Integrating with DPD for Selfprinter Setups **GeoData**

Version 2.0: DPD Belux 08/2021

Parcel delivery network of GeoPost

Contents

Revision

Version	Changes	Author
Version 0.1	Initial version	Julien FRENCEL, DPDgroup
Version 2.0	Reworked version DPD Belux (layout and references)	Andy Van Hove, DPD Belux

1. Introduction

Dear DPD Customer, Partner, IT Integrator,

This document details the rules to create a GeoDATA EDI for DPD shipments. It is common to all DPD customers. In some cases MPSEXPDATA usage will be tolerated but it is considered EOL.

Dependencies

This document has dependencies to other documentation (GeoLabel – GeoRouting). It is important that you understand some parts of other documents in order to successfully integrate.

- Guidelines + Samples
  - General Information on a Selfprinting Integration + Test set
- GeoLabel
  - How to create a compliant DPD standardized label.
- GeoRouting
  - How to calculate the proper Routing for each shipment. This is a requirement for a reliable delivery of your parcel.
- GeoDATA specification: Mapping of all containers in the GeoDATA format
  - The Excel Sheet defining all information that can be found in a GeoData customer file.
  - Version 3.3.2 and upwards / EDI and JSON

Validation

The ordering DPD BU and depot are responsible for the validation of the data. Mandatory, Conditional and Optional fields must be filled accordingly to achieve a successful validation and go-live.

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2. Dataflow Description

General organization

The GeoDATA file format carries different functional data flows.The file is made of a set of different "subtypes", which is a set of data with information, organized in a defined hierarchical order.

Subtypes are organized depending on different functionalities. For instance, the collection request subtype contains all the information about the collection request. The use and order of subtype in the GeoData file is defined by the functional dataflow.

The type of data is specified into the header subtype and the file name. It is forbidden to mix different data flow into the same GeoData file. For each dataflow, there is a hierarchy between subtypes for a specific dataflow.

There are "Main" Subtypes, for master information, and "Child" Subtypes, for additional information. The information for a main subtype is shared with its child. For example, all parcels defined after a “shipment” are part of this shipment. The “Main/Child” relationship is defined by a the numorder field.

In a GeoData file, a father subtypes have one or multiple sons. All son subtypes must be under their fathers. Every “Son” subtypes should have a father.

Dataflow categories

The part describes the dataflow for all the data exchange. To clarify the understanding these different kinds of categories are defined for sending customer date to customer BU.

Dataflow name	Short Name	In/Out Responsible	Description
SHIPNOTIFYCUSTOMER	SHPNOTCUS	Customer - > BU	DATA coming from the customer to notify the shipment detail.
COLLECTREQUESTCUSTOMER	COLREQCUS	Customer - > BU BU - > Customer	Collect Request exchange between Customer and BU
COLLECTANSWERCUSTOMER	COLANSCUS	Customer - > BU BU - > Customer	Collect Answer exchange between Customer and BU
SHIPNOTIFYRETURNCUSTOMER	SHPNOTRETCUS	Customer -> BU	Define the parcel information from the customer to the BU for the return parcel

3. File Format Description

These tokens are used in the GeoData Header definition:

Value	Description
#FILE;<Filename>;	Subtype definition
#ENCODING;<CharacterSet> ;	
#VERSION;<N.N.N>; #DEF;GEODATA:HEADER;Field1;Field2;…;;	
#DEF;GEODATA:SUBTYPE1;Field1;Field2;…;FieldN;;	
#DEF;GEODATA:SUBTYPE2;Field1;Field2;…;FieldN;;	
#DEF;GEODATA:SUBTYPE3;Field1;Field2;…;FieldN;;	
#DEF;GEODATA:SUBTYPE4;Field1;Field2;…;FieldN;;	
#DEF;GEODATA:SUBTYPE5;Field1;Field2;…;FieldN;;	
…;	

File name description

This part describes the file name management. The same structure is defined for every GeoData file.

GEODATA_<DATAFLOW>_<SOURCE>_<DESTINATION>_D<YYYYMMDD>T<hhmmss>_<SEQUENCENUMMER>

In the following table we define the different parts of the file name:

Name	Description
DATAFLOW	Dataflow shortname (see data flow definition)
SOURCE	Origin of the dataflow For a <*_CUS> file the customer number is made up of these components: 3 digits BU 4 digits customer depot The customer number
DESTINATION	The destination of the Dataflow. For a <*_CUS> file your customer depot Note: Please use the full GeoRouting 7 AN digits depot. 3 digits BU and 4 digits depot
YYYYMMDD	Date of creation the file: YYYY: Year in four digits MM: Month codes two numeric digits padded on the left to “0” if necessary

	DD: Day codes two numeric digits padded on the left to “0” if necessary
hhmmss	Time of creation of the file: hh: hour codes two numeric digits padded on the left to “0” if necessary mm: minute codes two numeric digits padded on the left to “0” if necessary ss: second codes two numeric digits padded on the left to “0” if necessary
SEQUENCENUMMER	Integer using 1-3 digits. This field is used to avoid duplicated files within the same second.

File Header token

Each token starts with “#” and its name follow by semicolon “;” and the <token value>.

Token: File

This token repeats the exact name of the file name.

Token: Encoding

Specify the character set to use in the file.

- UTF-8[1]

Note: In the geodata standard, the character “:” is forbidden. This character is only used as a separator in the GeoData file.

Token: Version

Specify the version format: N.N of the standard used.

In case of version 4.1. VERSION: 4.1

Token: DEF;GEODATA: Subtype definition

Start from HEADER follow by subtype1 with field1 till subtype5 and field N. For each subtype.

Value	Description
#DEF;GEODATA:SUBTYPE1;Field1;Field2;…;FieldN;;	Subtype Definition
#DEF;GEODATA:SUBTYPE2;Field1;Field2;…;FieldN;;	
#DEF;GEODATA:SUBTYPE3;Field1;Field2;…;FieldN;;	
#DEF;GEODATA:SUBTYPE4;Field1;Field2;…;FieldN;;	
#DEF;GEODATA:SUBTYPE5;Field1;Field2;…;FieldN;;	

1 Please note that in some BU there may be differences in the interpretation of unicode characters larger than 127. Here the coding to the byte chains two to four is meant.

File content description

GeoData is an auto described file with semicolon “;” separated field.

HEADER; Value1; Value2;Value3;	Value of subtype in the order defined by the dataflow
SUBTYPE1;Value1;Value2;…;ValueN;	
SUBTYPE2;Value1;Value2;…;ValueN;	
SUBTYPE1;Value1;Value2;…;ValueN;	
SUBTYPE2;Value1;Value2;…;ValueN;	
SUBTYPE3;Value1;Value2;…;ValueN;	
SUBTYPE4;Value1;Value2;…;ValueN;	
SUBTYPE5;Value1;Value2;…;ValueN;	
SUBTYPE1;Value1;Value2;…;ValueN;	
SUBTYPE2;Value1;Value2;…;ValueN;	
SUBTYPE3;Value1;Value2;…;ValueN;	
SUBTYPE4;Value1;Value2;…;ValueN;	
SUBTYPE5;Value1;Value2;…;ValueN;	
…	
#END;	

Remark: The end of each definition line must include a double semicolon (“;;”).

Each GeoData file ends with this line: #END;

Subtype management

In the definition part, a specific way will be defined below.

Indeed, only the subtype defined in the dataflow has to implemented in the “DEF” token. Furthermore, if a subtype is not used, you have to remove it.

For example:

- Subtype 1, 2 and 4 are used
- Subtype 3 is not used

Value
#FILE;<Filename>;
#ENCODING;<CharacterSet> ;
#VERSION;<N.N.N>; #DEF;GEODATA:HEADER;Field1;Field2;…;;
#DEF;GEODATA:SUBTYPE1;Field1;Field2;…;FieldN;;
#DEF;GEODATA:SUBTYPE2;Field1;Field2;…;FieldN;;
#DEF;GEODATA:SUBTYPE3;Field1;Field2;…;FieldN;;
#DEF;GEODATA:SUBTYPE4;Field1;Field2;…;FieldN;;
#DEF;GEODATA:SUBTYPE5;Field1;Field2;…;FieldN;;
x…;

Field Management

As it mentioned above, fields are included in the subtypes. They are classified in three categories:

- M: Mandatory
- O: optional
- C: conditional

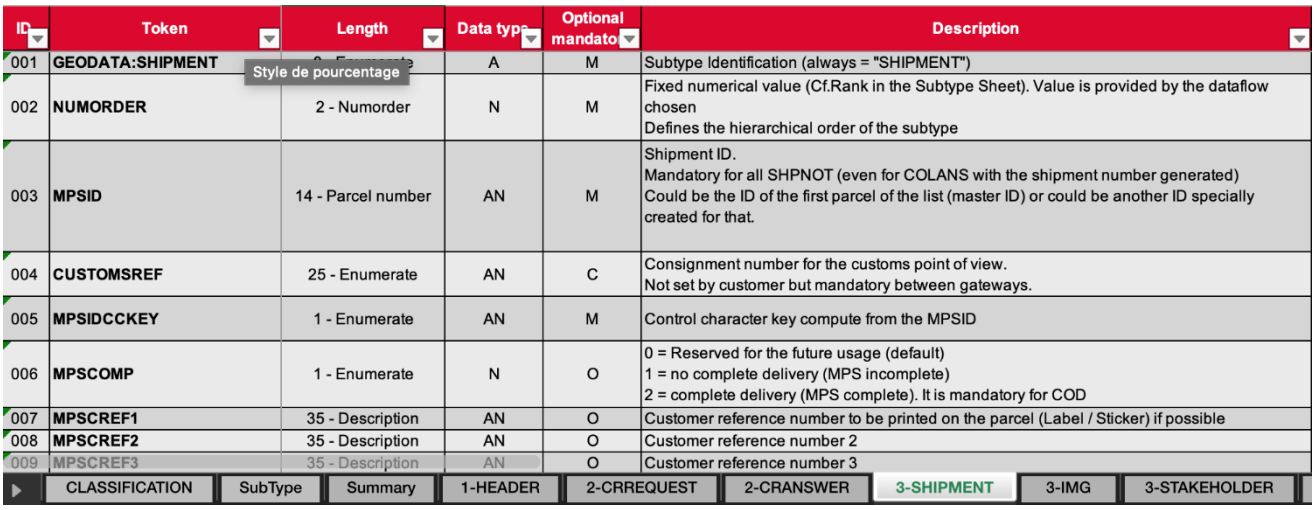
When a subtype is defined in a data flow file, mandatory fields has to be filled.

In the excel file tab subtype is defined the information on the subtypes for each dataflow:

- The “subtype” column defines the name of the subtypes
- The “Mand/Cond” column defines if this one is mandatory (M), conditional (C) or optional (O)
- The aim of the column “Order” provides the order to respect in subtypes definition into field (NUMORDER field)

Warning: The file has to respect the order of each field. You cannot invert two or several fields. Indeed, a field is not defined has to removed.

In the excel file in each tab named as the subtype is defined the information for each dataflow:



ID	Token	Length	Data type	Optional mandato	Description
001	GEODATA:SHIPMENT	Style de pourcentage	A	M	Subtype Identification (always = "SHIPMENT")
002	NUMORDER	2 - Numorder	N	M	Fixed numerical value (Cf.Rank in the Subtype Sheet). Value is provided by the dataflow chosen Defines the hierarchical order of the subtype
003	MPSID	14 - Parcel number	AN	M	Shipment ID. Mandatory for all SHPNOT (even for COLANS with the shipment number generated) Could be the ID of the first parcel of the list (master ID) or could be another ID specially created for that.
004	CUSTOMSREF	25 - Enumerate	AN	C	Consignment number for the customs point of view. Not set by customer but mandatory between gateways.
005	MPSIDCCKEY	1 - Enumerate	AN	M	Control character key compute from the MPSID
006	MPSCOMP	1 - Enumerate	N	O	0 = Reserved for the future usage (default) 1 = no complete delivery (MPS incomplete) 2 = complete delivery (MPS complete). It is mandatory for COD
007	MPSCREF1	35 - Description	AN	O	Customer reference number to be printed on the parcel (Label / Sticker) if possible
008	MPSCREF2	35 - Description	AN	O	Customer reference number 2
009	MPSCREF3	35 - Description	AN	O	Customer reference number 3

CLASSIFICATION | SubType | Summary | 1-HEADER | 2-CRREQUEST | 2-CRANSWER | 3-SHIPMENT | 3-IMG | 3-STAKEHOLDER

Hereafter you will find the rules and columns as they are displayed:

- The token column describes the name of the field. This name will be used in the definition area in the GeoData file.
- Length: describes the length of the accepted data.
- Data type: describes if the field is alpha, numeric or alphanumeric
- Optional mandatory:
  - M: Mandatory
  - O: optional
  - C: conditional

Note: Default value for a field in GeoData is an empty field ";;".

File transmission rules

Normally, the datafiles are stored on an SFTP server at the customer depot. You can find out the exact transfer modalities from your responsible customer depot.

Default functional rules

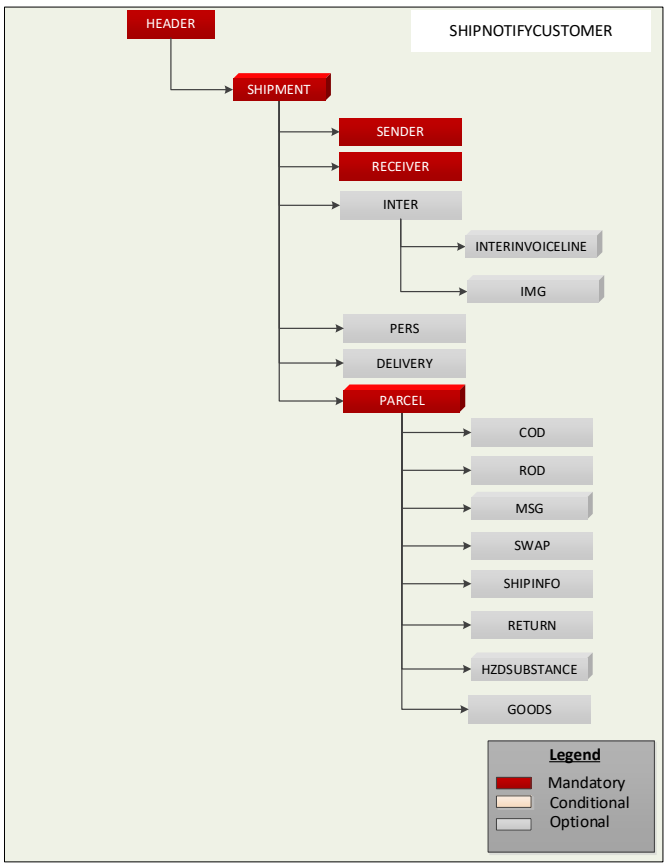
These rules apply to all data flow per default. Some exception rules could exist for specific dataflow.

GeoData files can be sent at any time to BU

- Don't sent the file as "fire and forget" (if the BU server is down, try it later)
- Please note the deadline for delivery data from your customer depot.

4. SHIPNOTCUS dataflow

This view describes the relation between the “Subtypes” for the dataflow Shipment Notify Customer. This dataflow defines the data coming from the customer to notify the shipment details.



SUBTYPES

- Sender – There is a SENDER sub-type per shipment.
- Receiver – Also used to specify the address of the real customer when it is a PUDO delivery. In this case, the address of the PUDO is in RECEIVER-subtype.
- INTER – Mandatory for international parcel
- PERS – Final consignee information (in case of Receiver address is different with the to consignee address)
- DELIVERY – This subtype describes information for programmed delivery
- PARCEL – This subtype describes information on the current parcel. It needs to have at least one PARCEL per shipment.
- MSG - There could be zero, one or several occurrence(s) of this subtype per shipment in order to create different trigger on the same shipment.

Delivery services

In case of different delivery services some value in subtypes for dataflow SHPNOTCUS becomes mandatory.

Shipments to PUDO Shop (2PUDO):

SUBTYPE	TOKEN	SHPNOTCUS
PERS	GEODATA: PERS	Mandatory value for PUDO Delivery
	NUMORDER	
	PERSDELIVER	
	PERSNAME	
	PERSNAME1	
RECEIVER	RPUDOID	Mandatory value for PUDO Delivery
MSG	GEODATA:MSG	Mandatory value for PUDO Delivery
	NUMORDER	
	MSGTYPE	
	MSGDESTINATION	
	MSGTRIGGER	

Direct to home (2Home) and Shipment to business(2Business):

SUBTYPE	TOKEN	SHPNOTCUS
HEADER	GEODATA: HEADER	Mandatory value for 2Home and 2Business delivery
	VERSION	
	CLASSIFICATION	
SHIPMENT	GEODATA: SHIPMENT	Mandatory value for 2Home and 2Business delivery
	NUMORDER	
	MPSID	
	MPSIDDCKEY	
	MPSCOUNT	
	SDEPOT	
	CDATE	
	HARDWARE	
	SPTDATE	
	DELMODALLOW	

SENDER	GEODATA: SENDER	Mandatory value for 2Home and 2Business delivery
	NUMORDER	
	SCUSTACCNUMBER	
	SCOMPNAME	
	SNAME1	
	STREET	
	SCOUNTRYCODE	
	SZIPCODE	
	STOWN	
RECEIVER	GEODATA: RECEIVER	Mandatory value for 2Home and 2Business delivery
	NUMORDER	
	RNAME1	Mandatory value for 2Home delivery
	RCOMPNAME	
	RSTREET	
	RCOUNTRYCODE	
	RZIPCODE	
	RTOWN	
PARCEL	GEODATA: PARCEL	Mandatory values for 2Home delivery
	NUMORDER	
	PARCELNUMBER	
	PARCELNUMBERCCKEY	
	SERVICECODE	

5. Collection Request

With the service Collection Request you have to agree with your Business Unit. You are able to pose a request to collect a parcel to have it delivered.

The process consists of two different Flow Types. The COLREQCUS to create the Collection Request Order where the COLANSCUS returning the status of the Collection Request. This file will be provided by the Business Unit to you.

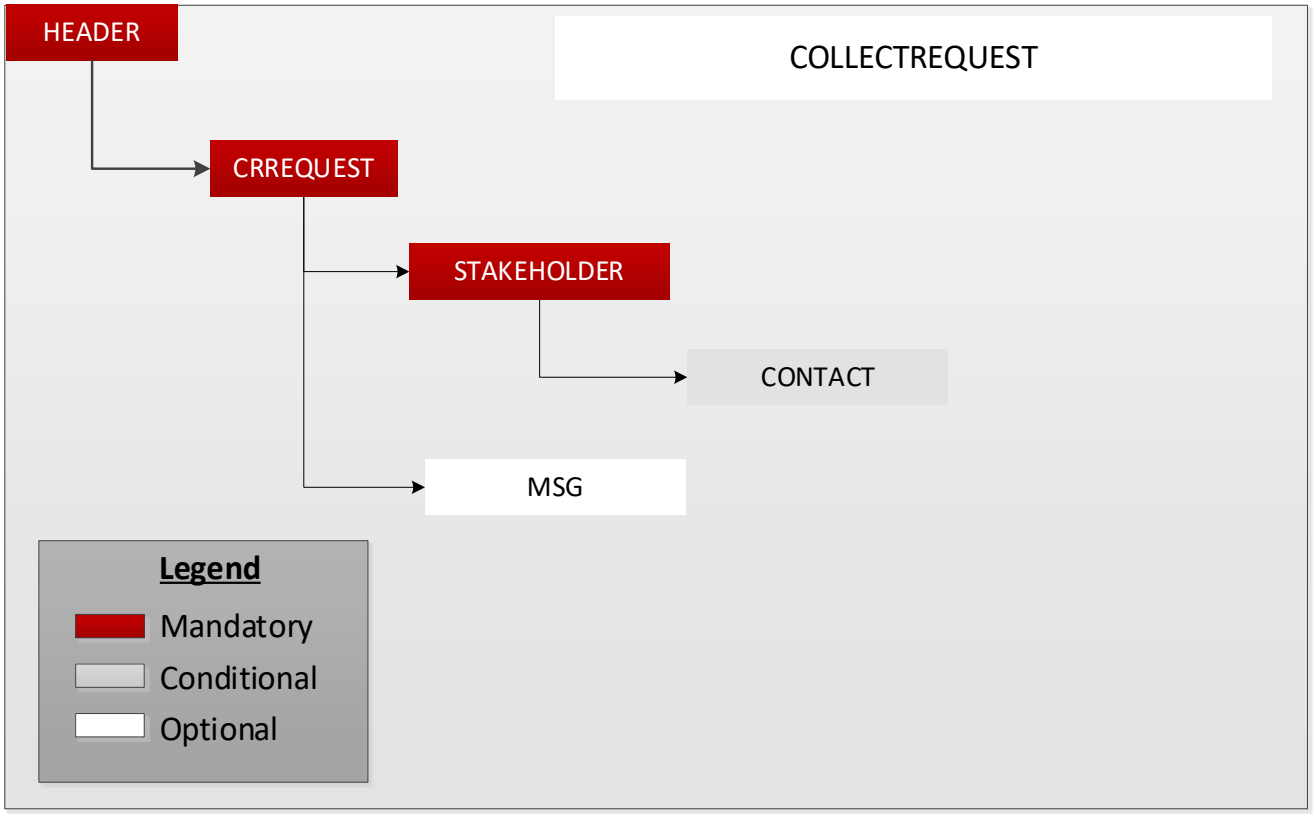
Collection Request supports also the feature of cancelation a Collection Request.

Please align with your responsible Business Unit to agree in the features that are supported by the Business Unit

The dataflows COLREQCUS and COLANSCUS have to include all the fields, even if your Business Unit decides not use the feature.

Collection Request: COLREQCUS

The COLREQ_CUS

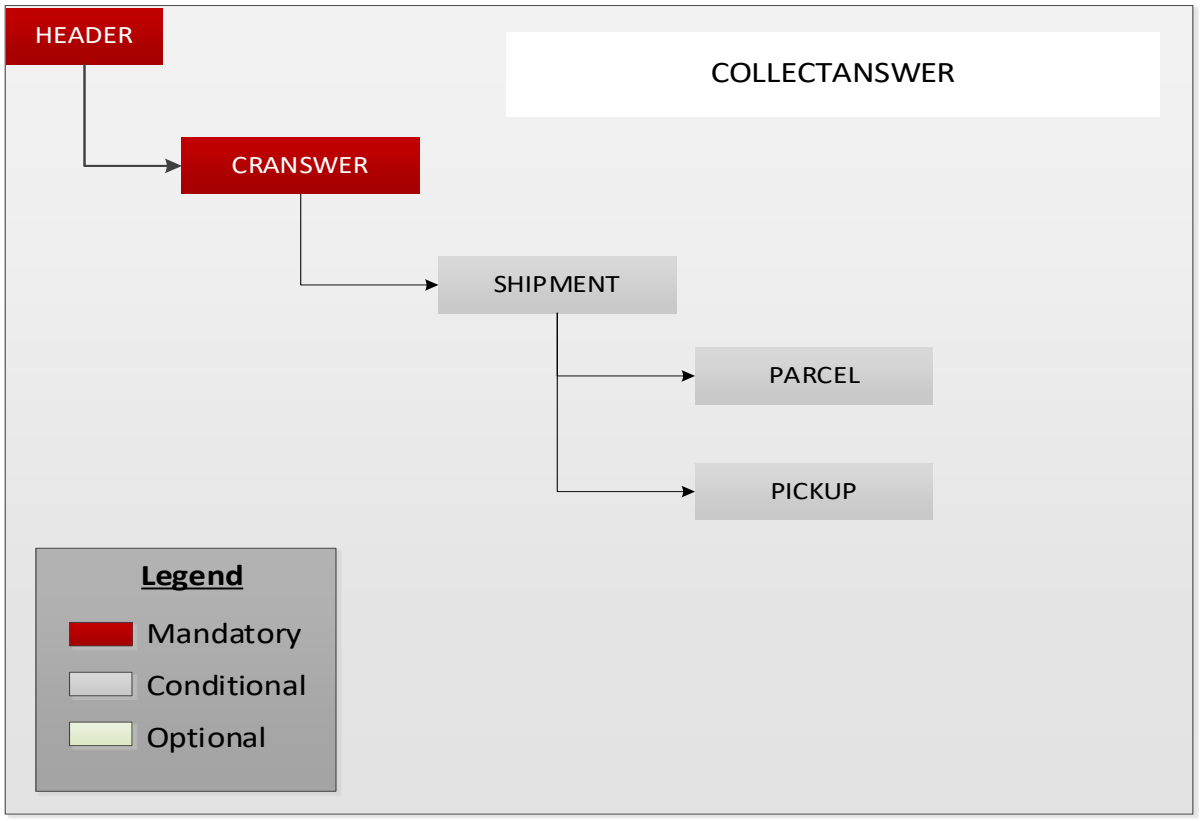


Collection Answer: COLANSCUS

This dataflow defines the status of the Collection Request.

The Business Unit will provide the COLANSCUS Format to you.

If the answer is an approval with the shipment number generated (or if the shipment number has not been created) / a disapproval, the structure is defined as follows:



The PICKUP subtype is conditional: it is mandatory when the COLANS contains information about the pickup execution of the parcel.

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