by | complexTypes **EddsUsageReport EventRecordReport OolRecordReport PktTcReport PktTmReport** |
| annotation | documentation<br>Base class for all batch requests (including report requests) |

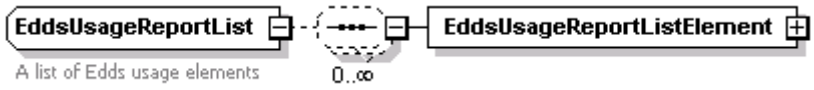
## *I.2 complexType EddsUsageReport*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |

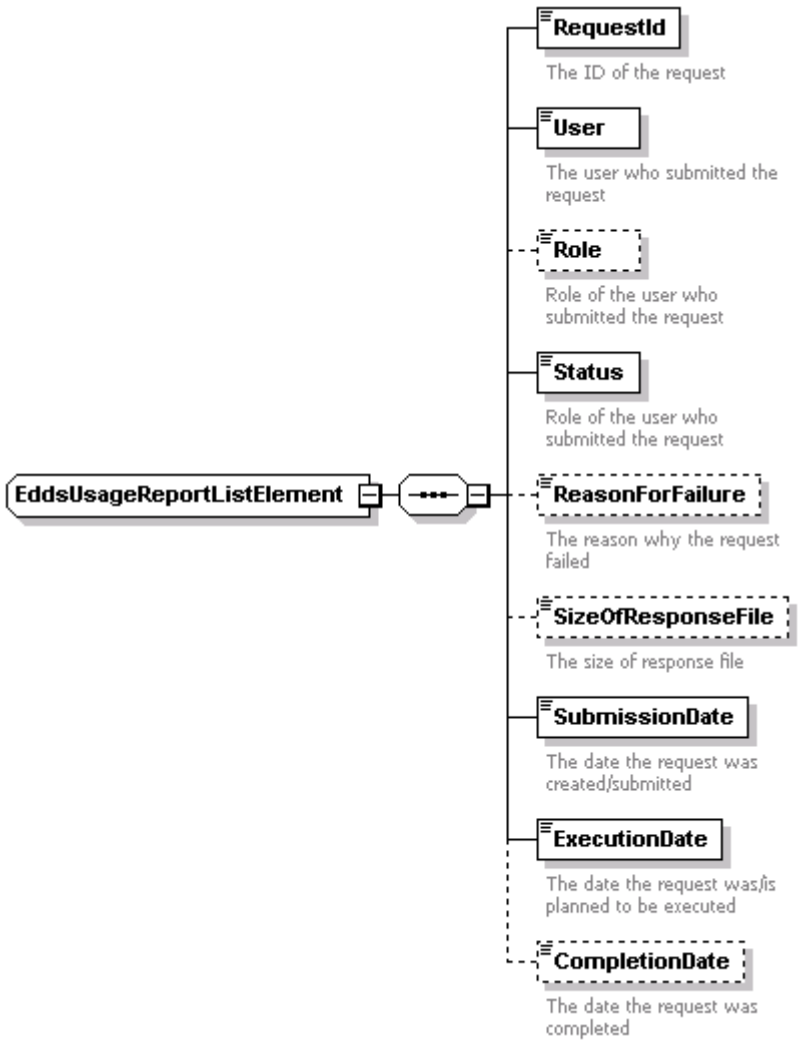
 

| | |
|---|---|
| children | **DataSource RequestPostProcessing Delivery EddsUsageReportFilter EddsUsageReportFormat** |
| annotation | documentation<br>Defines the Edds Usage report |

## I.3 complexType EddsUsageReportList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EddsUsageReportListElement** |
| used by | element **EddsUsageReportResponse/EddsUsageReportList** |
| annotation | documentation<br>A list of Edds usage elements |

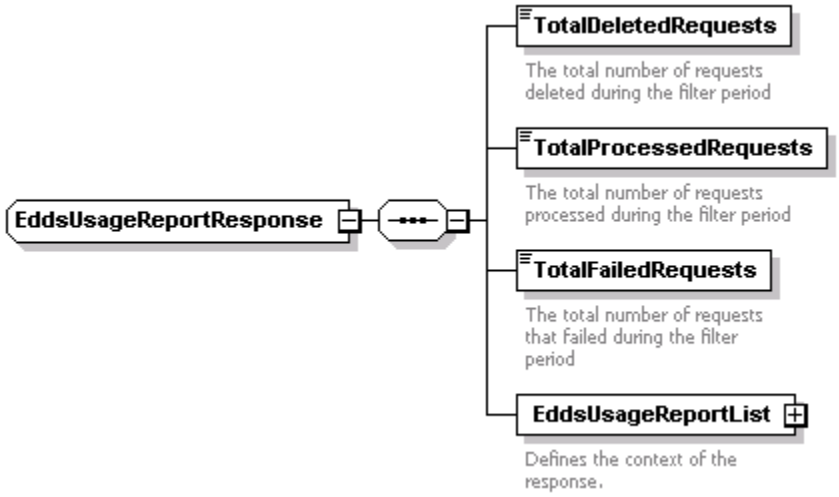
## I.4 complexType EddsUsageReportListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |

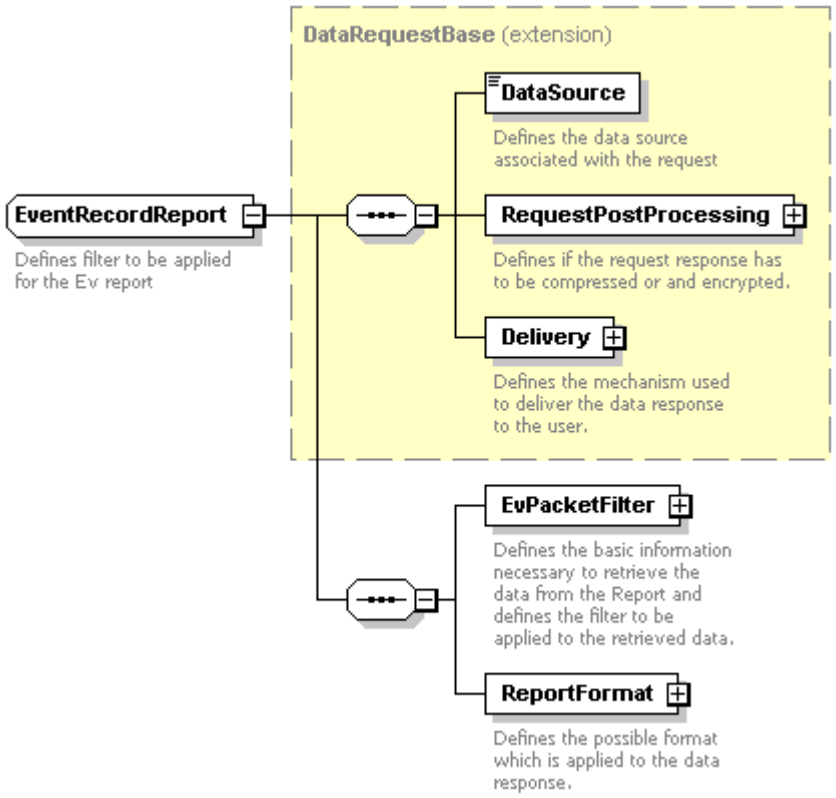
| | |
|---|---|
| children | **RequestId User Role Status ReasonForFailure SizeOfResponseFile SubmissionDate ExecutionDate CompletionDate** |
| used by | element **EddsUsageReportList/EddsUsageReportListElement** |

## *I.5 complexType EddsUsageReportResponse*

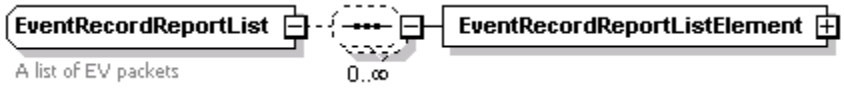
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **TotalDeletedRequests TotalProcessedRequests TotalFailedRequests EddsUsageReportList** |

## I.6 complexType EventRecordReport

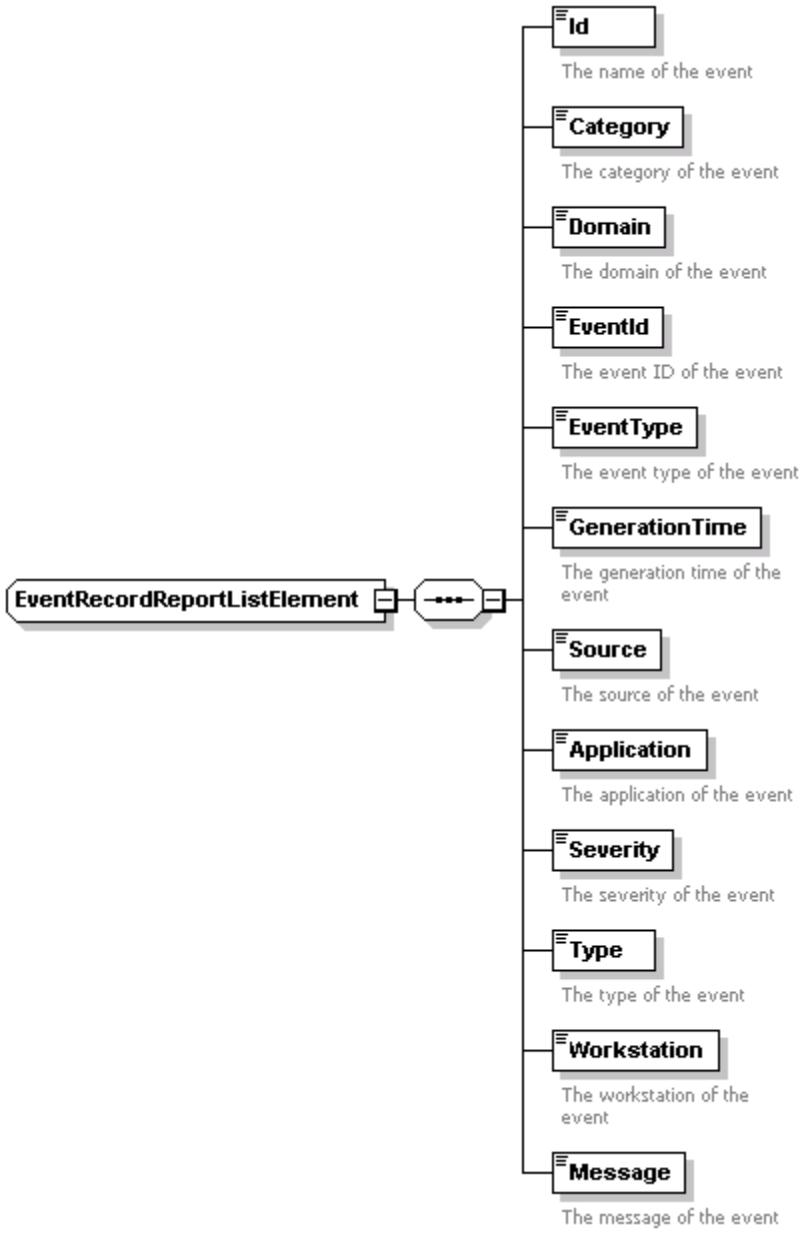
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **DataSource RequestPostProcessing Delivery EvPacketFilter ReportFormat** |
| annotation | documentation<br>Defines filter to be applied for the Ev report |

## I.7 complexType EventRecordReportList

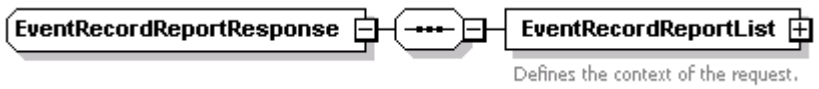
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EventRecordReportListElement** |
| used by | element **EventRecordReportResponse/EventRecordReportList** |
| annotation | documentation<br>A list of EV packets |

## I.8 complexType EventRecordReportListElement

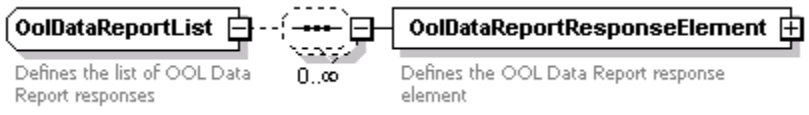
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | Id Category Domain EventId EventType GenerationTime Source Application Severity Type Workstation Message |
| used by | element **EventRecordReportList/EventRecordReportListElement** |

## I.9 complexType EventRecordReportResponse

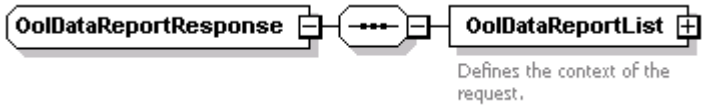
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **EventRecordReportList** |

## *I.10 complexType OolDataReportList*

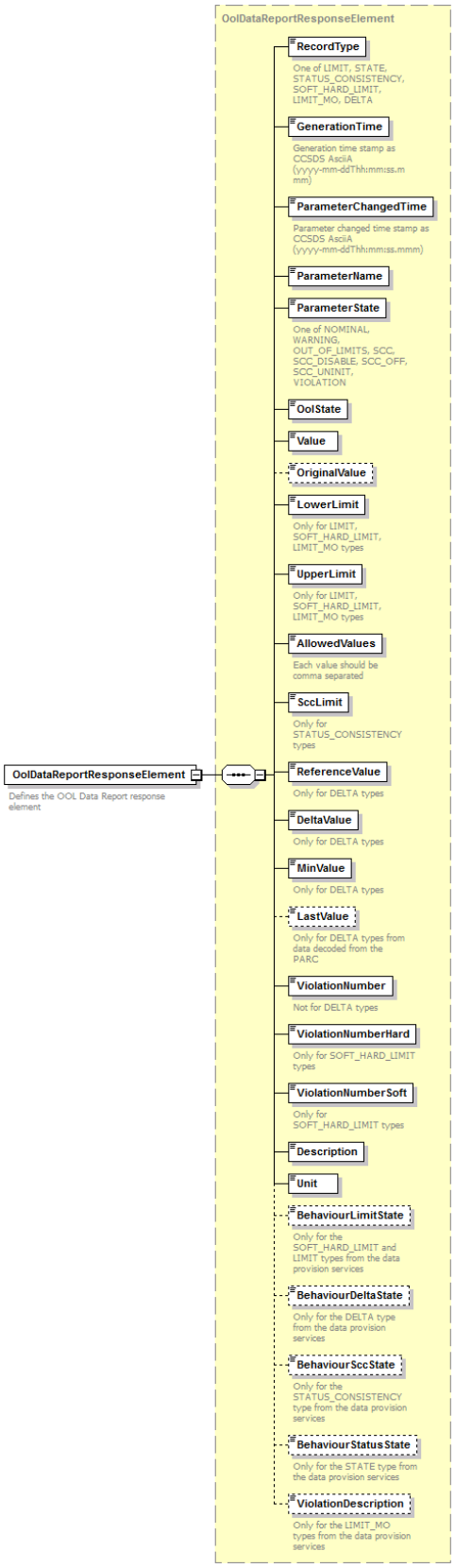
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **OolDataReportResponseElement** |
| used by | element **OolDataReportResponse/OolDataReportList** |
| annotation | documentation<br>Defines the list of OOL Data Report responses |

## *I.11 complexType OolDataReportResponse*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **OolDataReportList** |

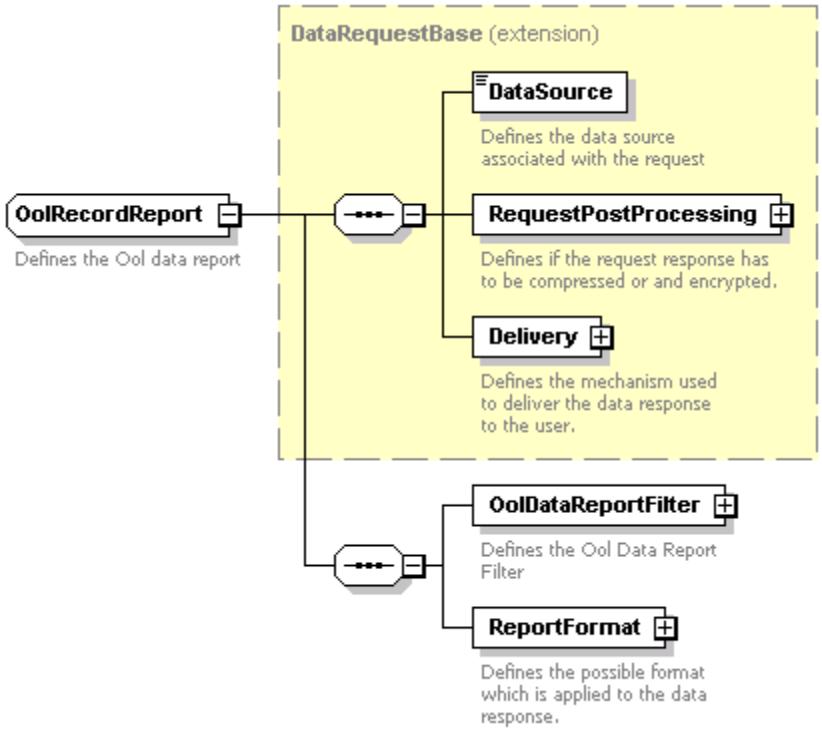
## *I.12 complexType OolDataReportResponseElement*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **RecordType GenerationTime ParameterChangedTime ParameterName ParameterState OolState Value OriginalValue LowerLimit UpperLimit AllowedValues SccLimit ReferenceValue DeltaValue MinValue** |

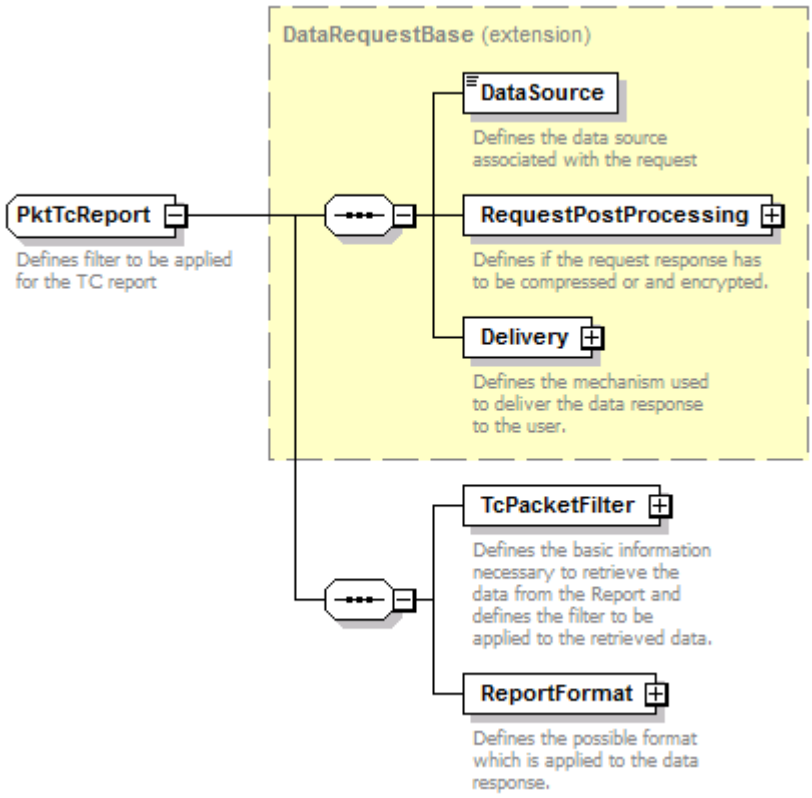
| | |
|---|---|
| | **LastValue ViolationNumber ViolationNumberHard ViolationNumberSoft Description Unit BehaviourLimitState BehaviourDeltaState BehaviourSccState BehaviourStatusState ViolationDescription** |
| used by | element **OolDataReportList/OolDataReportResponseElement** |

## *I.13 complexType OolRecordReport*

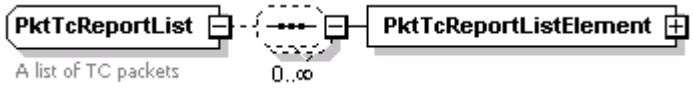
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **DataSource RequestPostProcessing Delivery OolDataReportFilter ReportFormat** |
| annotation | documentation<br>Defines the Ool data report |

## I.14 complexType PktTcReport

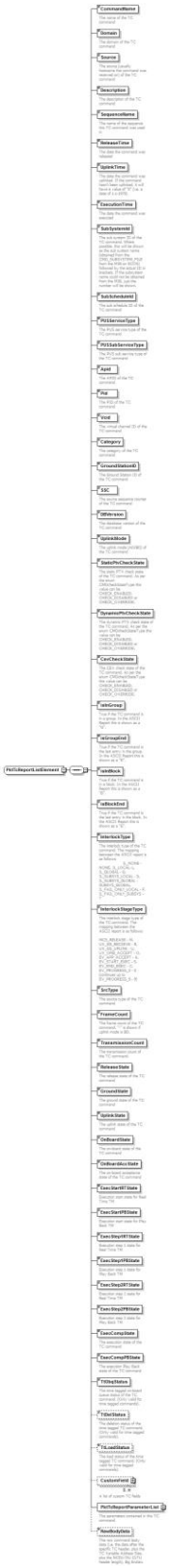
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **DataSource RequestPostProcessing Delivery TcPacketFilter ReportFormat** |
| annotation | documentation<br>Defines filter to be applied for the TC report |

## I.15 complexType PktTcReportList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PktTcReportListElement** |
| used by | element **PktTcReportResponse/PktTcReportList** |
| annotation | Documentation<br>A list of TC packets |

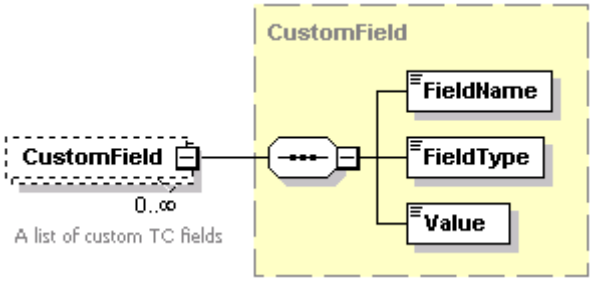
## *I.16 complexType PktTcReportListElement*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **CommandName Domain Source Description SequenceName ReleaseTime UplinkTime ExecutionTime SubSystemId SubScheduleId PUSServiceType PUSSubServiceType Apid Pid Vcid Category GroundStationID SSC DBVersion UplinkMode StaticPtvCheckState DynamicPtvCheckState CevCheckState** |

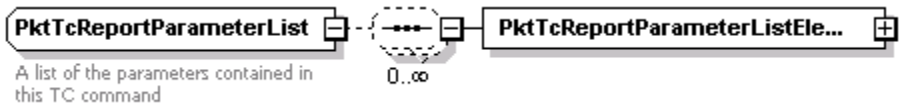
 

| | |
|---|---|
| | isInGroup isGroupEnd isInBlock isBlockEnd InterlockType InterlockStageType SrcType FrameCount TransmissionCount ReleaseState GroundState UplinkState OnBoardState OnBoardAccState ExecStartRTState ExecStartPBState ExecStep1RTState ExecStep1PBState ExecStep2RTState ExecStep2PBState ExecCompState ExecCompPBState TtObqStatus **TtDelStatus TtLoadStatus** CustomField PktTcReportParameterList RawBodyData |
| used by | element **PktTcReportList/PktTcReportListElement** |

## I.17 complexType CustomField

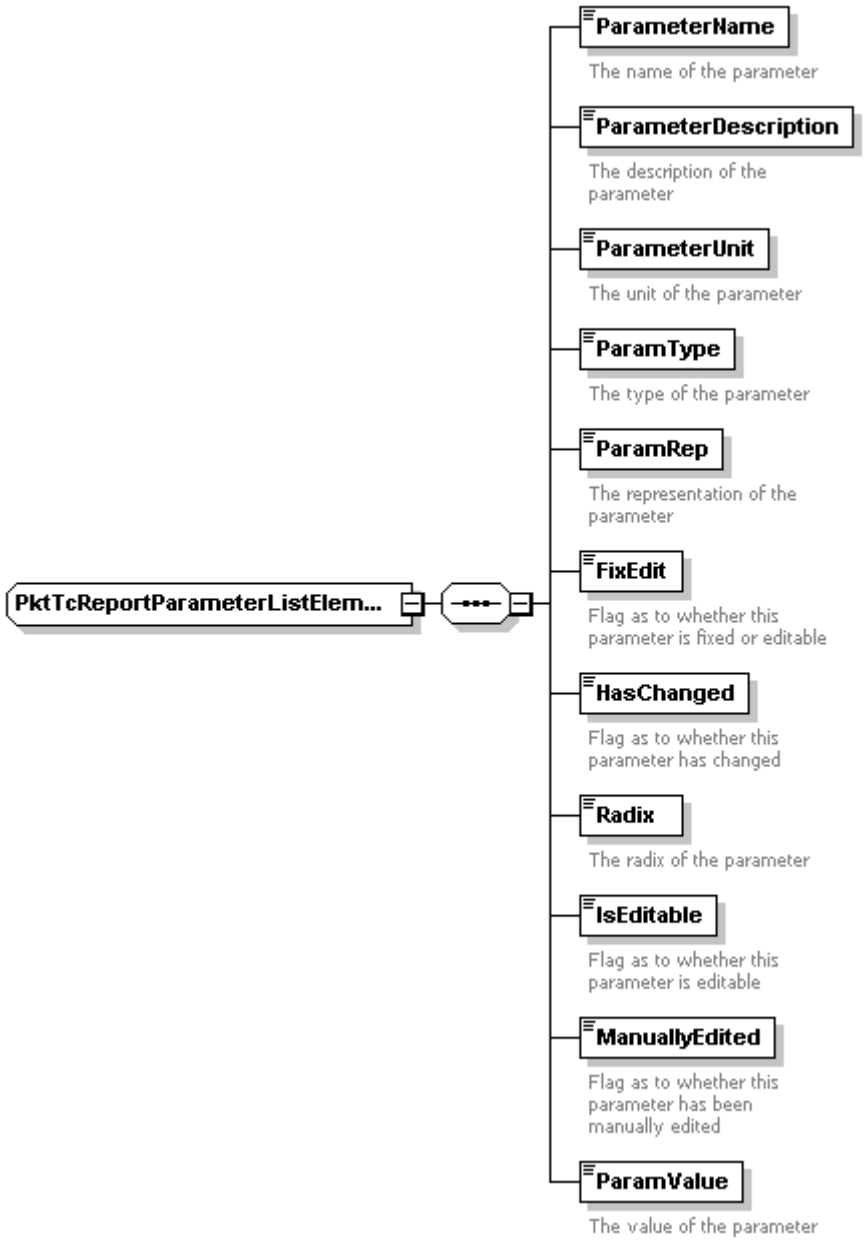
| | |
|---|---|
| diagram |  |
| type | CustomField |
| properties | isRef 0<br>minOcc 0<br>maxOcc unbounded<br>content complex |
| children | FieldName FieldType Value |
| annotation | documentation<br>A list of custom TC fields |

## I.18 complexType PktTcReportParameterList

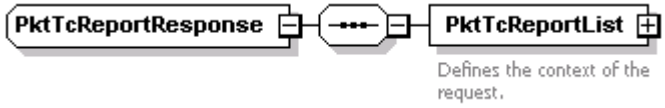
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PktTcReportParameterListElement** |
| used by | element **PktTcReportListElement/PktTcReportParameterList** |
| annotation | documentation<br>A list of the parameters contained in this TC command |

## I.19 complexType PktTcReportParameterListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParameterName ParameterDescription ParameterUnit ParamType ParamRep FixEdit HasChanged Radix IsEditable ManuallyEdited ParamValue** |
| used by | element **PktTcReportParameterList/PktTcReportParameterListElement** |

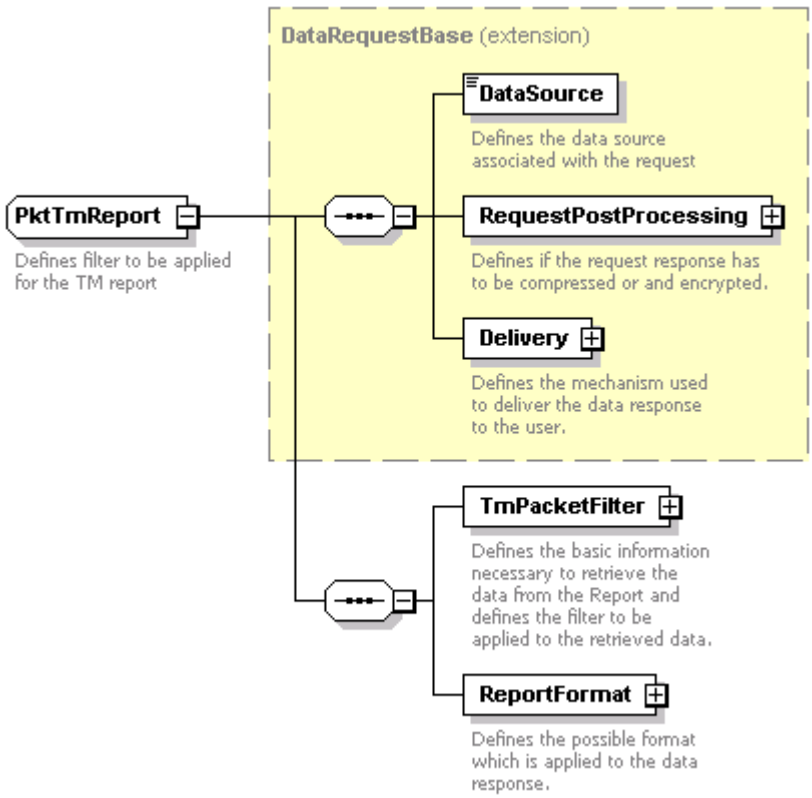
## I.20 complexType PktTcReportResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |

| | |
|---|---|
| children | **PktTcReportList** |

## I.21 complexType PktTmReport

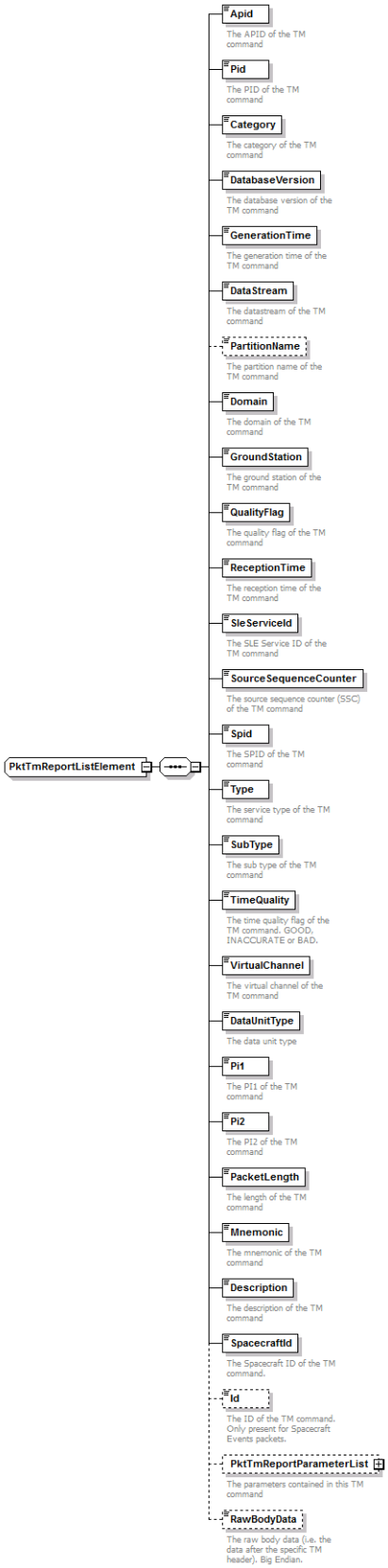
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **DataRequestBase** |
| properties | base DataRequestBase |
| children | **DataSource RequestPostProcessing Delivery TmPacketFilter ReportFormat** |
| annotation | documentation<br>Defines filter to be applied for the TM report |

## I.22 complexType PktTmReportList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PktTmReportListElement** |
| used by | element **PktTmReportResponse/PktTmReportList** |
| annotation | documentation<br>A list of TM packets |

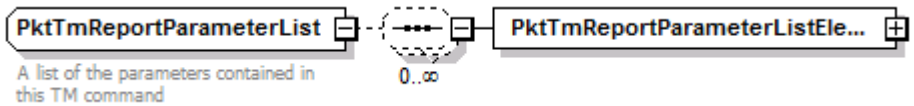
## *I.23 complexType PktTmReportListElement*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Apid Pid Category DatabaseVersion GenerationTime DataStream PartitionName Domain GroundStation QualityFlag ReceptionTime SleServiceId SourceSequenceCounter Spid Type SubType TimeQuality** |

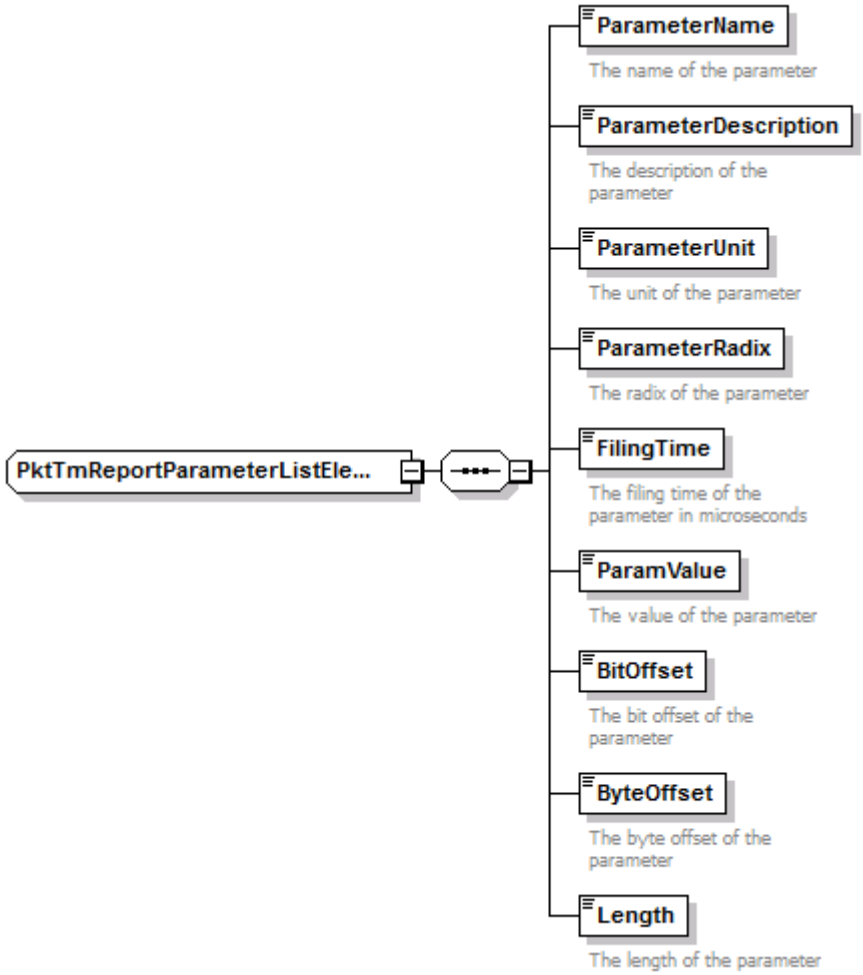
 

| | |
|---|---|
| | **VirtualChannel DataUnitType Pi1 Pi2 PacketLength Mnemonic Description SpacecraftId Id PktTmReportParameterList RawBodyData** |
| used by | element **PktTmReportList/PktTmReportListElement** |

## I.24 complexType PktTmReportParameterList

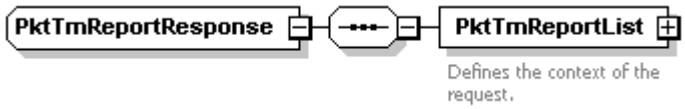
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PktTmReportParameterListElement** |
| used by | element **PktTmReportListElement/PktTmReportParameterList** |

## I.25 complexType PktTmReportParameterListElement

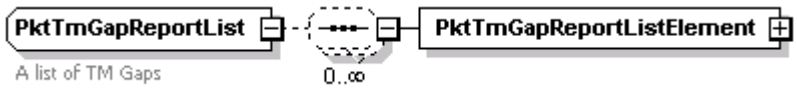
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ParameterName ParameterDescription ParameterUnit ParameterRadix FilingTime ParamValue BitOffset ByteOffset Length** |
| used by | element **PktTmReportParameterList/PktTmReportParameterListElement** |

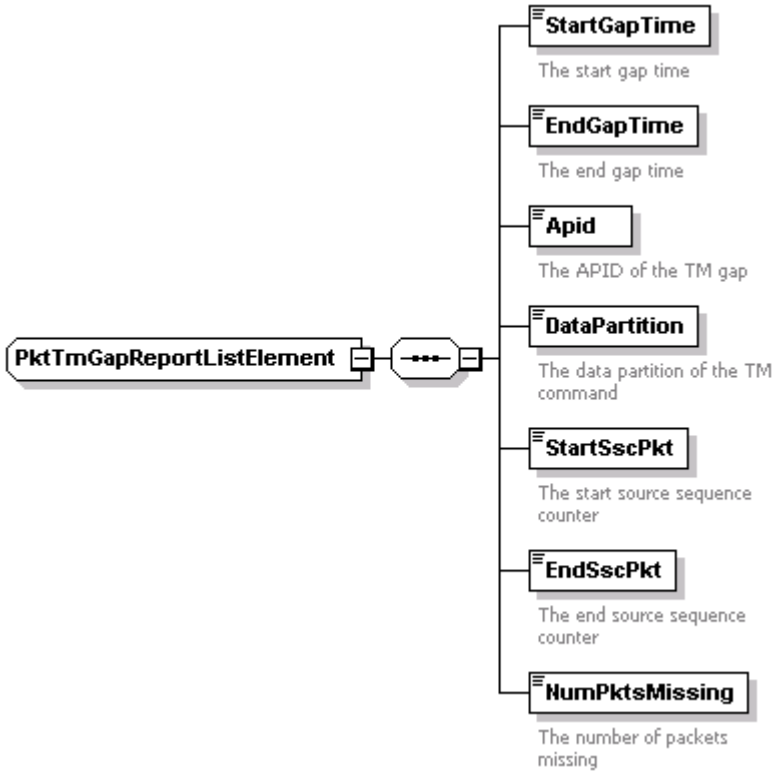
## I.26 complexType PktTmReportResponse

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **PktTmReportList** |

## I.27 complexType PktTmGapReportList

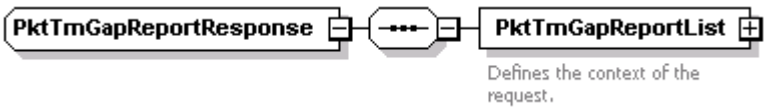
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | PktTmGapReportListElement |
| used by | element PktTmGapReportResponse/PktTmGapReportList |

## I.28 complexType PktTmGapReportListElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | StartGapTime EndGapTime Apid DataPartition StartSscPkt EndSscPkt NumPktsMissing |
| used by | element PktTmGapReportList/PktTmGapReportListElement |

## I.29 complexType PktTmGapReportResponse

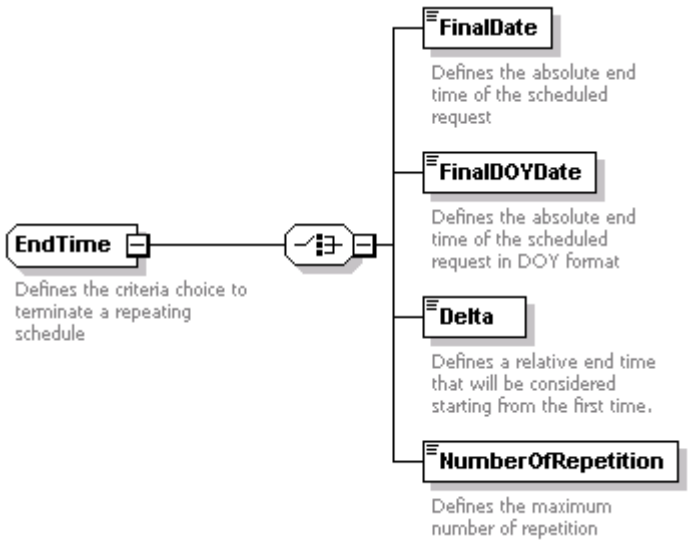
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | PktTmGapReportList |

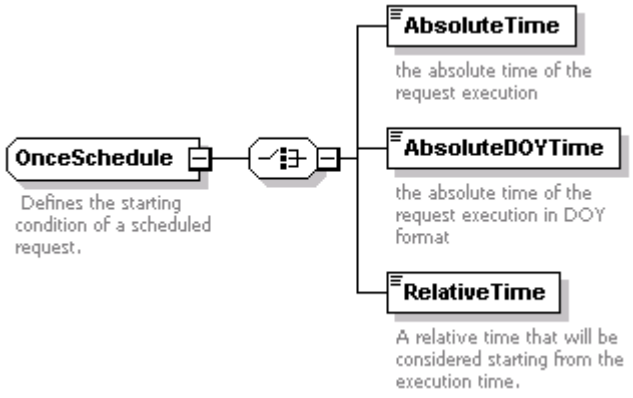
# Appendix J Schedule Data Type

This section of the document describes the complex types used for scheduling as defined in the schedule.xsd file.

## *J.1 complexType EndTime*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **FinalDate FinalDOYDate Delta NumberOfRepetition** |
| used by | element **RepeatingSchedule/EndTime** |
| annotation | documentation<br>Defines the criteria choice to terminate a repeating schedule |

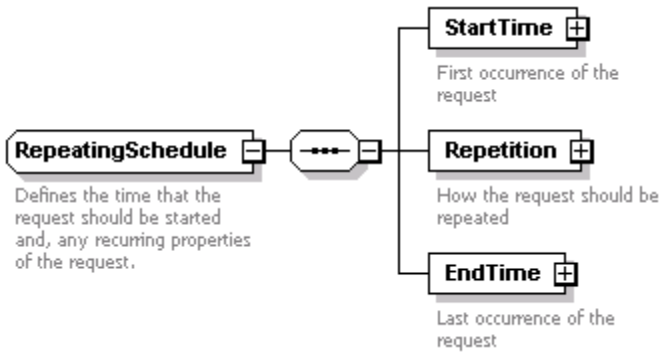
## *J.2 complexType OnceSchedule*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **AbsoluteTime AbsoluteDOYTime RelativeTime** |
| used by | elements **ScheduleOnce/Once ScheduleWithExpiry/RequestExpiryDate RepeatingSchedule/StartTime** |

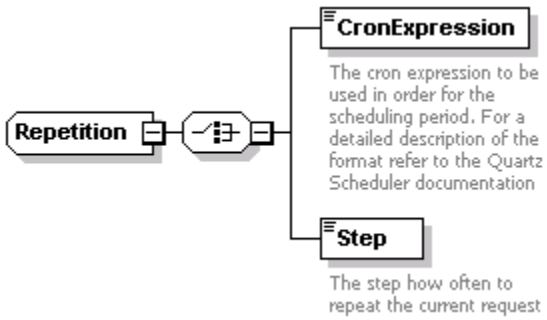
 

| | |
|---|---|
| annotation | documentation<br>Defines the starting condition of a scheduled request. |

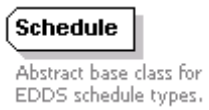
## J.3 complexType RepeatingSchedule

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **StartTime Repetition EndTime** |
| used by | element **ScheduleRepeating/RepeatingSchedule** |
| annotation | documentation<br>Defines the time that the request should be started and, any recurring properties of the request. |

## J.4 complexType Repetition

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **CronExpression Step** |
| used by | element **RepeatingSchedule/Repetition** |

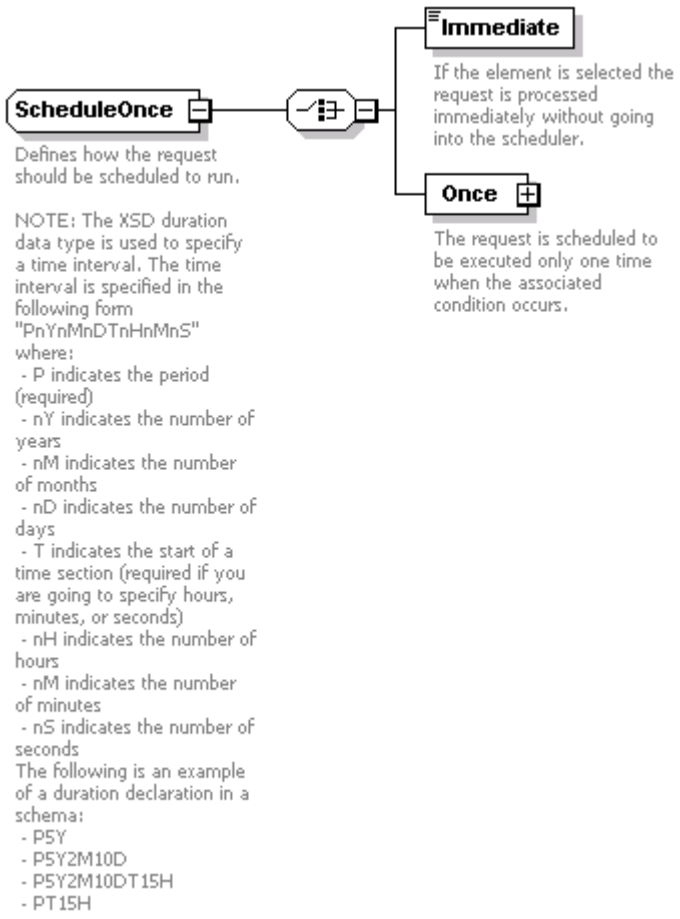
## J.5 complexType Schedule

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| properties | abstract true |
| used by | complexTypes **ScheduleOnce ScheduleRepeating** |

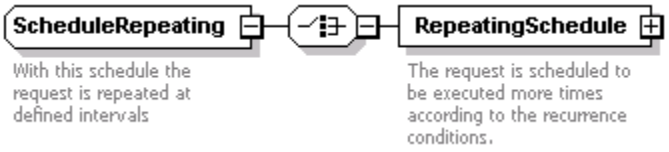
| | |
|---|---|
| annotation | documentation<br>Abstract base class for EDDS schedule types. |

## *J.6 complexType ScheduleOnce*

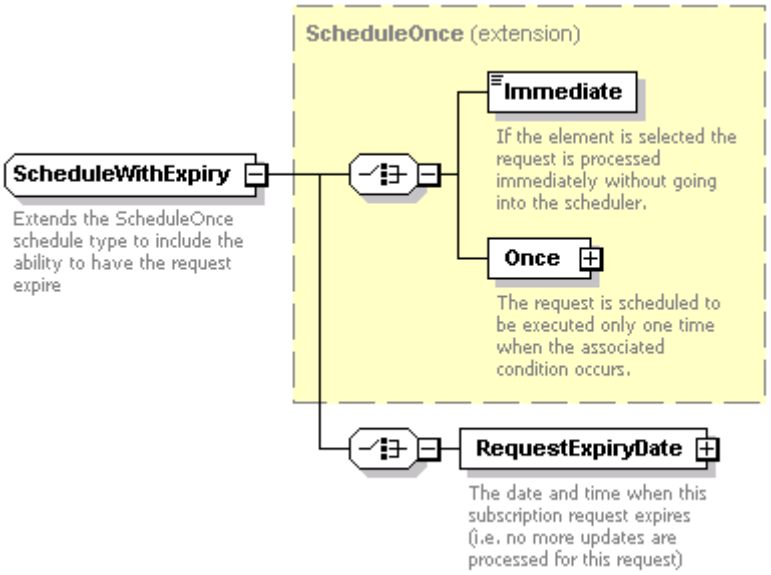
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **Schedule** |
| properties | base Schedule |
| children | **Immediate Once** |
| used by | complexType **ScheduleWithExpiry** |
| annotation | documentation<br>Defines how the request should be scheduled to run.<br>NOTE: The XSD duration data type is used to specify a time interval. The time interval is specified in the following form "PnYnMnDTnHnMnS" where:<br>- P indicates the period (required)<br>- nY indicates the number of years<br>- nM indicates the number of months<br>- nD indicates the number of days<br>- T indicates the start of a time section (required if you are going to specify hours, minutes, or seconds)<br>- nH indicates the number of hours<br>- nM indicates the number of minutes<br>- nS indicates the number of seconds<br>The following is an example of a duration declaration in a schema:<br>- P5Y<br>- P5Y2M10D<br>- P5Y2M10DT15H<br>- PT15H |

## J.7 complexType ScheduleRepeating

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **Schedule** |
| properties | base Schedule |
| children | **RepeatingSchedule** |
| annotation | documentation<br>With this schedule the request is repeated at defined intervals |

## J.8 complexType ScheduleWithExpiry

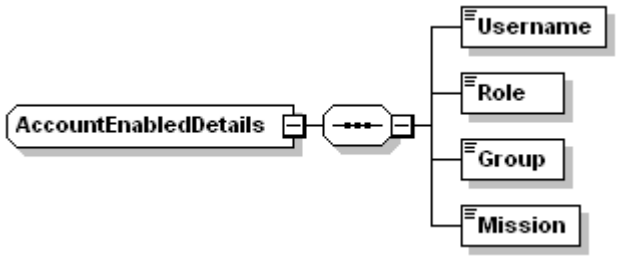
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **ScheduleOnce** |
| properties | base ScheduleOnce |
| children | **Immediate Once RequestExpiryDate** |
| annotation | documentation<br>Extends the ScheduleOnce schedule type to include the ability to have the request expire |

# Appendix K User Management Data Type

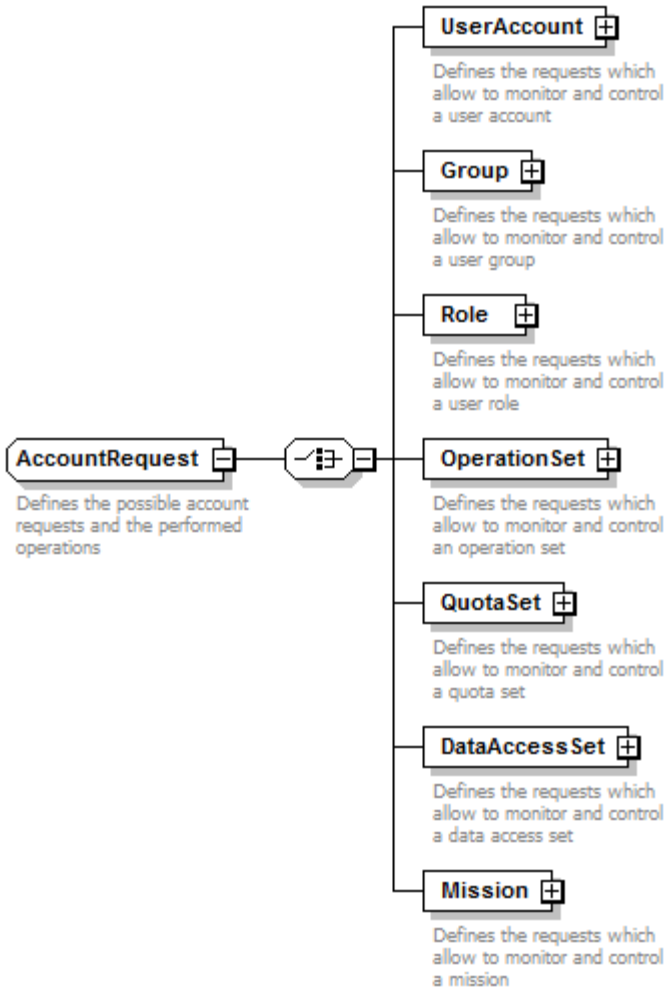
This section of the document describes the complex types used for user mangement as defined in the userrequest.xsd file.

## *K.1 complexType AccountEnabledDetails*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Username Role Group Mission** |
| used by | element **AccountEnabledDetails** |

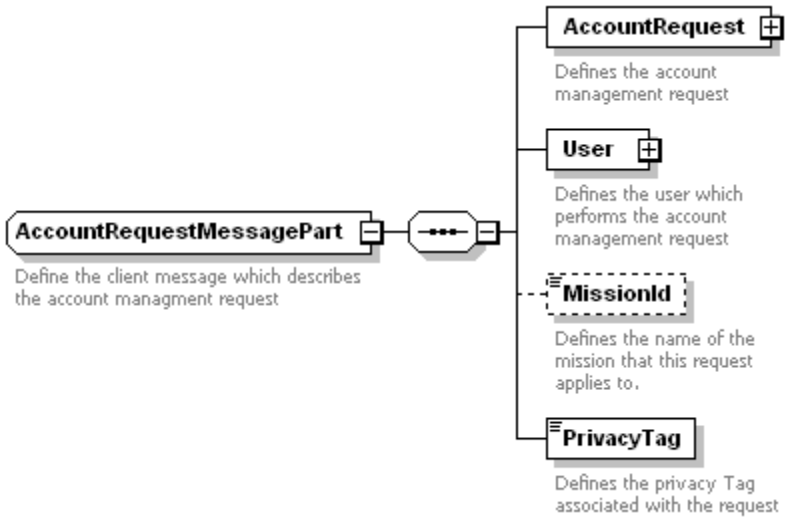
 

## *K.2 complexType AccountRequest*

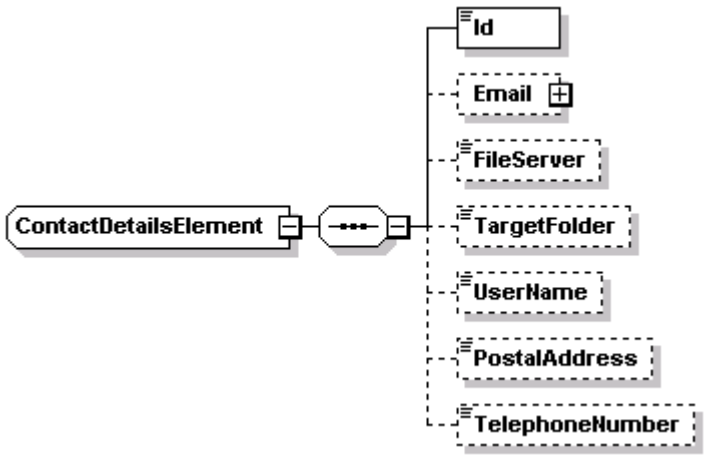
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **UserAccount Group Role OperationSet QuotaSet DataAccessSet Mission** |
| used by | element **AccountRequestMessagePart/AccountRequest** |
| annotation | documentation<br>Defines the possible account requests and the performed operations |

## K.3 complexType AccountRequestMessagePart

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **AccountRequest User MissionId PrivacyTag** |
| used by | element **AccountRequestMessagePart** |
| annotation | documentation<br>Define the client message which describes the account management request |

## K.4 complexType ContactDetailsElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Id Email FileServer TargetFolder UserName PostalAddress TelephoneNumber** |
| used by | elements **UserAccountBase/ContactDetailsList UserAttributes/ContactDetailsList** |

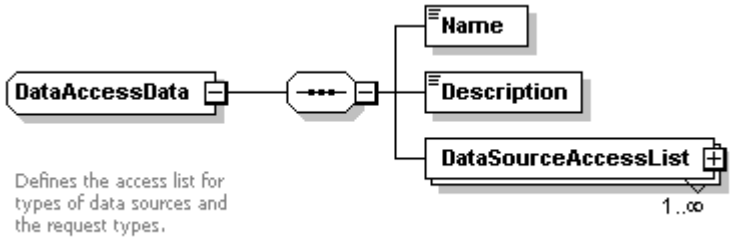
## K.5 complexType ContactDetailsList

| | |
|---|---|
| diagram |  |

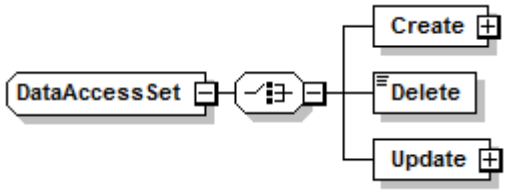
 

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **ContactDetailsListElement** |
| used by | elements **UserAccountData/ContactDetailsList UserAttributes/ContactDetailsList** |

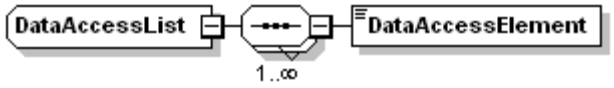
## *K.6 complexType DataAccessData*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description DataSourceAccessList** |
| used by | elements **DataAccessSet/Create MissionDetailsList/DataAccessDataList DataAccessSet/Update** |
| annotation | documentation<br><br>Defines the access list for types of data sources and the request types. |

## *K.7 complexType DataAccessSet*

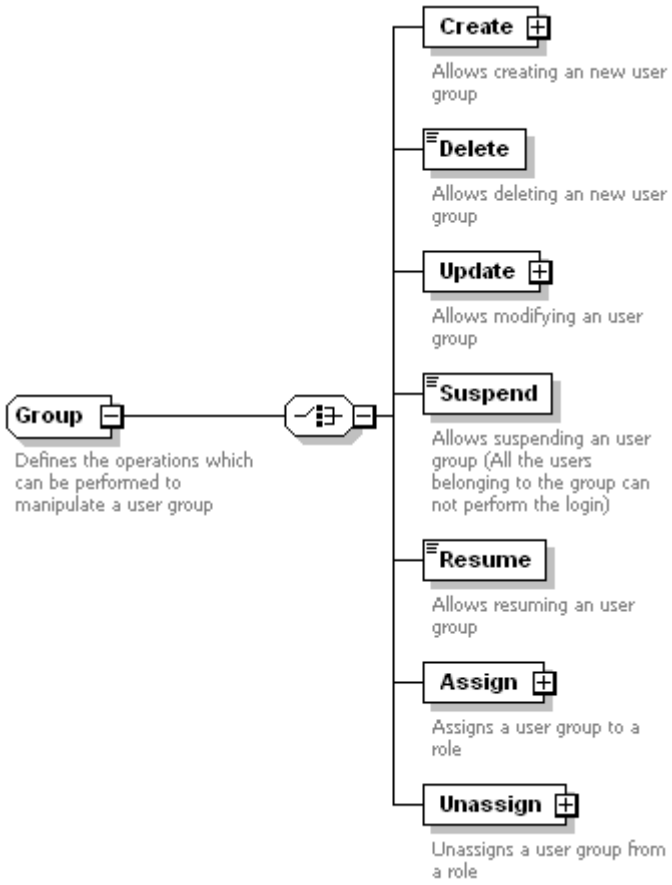
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Create Delete Update** |
| used by | element **AccountRequest/DataAccessSet** |

## *K.8 complexType DataAccessList*

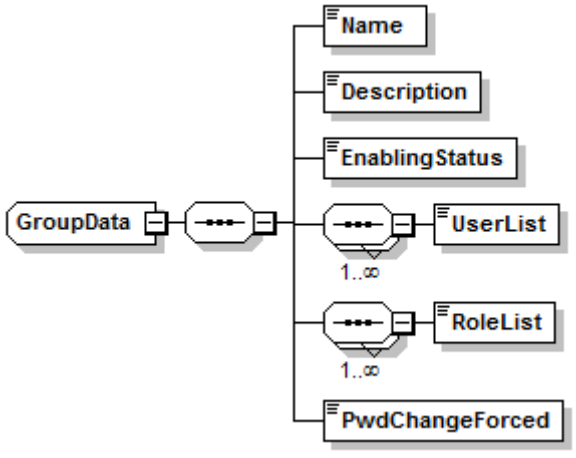
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DataAccessElement** |
| used by | element **DataAccessData/DataAccessList** |

## K.9 complexType Group

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Create Delete Update Suspend Resume Assign Unassign** |
| used by | element **AccountRequest/Group** |
| annotation | documentation<br>Defines the operations which can be performed to manipulate a user group |

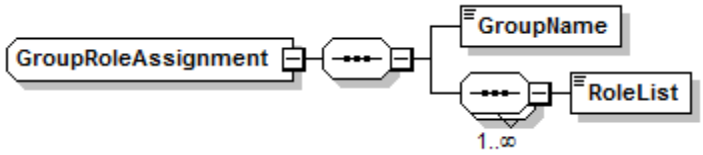
## K.10 complexType GroupData

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description EnablingStatus UserList RoleList PwdChangeForced** |

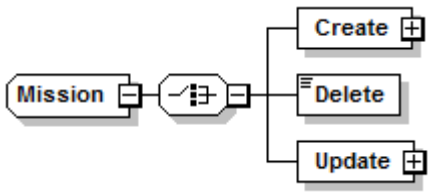
 

| | |
|---|---|
| used by | elements **Group/Create MissionDetailsList/GroupDataList Group/Update** |

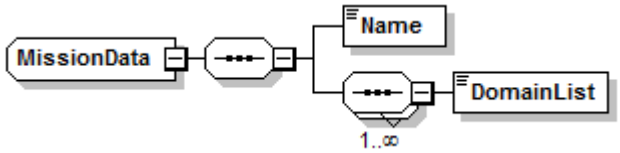
## K.11 complexType GroupRoleAssignment

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **GroupName RoleList** |
| used by | elements **Group/Assign Group/Unassign** |

## K.12 complexType Mission

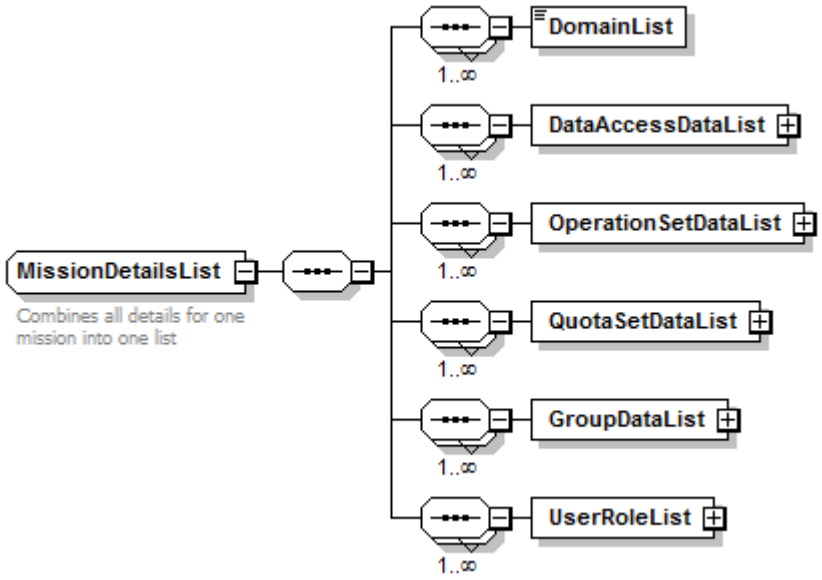
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Create Delete Update** |
| used by | element **AccountRequest/Mission** |

## K.13 complexType MissionData

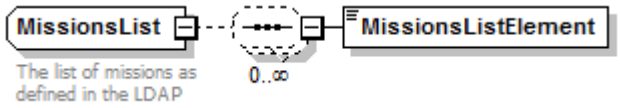
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name DomainList** |
| used by | elements **Mission/Create Mission/Update** |

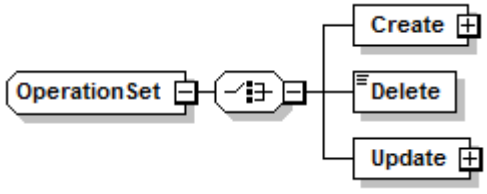
## K.14 complexType MissionDetailsList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **DomainList DataAccessDataList OperationSetDataList QuotaSetDataList GroupDataList UserRoleList** |
| used by | element **MissionDetails** |
| annotation | documentation<br>Combines all details for one mission into one list |

## K.15 complexType MissionsList

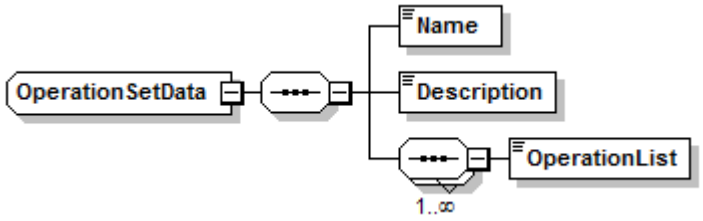
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **MissionsListElement** |
| used by | element **MissionsList** |
| annotation | documentation<br>The list of missions as defined in the LDAP |

## K.16 complexType OperationSet

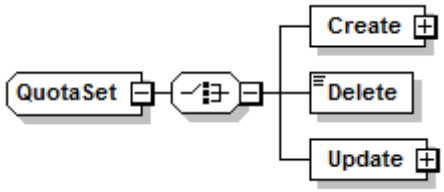
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Create Delete Update** |
| used by | element **AccountRequest/OperationSet** |

## K.17 complexType OperationSetData

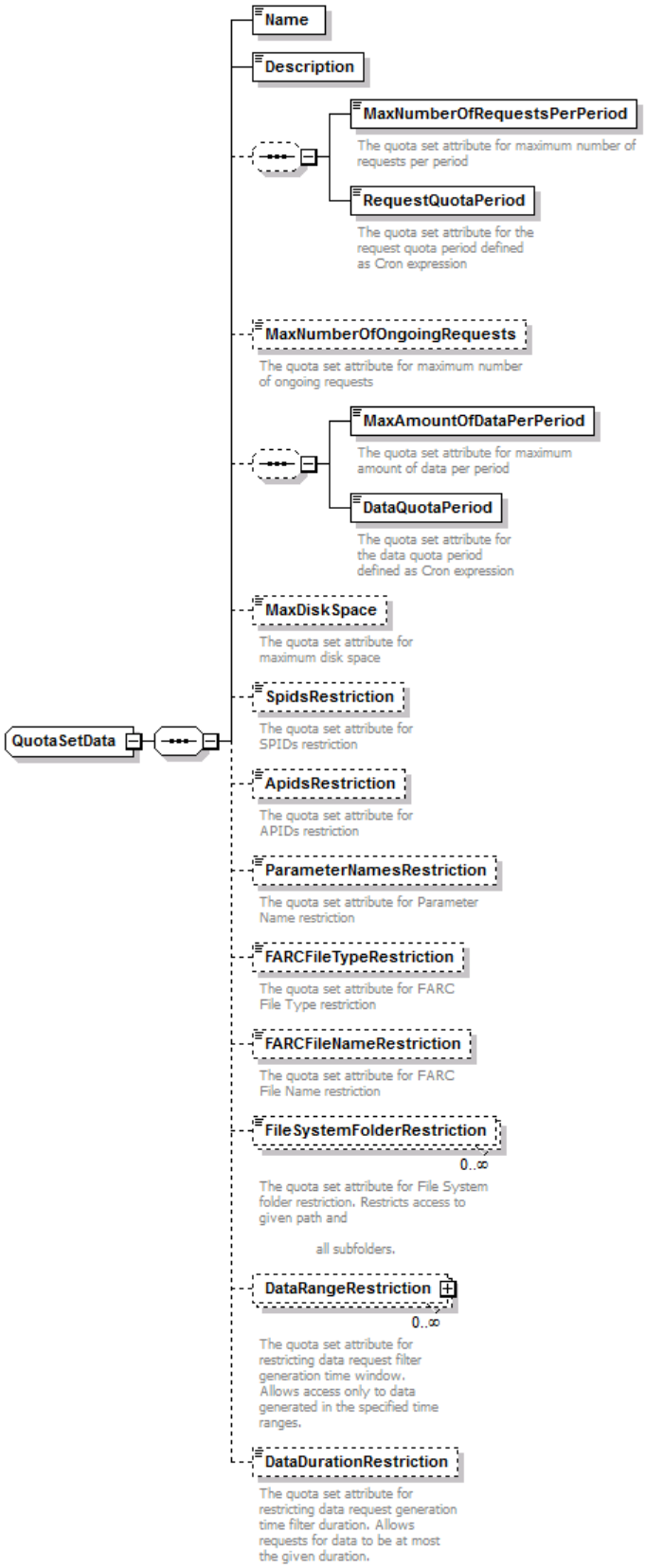
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description OperationList** |
| used by | elements **OperationSet/Create MissionDetailsList/OperationSetDataList OperationSet/Update** |

## K.18 complexType QuotaSet

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Create Delete Update** |
| used by | element **AccountRequest/QuotaSet** |

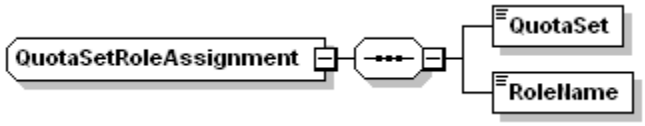
## *K.19 complexType QuotaSetData*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description MaxNumberOfRequestsPerPeriod RequestQuotaPeriod MaxNumberOfOngoingRequests MaxAmountOfDataPerPeriod DataQuotaPeriod MaxDiskSpace** |

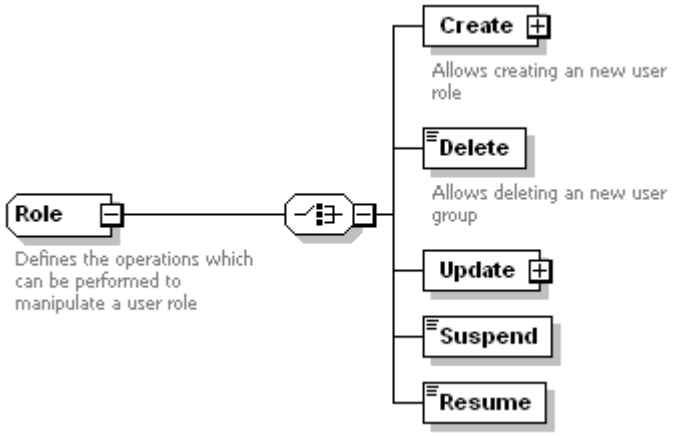
 

| | |
|---|---|
| | **SpidsRestriction ApidsRestriction ParameterNamesRestriction FARCFileTypeRestriction FARCFileNameRestriction FileSystemFolderRestriction DataRangeRestriction DataDurationRestriction** |
| used by | elements **QuotaSet/Create UserQuotaDetails/QuotaLimits MissionDetailsList/QuotaSetDataList QuotaSet/Update** |

## *K.20 complexType QuotaSetRoleAssignment*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **QuotaSet RoleName** |
| used by | elements **QuotaSet/Assign QuotaSet/Unassign** |

## *K.21 complexType Role*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Create Delete Update Suspend Resume** |
| used by | element **AccountRequest/Role** |
| annotation | documentation<br>Defines the operations which can be performed to manipulate a user role |

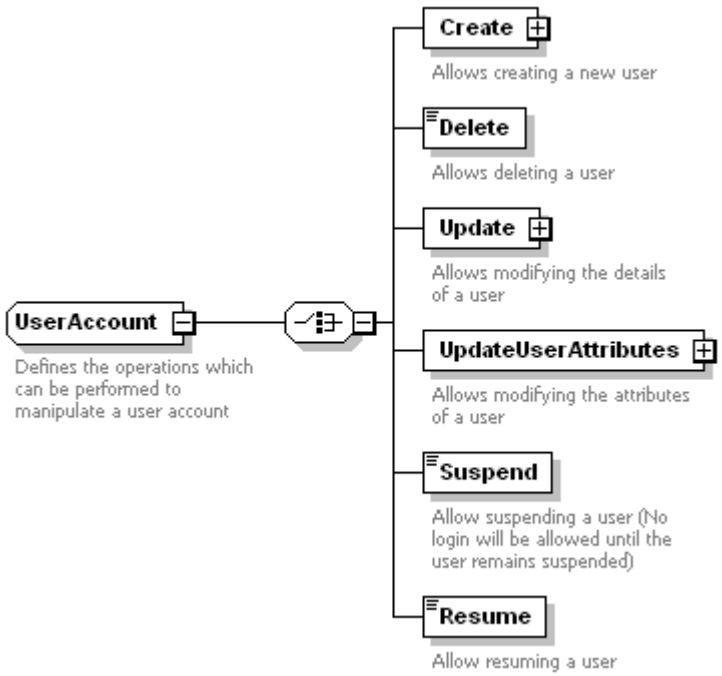
## *K.22 complexType RolesList*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **RoleElement** |
| used by | element **RolesList** |
| annotation | documentation |

| | |
|---|---|
| | The list of roles a user has permission to use for the specified mission |

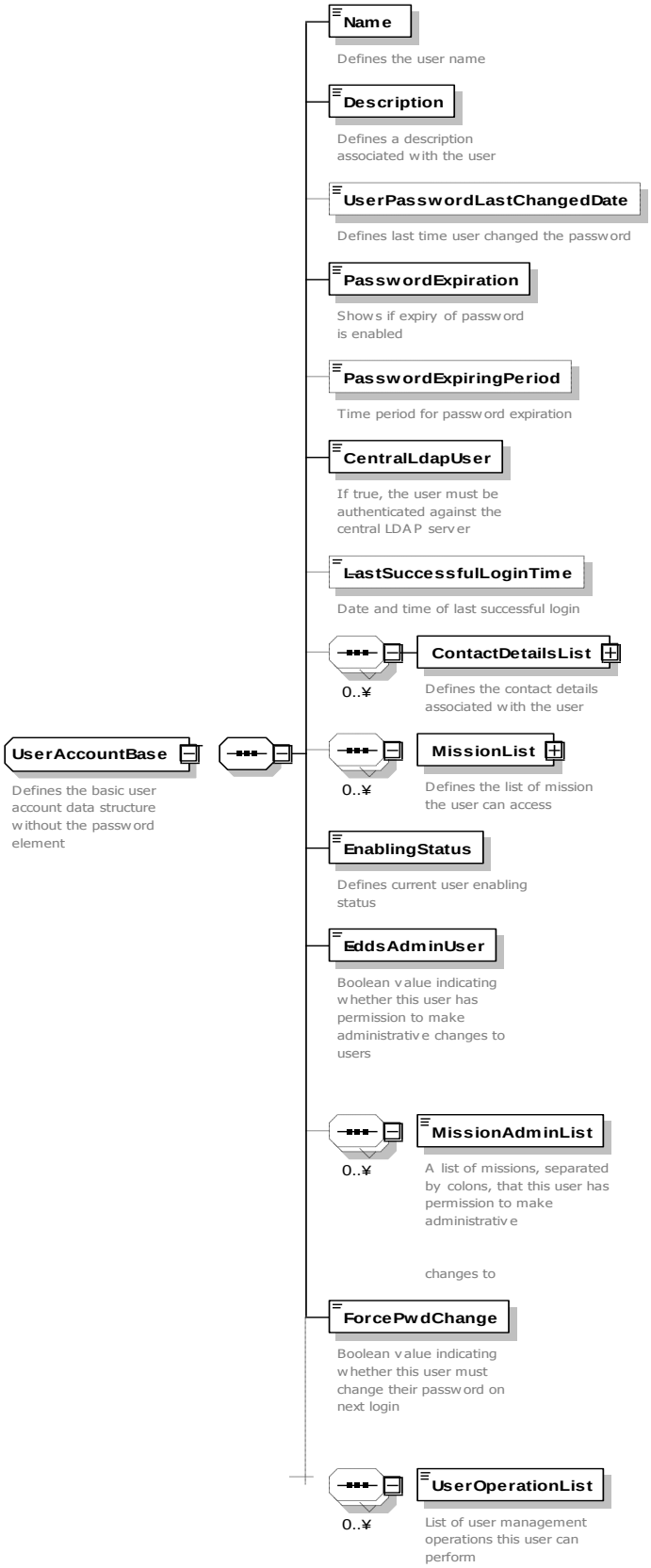
## *K.23 complexType UserAccount*

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Create Delete Update UpdateUserAttributes Suspend Resume** |
| used by | element **AccountRequest/UserAccount** |
| annotation | documentation<br>Defines the operations which can be performed to manipulate a user account |

## *K.24 complexType UserAccountBase*

diagram




| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| children | **Name Description UserPasswordLastChangedDate PasswordExpiration PasswordExpiringPeriod CentralLdapUser LastSuccessfulLoginTime ContactDetailsList MissionList EnablingStatus** |

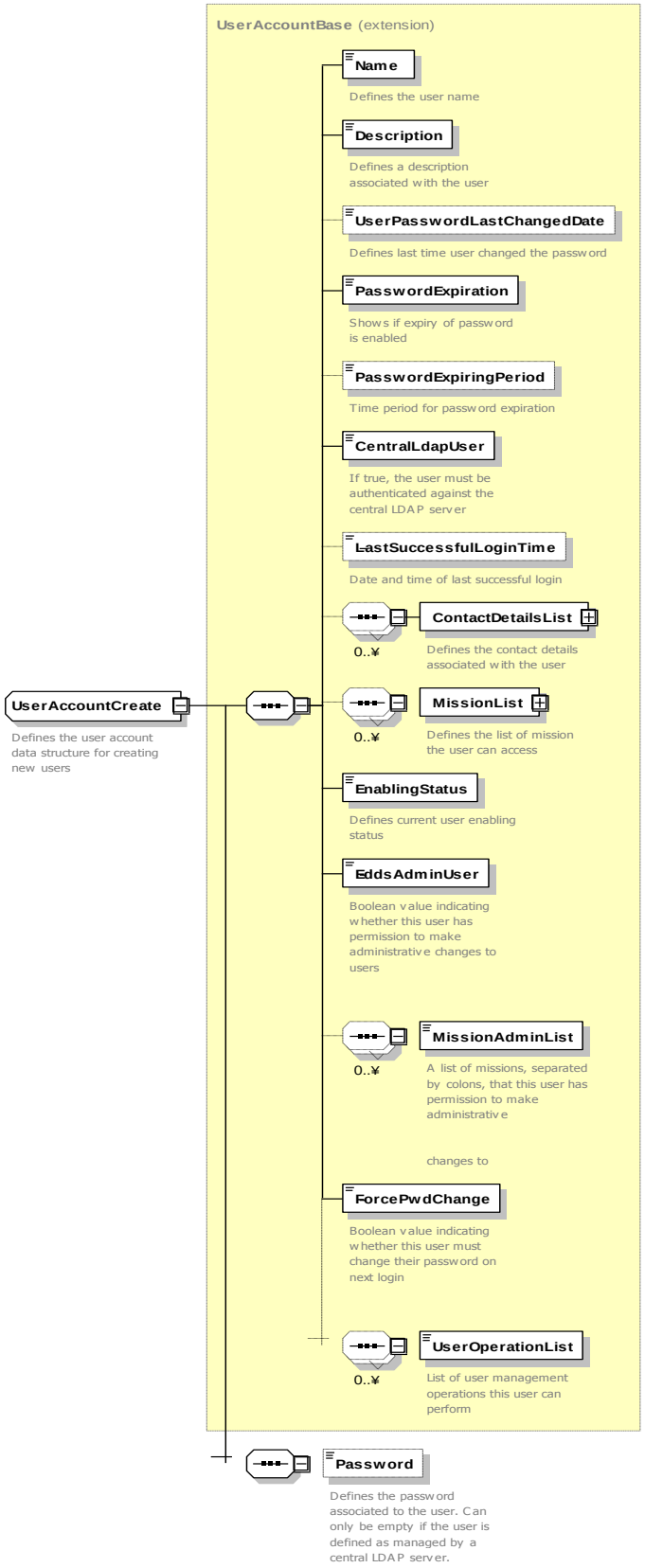
 

| | **EddsAdminUser MissionAdminList ForcePwdChange UserOperationList** |
|---|---|
| used by | complexTypes **UserAccountCreate UserAccountDetails** |
| annotation | documentation<br>Defines the basic user account data structure without the password element |

## *K.25 complexType UserAccountCreate*

diagram



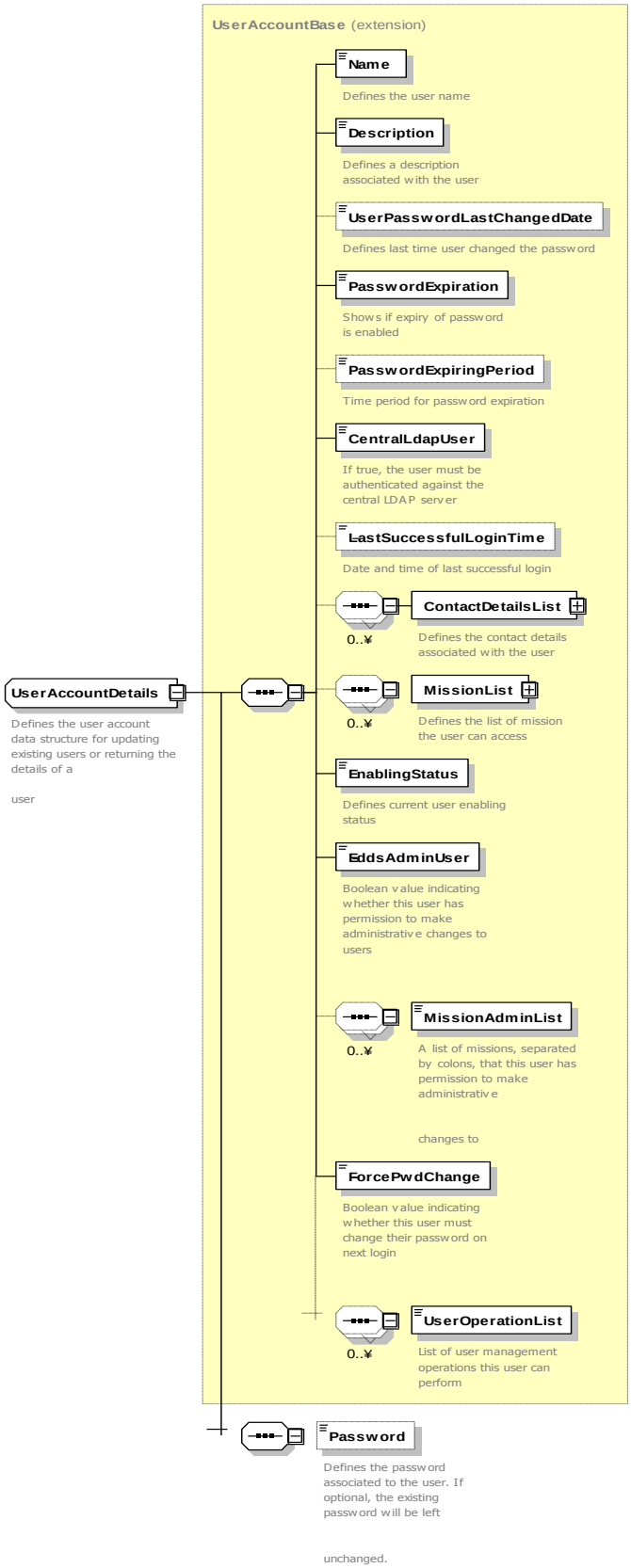

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | extension of **UserAccountBase** |

| | |
|---|---|
| properties | base UserAccountBase |
| children | **Name Description UserPasswordLastChangedDate PasswordExpiration PasswordExpiringPeriod CentralLdapUser LastSuccessfulLoginTime ContactDetailsList MissionList EnablingStatus EddsAdminUser MissionAdminList ForcePwdChange UserOperationList Password** |
| used by | element **UserAccount/Create** |
| annotation | documentation<br>Defines the user account data structure for creating new users |

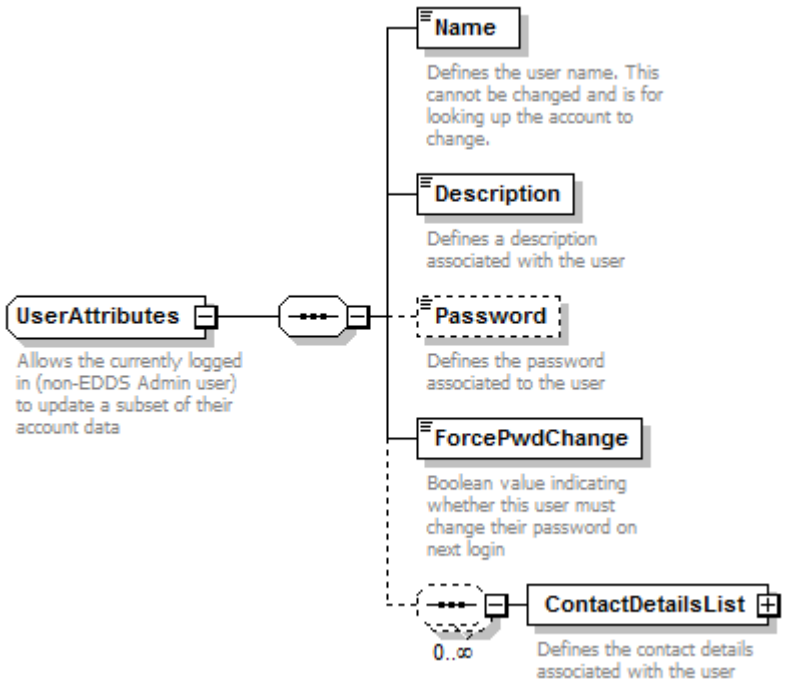
## K.26 complexType UserAccountDetails

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **UserAccountBase** |

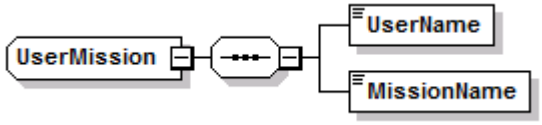
 

| | |
|---|---|
| properties | base UserAccountBase |
| children | **Name Description UserPasswordLastChangedDate PasswordExpiration PasswordExpiringPeriod CentralLdapUser LastSuccessfulLoginTime ContactDetailsList MissionList EnablingStatus EddsAdminUser MissionAdminList ForcePwdChange UserOperationList Password** |
| used by | elements **UserAccount/Update UserAccountDetails** |
| annotation | documentation<br>Defines the user account data structure for updating existing users or returning the details of a user |

## K.27 complexType UserAttributes

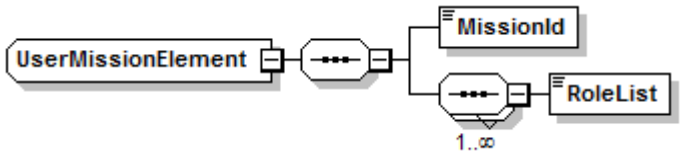
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description Password ForcePwdChange ContactDetailsList** |
| used by | element **UserAccount/UpdateUserAttributes** |
| annotation | documentation<br>Allows the currently logged in (non-EDDS Admin user) to update a subset of their account data |

## K.28 complexType UserMission

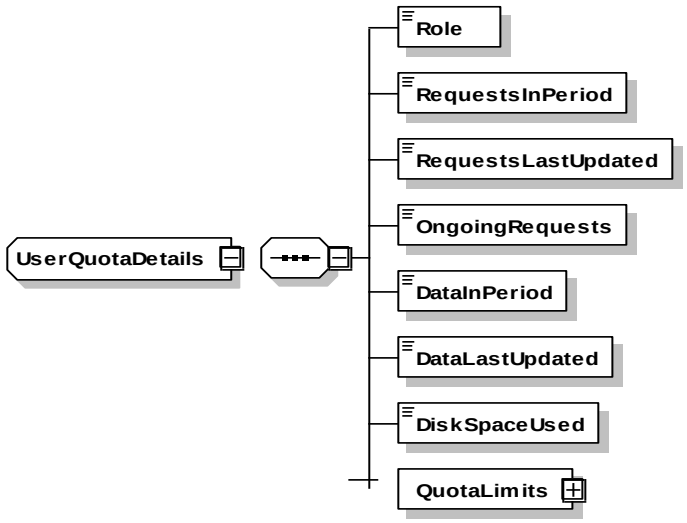
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | UserName MissionName |
| used by | element UserMission |

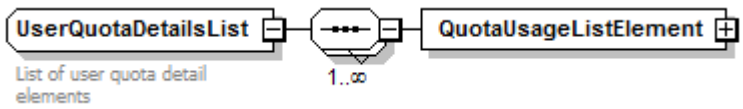
## K.29 complexType UserMissionElement

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **MissionId RoleList** |
| used by | element **UserAccountBase/MissionList** |

## K.30 complexType UserQuotaDetails

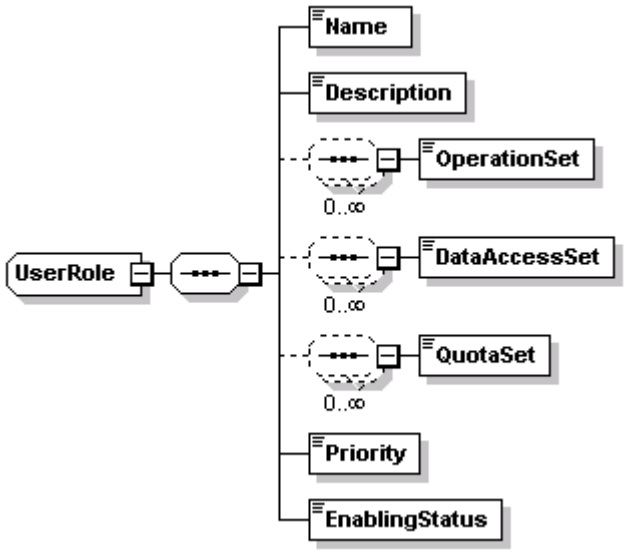
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Role RequestsInPeriod RequestsLastUpdated OngoingRequests DataInPeriod DataLastUpdated DiskSpaceUsed QuotaLimits** |
| used by | element **UserQuotaDetailsList/QuotaUsageListElement** |

## K.31 complexType UserQuotaDetailsList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **QuotaUsageListElement** |
| used by | element **UserQuotaDetails** |
| annotation | documentation<br>List of user quota detail elements |

## K.32 complexType UserRole

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Name Description OperationSet DataAccessSet QuotaSet Priority EnablingStatus** |
| used by | elements **Role/Create Role/Update MissionDetailsList/UserRoleList** |

## K.33 complexType UsersList

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **UsersListElement** |
| used by | element **UsersList** |
| annotation | documentation<br>The list of users as defined in the LDAP |

## K.34 simpleType OperationElement

| | |
|---|---|
| namespace | http://edds.egos.esa/model |
| type | restriction of **xs:string** |
| properties | base xs:string |
| used by | element **OperationSetData/OperationList** |
| facets | Kind Value annotation<br>enumeration CREATE_GROUP<br>enumeration DELETE_GROUP<br>enumeration UPDATE_GROUP<br>enumeration ASSIGN_ROLE_TO_GROUP<br>enumeration UNASSIGN_ROLE_FROM_GROUP<br>enumeration SUSPEND_GROUP |

| | | |
|---|---|---|
| | enumeration | RESUME_GROUP |
| | enumeration | CREATE_ROLE |
| | enumeration | DELETE_ROLE |
| | enumeration | UPDATE_ROLE |
| | enumeration | SUSPEND_ROLE |
| | enumeration | RESUME_ROLE |
| | enumeration | UPDATE_ROLE_DEFAULT_CONTACT_DETAILS |
| | enumeration | CREATE_OPERATIONS_SET |
| | enumeration | DELETE_OPERATIONS_SET |
| | enumeration | UPDATE_OPERATIONS_SET |
| | enumeration | ASSIGN_OPERATIONS_SET_TO_ROLE |
| | enumeration | UNASSIGN_OPERATIONS_SET_FROM_ROLE |
| | enumeration | CREATE_DATA_ACCESS_SET |
| | enumeration | DELETE_DATA_ACCESS_SET |
| | enumeration | UPDATE_DATA_ACCESS_SET |
| | enumeration | ASSIGN_DATA_ACCESS_SET_TO_ROLE |
| | enumeration | UNASSIGN_DATA_ACCESS_SET_FROM_ROLE |
| | enumeration | CREATE_QUOTA_SET |
| | enumeration | DELETE_QUOTA_SET |
| | enumeration | UPDATE_QUOTA_SET |
| | enumeration | ASSIGN_QUOTA_SET_TO_ROLE |
| | enumeration | UNASSIGN_QUOTA_SET_FROM_ROLE |
| | enumeration | SCHEDULE_REQUEST |
| | enumeration | VIEW_LOG_FILE |

## *K.35 simpleType UserOperationElement*

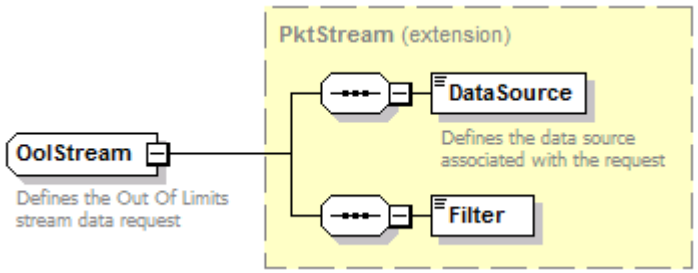
| | | | |
|---|---|---|---|
| namespace | http://edds.egos.esa/model | | |
| type | restriction of **xs:string** | | |
| properties | base xs:string | | |
| used by | element **UserAccountBase/UserOperationList** | | |
| facets | Kind | Value | annotation |
| | enumeration | CREATE_USER_ACCOUNT | |
| | enumeration | DELETE_USER_ACCOUNT | |
| | enumeration | UPDATE_USER_ACCOUNT | |
| | enumeration | UPDATE_USER_PERSONAL_ATTRIBUTES | |
| | enumeration | SUSPEND_USER_ACCOUNT | |
| | enumeration | RESUME_USER_ACCOUNT | |

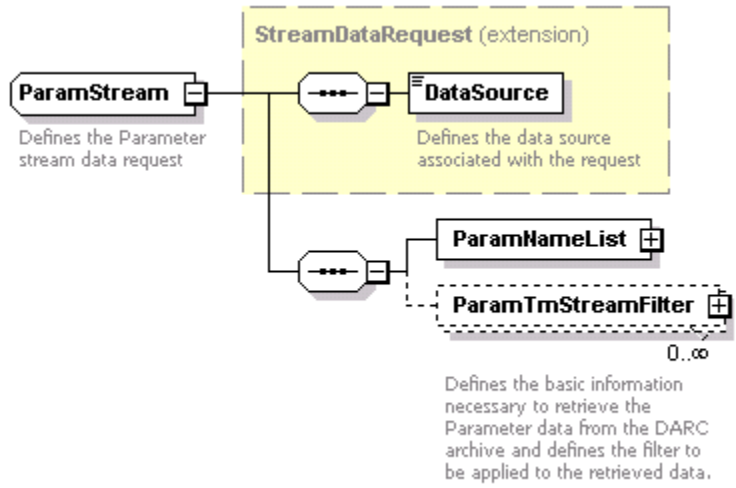
# Appendix LStream Request Data Type

This section of the document describes the complex types used for stream requests as defined in the streamrequest.xsd file.

## *L.1 complexType OolStream*

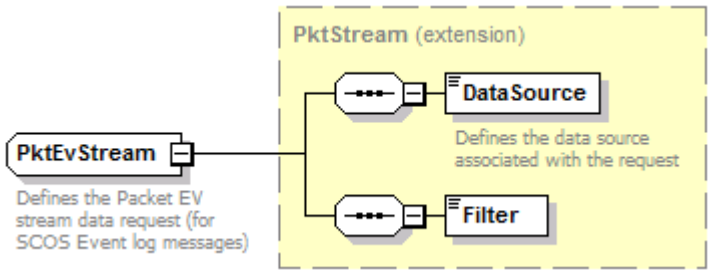
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of PktStream |
| properties | base PktStream |
| children | **DataSource Filter** |
| annotation | documentation<br>Defines the Out Of Limits stream data request |

## *L.2 complexType ParamStream*

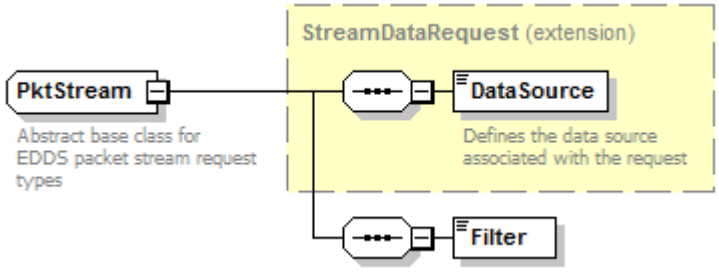
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of StreamDataRequest |
| properties | base StreamDataRequest |
| children | **ParamNameList ParamTmStreamFilter** |
| annotation | documentation<br>Defines the Parameter stream data request |

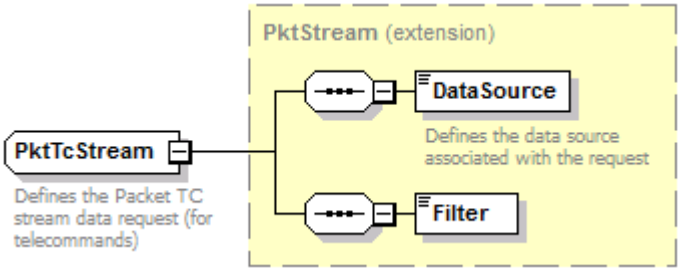
## L.3 complexType PktEvStream

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of PktStream |
| properties | base PktStream |
| children | **DataSource Filter** |
| annotation | documentation<br>Defines the Packet EV stream data request (for SCOS Event log messages) |

## L.4 complexType PktStream

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of StreamDataRequest |
| properties | base StreamDataRequest<br>abstract true |
| used by | complexTypes OolStream PktEvStream PktTcStream PktTmStream |
| annotation | documentation<br>Abstract base class for EDDS packet stream request types |

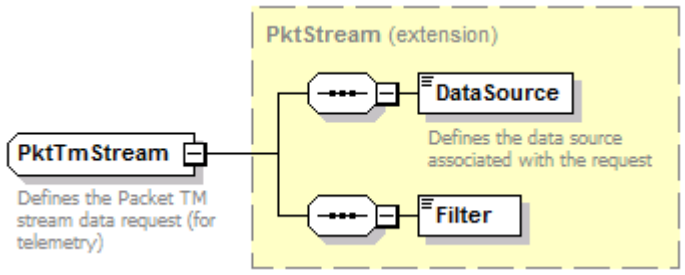
## L.5 complexType PktTcStream

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of PktStream |
| properties | base PktStream |

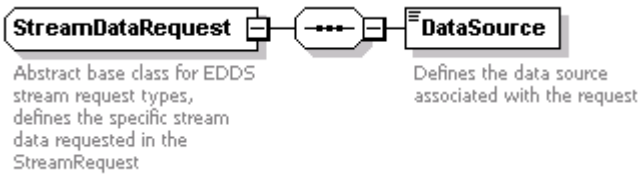
 

| | |
|---|---|
| children | **DataSource Filter** |
| annotation | documentation<br>Defines the Packet TC stream data request (for telecommands) |

## L.6 complexType PktTmStream

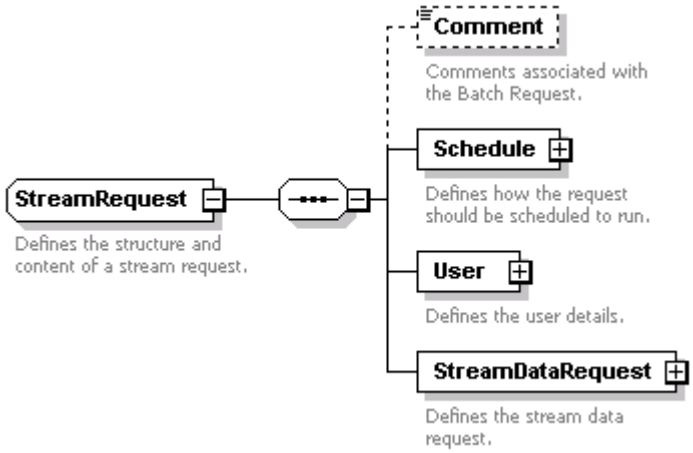
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| type | extension of **PktStream** |
| properties | base PktStream |
| children | **DataSource Filter** |
| annotation | documentation<br>Defines the Packet TM stream data request (for telemetry) |

## L.7 complexType StreamDataRequest

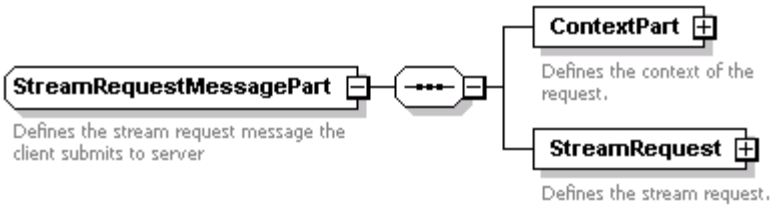
| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| properties | abstract true |
| children | **DataSource** |
| used by | element **StreamRequest/StreamDataRequest**<br>complexTypes **ParamStream PktStream** |
| annotation | documentation<br>Abstract base class for EDDS stream request types, defines the specific stream data requested in the StreamRequest |

## L.8 complexType StreamRequest

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **Comment Schedule User StreamDataRequest** |
| used by | element **StreamRequestMessagePart/StreamRequest** |
| annotation | documentation<br>Defines the structure and content of a stream request. |

## L.9 complexType StreamRequestMessagePart

| | |
|---|---|
| diagram |  |
| namespace | http://edds.egos.esa/model |
| children | **ContextPart StreamRequest** |
| used by | element **StreamRequestMessagePart** |
| annotation | documentation<br>Defines the stream request message the client submits to server |

# Appendix M EDDS Parameter Spreadsheet

## *M.1 TDRS like SpreadSheet*

EDDS provides a sample XSLT file for the Telemetry Parameter batch request so that the TDRS spreadsheet format can be created from the retrieved XML. The file is called “Param.xsl” and can be modified to each mission’s needs. The file is deployed by default into the EDDS Server runtime directory within “config/XSLT”. The filename must match the report type. More details on the format of the generated TDRS spreadsheet file can be found in the file “TDRS External Interfaces Control Document” [RD-14]

The following fields are included in the output of the TDRS spreadsheet file, but are only filled with dummy values as the information cannot be obtained yet these fields are mandatory in the TDRS ICD:

- Retrieval ID (always set to 0);
- Execution ID (always set to 0);
- Expiration day (always set to 0).

The values can be changed by editing the XSLT file.

As the XSLT file must load the XML data into memory to be able to create the TDRS output file, EDDS also provides a native TDRS format that can work with much larger amounts of data. This format can be selected on the Parameter TM Format request and optionally the number of decimal places can be limited under the TDRS Options section. By default, EDDS will not limit the number of decimal places and so the data will be as received from the DARC/SMON. The restrictions above regarding the mandatory fields that cannot be populated remain in place, except the Retrieval ID is set to the EDDS Request ID.

## *M.2 Presto Plot Stylesheet*

The style sheet for transforming XML results are mission specific and provided by the mission, and so considered out of the scope of this document.

# Appendix N Google Protocol Buffers

## *N.1 Introduction*

EDDS uses a software library called Google Protocol Buffers internally for use in passing messages between applications as well as for stream data. Google Protocol Buffers offers several advantages over the use of XML; in particular it is considerably faster and smaller than an XML message – an essential requirement for real-time streaming. More information on Google Protocol Buffers can be found here: http://code.google.com/apis/protocolbuffers/

EDDS uses the Google Protocol Buffers implementation found within the ActiveMQ library. However, the proto files are also compatible with the Protocol Buffers implementation from Googlei Inc. The proto files (which describe the data structure) are compiled into Java classes when compiling the software from source. The proto files can be found in the project edds-ws-common within src/main/protoFiles. The Maven plugin `org.apache.activemq.protobuf:activemq-protobuf` is used to compile the proto files.

EDDS uses the `toFramedByteArray()` and `fromFramedByteArray()` methods (of ActiveMQ protobuf implementation) in the compiled proto code for converting the data to a byte array for sending on the payload of a JMS message and reading the data back again on the receiver's end. Several helper classes exist for reading the encoded byte arrays sent from the server to the client. The Java client API also uses these classes for making it easier for users of the API to access the information returned by the web server. The helper classes can be found in esa.egos.edds.types within edds-ws-common.

There is helper class DarcParameterBinarySupport available to simplify reading data from DARC parameter binary response. This class can be found from project edds-ws-client.

Here is a list of the proto files within EDDS and their purpose:

| Proto file | Description |
|---|---|
| darcparameter.proto | A record containing information about a DARC parameter as placed on the DARC stream topic |
| farccatalogue.proto | Contains records containing information about files stored in the FARC |
| paramdef.proto | A record containing information about a DARC parameter definition |
| requestinfo.proto | A record containing information about a batch, stream or account request |
| systemlog.proto | A record containing information about a log message from EDDS |
| DarcParameterBinary.proto | A record containing information about DARC parameters in Parameter TM request response files in BINARY format |
| SMONParameter.proto | A record containing information about TM parameters in SMON Parameter request response files in BINARY format |
| EventRecordReport.proto | A record containing information about EV data in Event Record Report request response files in BINARY format |
| PacketRaw.proto | A record containing information about raw data in Packet TC Raw, Packet TM Raw and Packet EV Raw requests response files in BINARY format |
| PacketTCReport.proto | A record containing information about TC data in Packet TC Report request response files in BINARY format |
| PacketTMReport.proto | A record containing information about TM data in Packet TM Report request response files in BINARY format |
| PacketTMGapReport.proto | A record containing information about TM gap data in Packet TM Gap Report request response files in BINARY format |
| ParamValidity.proto | Definition of parameter validity as a separate proto file to be reused by multiple proto file definitions. |
| OOLReport.proto | A record containing information about out of limit data in Out of Limits Report request response files in BINARY format |