

STOSAG standard

STuurgroep Open Standaarden Afval en Grondstoffen – www.stosag.nl

Part 3 – Collection Container Information

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1 Introduction

STOSAG is the Dutch acronym for ‘STuurgroep Open Standaarden Afval en Grondstoffen’, which translates to ‘Steering committee for Open Standards for Waste and Base Material’. This document presents the standard for the exchange of information between the collection container system and the back-office systems.

1.1 Scope & reading guide

This part of the STOSAG standard is targeted at the following process in the waste processing industry:

- The processing of relevant information for the deposit of waste between the collection container system and the back-office systems.

This document consists of four chapters. Chapter 1 contains the introduction. Chapter 2 contains the message model for the ‘Transaction & system information’-interface (3a), chapter 3 contains information about the ‘Authorization & configuration’-interface (3b) and chapter 4 describes the Acknowledgement message which is a response message to the other two.

1.2 Structure of the standard

The STOSAG standard consists of six parts.

- Part 0 - Overview
- Part 1 - Card Identification
- Part 2 - Wheelie Bin Identification
- Part 3 - Collection Container Information (this document)
- Part 4 - Wheelie Bin Information
- Transmission

1.3 Conformance

This document, together with the ‘STOSAG – Part 0 – Overview’ part of the standard, serves as a formal and strict specification for the STOSAG implementation of the information exchange with regard to the collection container information in the Netherlands. Any implementation that conforms to this specific part of the standard shall use the guidelines provided in this part and the guidelines provided in the.

1.4 Version history

Table 1: Version history

Version	Date	Description
1.0	2010-12-03	First release of the STOSAG – Part 3 – Collection Container Information standard
2.0	2015-09-25	v2.0 release of the STOSAG – Part 3 – Collection Container Information standard
2.1	2016-12-09	Updated definitions in data types shared between this part of the standard and Part 4.

1.5 List of changes

Table 2: List of changes

Section	Description
2. Collection container elements 3. Collection container elements 4. Acknowledgement elements	Several data elements with type 'xsd:integer' are changed to type 'xsd:unsignedInt'. See maintenance request for details about which data elements are affected. <i>Reference: MR2015-02</i>
XML schemas	Adapted to changes mentioned above

2 Collection container transaction & system information (3a)

This chapter presents the message model for the CC_TransactionAndSystemInformation message.

TransactionAndSystemInformation	
Definition	
Multiplicity	1..1
XML element	
Path	TransactionAndSystemInformation
Type	TransactionAndSystemInformationType
Restrictions	-

2.1 MessageId

MessageId	
Definition	Number of the message.
Multiplicity	1..1
Format	Integer
Allowed values	Must be an increasing number. May restart at 1 after the maximum number is reached, or after changing the controller.
<i>XML element</i>	
Path	TransactionAndSystemInformation/MessageId
Type	cc:MessageIdType
Restrictions	–

2.2 Transactions

Transactions	
Definition	List of registrations of a deposit of waste in the collection container.
Multiplicity	0..1
<i>XML element</i>	
Path	TransactionAndSystemInformation/Transactions
Type	TransactionsType
Restrictions	–

2.2.1 Transaction

Transaction	
Definition	The registration of a deposit of waste in the collection container.
Multiplicity	1..n
<i>XML element</i>	
Path	TransactionAndSystemInformation/Transactions/Transaction
Type	TransactionType
Restrictions	–

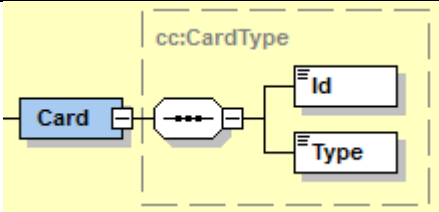
2.2.1.1 *TransactionNumber*

TransactionNumber	
Definition	Number of the transaction, must be an increasing number. May restart at 1 after the maximum number is reached, or after changing the controller.
Multiplicity	1..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/TransactionNumber
Type	xsd:unsignedInt
Restrictions	–

2.2.1.2 *TransactionType*

TransactionType	
Definition	The type of the transaction that is used to determine the action of the collection container. The allowed values for this attribute are specified in the code list: "TransactionType".
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: TransactionType
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/TransactionType
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 999

2.2.1.3 Card

Card	
Definition	Card that is authorized to perform a transaction on this collection container.
Multiplicity	1..1
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/Card
Type	cc:CardType
Restrictions	-
	

2.2.1.3.1 Id

Id	
Definition	The unique number assigned to the chip on the card by the manufacturer of the card. The uniqueness of this number is guaranteed by the ISO 14443 standard that defines the (information on the) cards.
Multiplicity	1..1
Format	Hexadecimal
Allowed values	
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/Card/Id
Type	xsd:hexBinary
Restrictions	minLen: 4 bytes (8 hex digits) maxLen: 7 bytes (14 hex digits)

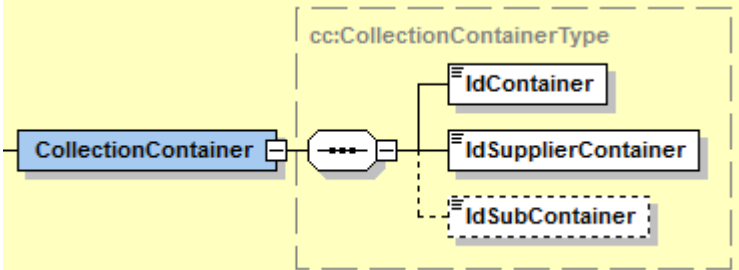
2.2.1.3.2 Type

Type	
Definition	The type of the card that can be used to determine the action of the collection container.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: CardType
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/Card/Type
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 999

2.2.1.4 *Timestamp*

Timestamp	
Definition	The specific date and time the transaction took place.
Multiplicity	1..1
Format	ISO 8601 datetime format: YYYY-MM-DDThh:mm:ssTZD
Allowed values	
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/Timestamp
Type	xsd:dateTime
Restrictions	–

2.2.1.5 *CollectionContainer*

CollectionContainer	
Definition	Collection container to which this transaction applies to.
Multiplicity	1..1
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/CollectionContainer
Type	cc:CollectionContainerType
Restrictions	–
	

2.2.1.5.1 *IdContainer*

IdContainer	
Definition	Number by which the collection container can be identified. This number has to be unique in the context of the party responsible for assigning the number to the specific container. This number can be assigned by the supplier of the container, but can also
Multiplicity	1..1
Format	Alphanumerical
Allowed values	
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/CollectionContainer/IdContainer
Type	xsd:string
Restrictions	maxLen: 16 digits

2.2.1.5.2 *IdSupplierContainer*

IdSupplierContainer	
Definition	Number by which the supplier of the unique number for the collection container can be identified. This number is assigned to a supplier by the party responsible for the administration of this standard.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: SupplierIdCollectionContainer
<i>XML element</i>	
Path	TransactionAndSystemInformation/Transactions/Transaction/CollectionContainer/IdSupplierContainer
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 999

2.2.1.5.3 *IdSubContainer*

IdSubContainer	
Definition	Id by which a subcontainer (drum/volume type/fraction) can be identified if applicable for the concerning collection container.
Multiplicity	0..1
Format	Alphanumerical
Allowed values	
<i>XML element</i>	
Path	TransactionAndSystemInformation/Transactions/Transaction/CollectionContainer/IdSubContainer
Type	xsd:string
Restrictions	–

2.2.1.6 *GrossWeight*

GrossWeight	
Definition	The gross weight in gram of the waste that is offered during the transaction.
Multiplicity	0..1
Format	Integer
Allowed values	
<i>XML element</i>	
Path	TransactionAndSystemInformation/Transactions/Transaction/GrossWeight
Type	cc:WeightInGramType
Restrictions	maxIncl: 4 294 967 295

2.2.1.7 *NetWeight*

NetWeight	
Definition	The net weight in gram of the waste that is offered during the transaction.
Multiplicity	0..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/NetWeight
Type	cc:WeightInGramType
Restrictions	maxIncl: 4 294 967 295

2.2.1.8 *TaraWeight*

TaraWeight	
Definition	The difference between the gross weight and the net weight, specifies the tare weight in gram of the waste offered during the transaction.
Multiplicity	0..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/TaraWeight
Type	cc:WeightInGramType
Restrictions	maxIncl: 4 294 967 295

2.2.1.9 *Volume*

Volume	
Definition	The volume in millilitre of the waste that is offered during the transaction.
Multiplicity	0..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/Transactions/Transaction/Volume
Type	cc:VolumeType
Restrictions	maxIncl: 999999 (6 digits)

2.3 SystemInformation

SystemInformation	
Definition	List of registrations of system information of collections containers.
Multiplicity	0..1
<i>XML element</i>	
Path	TransactionAndSystemInformation/SystemInformation
Type	SystemInformationType
Restrictions	-
	<pre> classDiagram class SystemInformationType { SystemInformation ContainerSystemInformation } SystemInformationType "1" -- "1..∞" ContainerSystemInformation </pre>

2.3.1 ContainerSystemInformation

ContainerSystemInformation	
Definition	The registration of system information in a collection container.
Multiplicity	1..n
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation
Type	ContainerSystemInformationType
Restrictions	–
	<pre>classDiagram class ContainerSystemInformationType { TimeStamp CollectionContainer Trigger SoftwareVersion AuthorizationListMessageld ConfigurationMessageld MaximumLoad CurrentLoad MalfunctionType BatteryCapacity SignalStrength InformationContainer } class ContainerSystemInformation { } ContainerSystemInformation "1..n" -- "0..n" ContainerSystemInformationType</pre>

2.3.1.1 Timestamp

Timestamp	
Definition	The specific date and time the system information registration took place.
Multiplicity	1..1
Format	ISO 8601 datetime format: YYYY-MM-DDThh:mm:ssTZD
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/Timestamp
Type	xsd:dateTime
Restrictions	–

2.3.1.2 *CollectionContainer*

CollectionContainer	
Definition	Collection container to which this system information applies to.
Multiplicity	1..1
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/CollectionContainer
Type	cc:CollectionContainerType
Restrictions	–

2.3.1.2.1 *IdContainer*

IdContainer	
Definition	Number by which the collection container can be identified. This number has to be unique in the context of the party responsible for assigning the number to the specific container. This number can be assigned by the supplier of the container, but can also
Multiplicity	1..1
Format	Alphanumeric
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/CollectionContainer/IdContainer
Type	xsd:string
Restrictions	maxLen: 16 digits

2.3.1.2.2 *IdSupplierContainer*

IdSupplierContainer	
Definition	Number by which the supplier of the unique number for the collection container can be identified. This number is assigned to a supplier by the party responsible for the administration of this standard.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: SupplierIdCollectionContainer
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/CollectionContainer/IdSupplierContainer
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 999

2.3.1.2.3 *IdSubContainer*

IdSubContainer	
Definition	Id by which a subcontainer (drum/volume type/fraction) can be identified if applicable for the concerning collection container.
Multiplicity	0..1
Format	Alphanumeric
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/CollectionContainer/IdSubContainer
Type	xsd:string
Restrictions	–

2.3.1.3 *Trigger*

Trigger	
Definition	The event that occurred or treshold value that is reached that initiated the transmission of a message from the collection container to the back office.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: CC-EventList
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/Trigger
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 9999 (4 digits)

2.3.1.4 *SoftwareVersion*

SoftwareVersion	
Definition	The version number of the firmware that is loaded onto the hardware of the collection container.
Multiplicity	0..1
Format	Alphanumerical
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/SoftwareVersion
Type	xsd:string
Restrictions	maxLen: 16 digits

2.3.1.5 *AuthorizationListMessageId*

AuthorizationListMessageId	
Definition	The unique number of the AuthorizationAndConfiguration message (3b) that contained the authorization list that is currently active.
Multiplicity	0..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/AuthorizationListMessageId
Type	cc:MessageIdType
Restrictions	–

2.3.1.6 *ConfigurationMessageId*

ConfigurationMessageId	
Definition	The unique number of the AuthorizationAndConfiguration message (3b) that contained the configuration that is currently active.
Multiplicity	0..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/ConfigurationMessageId
Type	cc:MessageIdType
Restrictions	–

2.3.1.7 *MaximumLoad*

MaximumLoad	
Definition	The maximum number of units that the container can contain.
Multiplicity	0..1
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/MaximumLoad
Type	cc:LoadType
Restrictions	–

2.3.1.7.1 *unit*

unit	
Definition	The unit of the specified amount.
Multiplicity	1..1
Format	Alphanumerical
Allowed values	- millilitre - gram - pieces - centimetres
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/MaximumLoad/@unit
Type	xsd:string
Restrictions	Specified enumeration in allowed values

2.3.1.7.2 *Value*

Value	
Definition	Specified amount.
Multiplicity	1..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/MaximumLoad/Value
Type	xsd:unsignedInt
Restrictions	maxIncl: 99999999 (8 digits)

2.3.1.8 *CurrentLoad*

CurrentLoad	
Definition	The load of the container on the date and time specified in the timestamp.
Multiplicity	0..1
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/CurrentLoad
Type	cc:LoadType
Restrictions	–

2.3.1.8.1 *unit*

unit	
Definition	The unit of the specified amount.
Multiplicity	1..1
Format	Alphanumerical
Allowed values	- millilitre - gram - pieces - centimetres
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/CurrentLoad/@unit
Type	xsd:string
Restrictions	Specified enumeration in allowed values

2.3.1.8.2 *Value*

Value	
Definition	Specified amount.
Multiplicity	1..1
Format	Integer
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/CurrentLoad/Value
Type	xsd:unsignedInt
Restrictions	maxIncl: 99999999 (8 digits)

2.3.1.9 *MalfunctionType*

MalfunctionType	
Definition	The specific type of error the container is suffering from.
Multiplicity	0..1
Format	Integer
Allowed values	Codelist: MalfunctionType
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/MalfunctionType
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 999

2.3.1.10 *BatteryCapacity*

BatteryCapacity	
Definition	The amount of power in the battery pack that is supplying the collection container with power.
Multiplicity	0..1
Format	Integer, expressed in a round percentage
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/BatteryCapacity
Type	xsd:unsignedInt
Restrictions	minIncl: 0 maxIncl: 100

2.3.1.11 *SignalStrength*

SignalStrength	
Definition	The strength of the wireless signal which the container is using to transmit information to the communication management system.
Multiplicity	0..1
Format	Integer, expressed in a round percentage
Allowed values	
XML element	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/SignalStrength
Type	xsd:unsignedInt
Restrictions	minIncl: 0 maxIncl: 100

2.3.1.12 *SystemInformation*

SystemInformation	
Definition	List of elements that can contain information that is send from the container to the back-office.
Multiplicity	0..n
<i>XML element</i>	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/SystemInformation
Type	cc:CodeValuePairType
Restrictions	–

2.3.1.12.1 *Code*

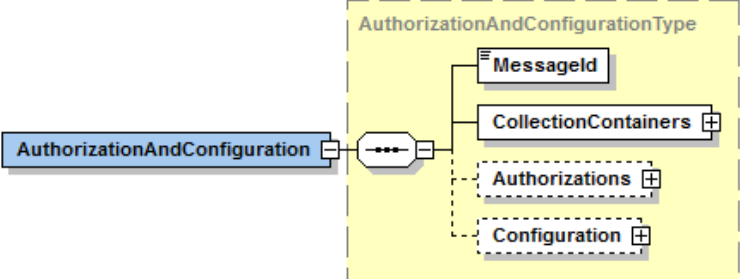
Code	
Definition	Code to identify the specific information that is send.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: CC-SystemInformation
<i>XML element</i>	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/SystemInformation/Code
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 9999 (4 digits)

2.3.1.12.2 *Value*

Value	
Definition	The system information itself. The meaning of the information can be found in the codelist CC-SystemInformation.
Multiplicity	0..1
Format	Alphanumerical
Allowed values	
<i>XML element</i>	
Path	TransactionAndSystemInformation/SystemInformation/ContainerSystemInformation/SystemInformation/Value
Type	xsd:string
Restrictions	–

3 Collection container authorization information & configuration (3b)

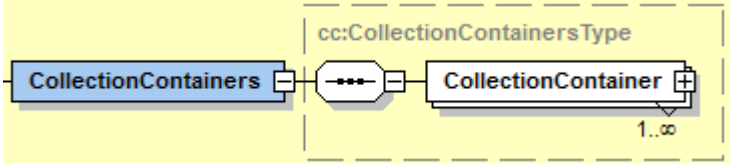
This chapter presents the message model for the CC_AuthorizationAndConfiguration message.

AuthorizationAndConfiguration	
Definition	
Multiplicity	1..1
XML element	
Path	AuthorizationAndConfiguration
Type	AuthorizationAndConfigurationType
Restrictions	-
	

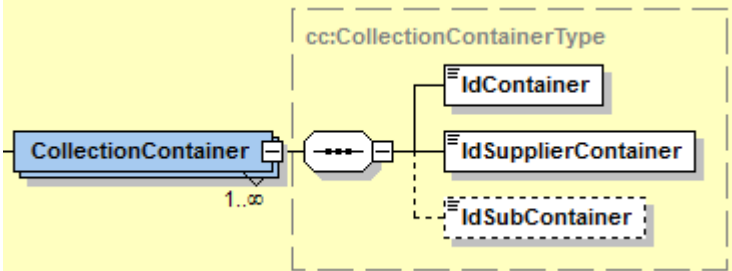
3.1 MessageId

MessageId	
Definition	Number of the message.
Multiplicity	1..1
Format	Integer
Allowed values	Must be an increasing number.
<i>XML element</i>	
Path	AuthorizationAndConfiguration/MessageId
Type	cc:MessageIdType
Restrictions	–

3.2 CollectionContainers

CollectionContainers	
Definition	List of collection containers to which this authorization and/or configuration applies to.
Multiplicity	1..1
XML element	
Path	AuthorizationAndConfiguration/CollectionContainers
Type	cc:CollectionContainersType
Restrictions	-
	

3.2.1 CollectionContainer

CollectionContainer	
Definition	Collection container to which this authorization and/or configuration applies to.
Multiplicity	1..n
XML element	
Path	AuthorizationAndConfiguration/CollectionContainers/CollectionContainer
Type	cc:CollectionContainerType
Restrictions	

3.2.1.1 *IdContainer*

IdContainer	
Definition	Number by which the collection container can be identified. This number has to be unique in the context of the party responsible for assigning the number to the specific container. This number can be assigned by the supplier of the container, but can also be assigned by the end user of the container.
Multiplicity	1..1
Format	Alphanumeric
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/CollectionContainers/CollectionContainer/IdContainer
Type	xsd:string
Restrictions	maxLen: 16 digits

3.2.1.2 *IdSupplierContainer*

IdSupplierContainer	
Definition	Number by which the supplier of the unique number for the collection container can be identified. This number is assigned to a supplier by the party responsible for the administration of this standard.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: SupplierIdCollectionContainer
XML element	
Path	AuthorizationAndConfiguration/CollectionContainers/CollectionContainer/IdSupplierContainer
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 999

3.2.1.3 *IdSubContainer*

IdSubContainer	
Definition	Id by which a subcontainer (drum/volume type/fraction) can be identified if applicable for the concerning collection container.
Multiplicity	0..1
Format	Alphanumeric
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/CollectionContainers/CollectionContainer/IdSubContainer
Type	xsd:string
Restrictions	–

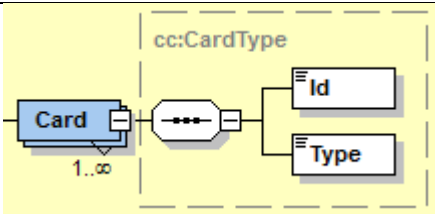
3.3 Authorizations

Authorizations	
Definition	Specification of authorizations to be sent to the collection container(s).
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Authorizations
Type	AuthorizationsType
Restrictions	-

3.3.1 Cards

Cards	
Definition	List of cards that are authorized to perform a transaction on this collection container.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Authorizations/Cards
Type	cc:CardsType
Restrictions	-

3.3.1.1 Card

Card	
Definition	Card that is authorized to perform a transaction on this collection container.
Multiplicity	1..n
XML element	
Path	AuthorizationAndConfiguration/Authorizations/Cards/Card
Type	cc:CardType
Restrictions	-
	

3.3.1.1.1 Id

Id	
Definition	The unique number assigned to the chip on the card by the manufacturer of the card. The uniqueness of this number is guaranteed by the ISO 14443 standard that defines the (information on the) cards.
Multiplicity	1..1
Format	Hexadecimal
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Authorizations/Cards/Card/Id
Type	xsd:hexBinary
Restrictions	minLen: 4 bytes (8 hex digits) maxLen: 7 bytes (14 hex digits)

3.3.1.1.2 Type

Type	
Definition	The type of the card that can be used to determine the action of the collection container.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: CardType
XML element	
Path	AuthorizationAndConfiguration/Authorizations/Cards/Card/Type
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 999

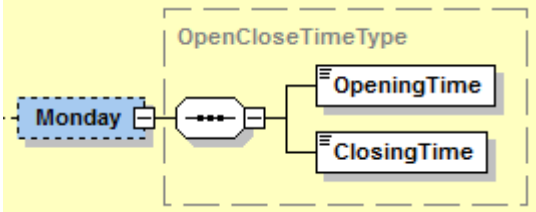
3.4 Configuration

Configuration	
Definition	Specification of configuration parameters to be sent to the collection container(s).
Multiplicity	0..1
<i>XML element</i>	
Path	AuthorizationAndConfiguration/Configuration
Type	ConfigurationType
Restrictions	–
	<pre> classDiagram class ConfigurationType { OpeningInformation 0..∞ ClosingInformation 0..∞ LockTimeout DefaultStatusOpen MaximumLoad MaximumLoadMessage CommunicationInformation ConfigurationSetting 0..∞ EventSetting 0..∞ } class Configuration ConfigurationType "1" *-- "0..1" Configuration </pre>

3.4.1 *OpeningInformation*

OpeningInformation	
Definition	Specification of the weekdays and times the collection container is accessible (i.e. can be used). Note that the DefaultStatusOpen element determines whether or not the collection container is accessible or not accessible by default. An empty OpeningInformation element in combination with a default accessible container must thus be interpreted as 'collection container is never accessible'.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation
Type	OpeningInformationType
Restrictions	–
	<pre> classDiagram class OpeningInformation { 0..∞ } class OpeningInformationType { 0..∞ +Monday +Tuesday +Wednesday +Thursday +Friday +Saturday +Sunday +StartEndDateTime 0..∞ } OpeningInformation "0..∞" -- "0..∞" OpeningInformationType </pre>

3.4.1.1 *Monday*

Monday	
Definition	Accessible time window on monday.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Monday
Type	OpenCloseTimeType
Restrictions	–
	

3.4.1.1.1 *OpeningTime*

OpeningTime	
Definition	The time after which the collection container is accessible.
Multiplicity	1..1
Format	ISO 8601 time format: hh:mm:ssTZD
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Monday/OpeningTime
Type	xsd:time
Restrictions	–

3.4.1.1.2 *ClosingTime*

ClosingTime	
Definition	The time after which the collection container is not accessible.
Multiplicity	1..1
Format	ISO 8601 time format: hh:mm:ssTZD
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Monday/ClosingTime
Type	xsd:time
Restrictions	–

3.4.1.2 *Tuesday*

Tuesday	
Definition	Accessible time window on tuesday.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Tuesday
Type	OpenCloseTimeType
Restrictions	–

For subelements see: 3.4.1.1 Monday

3.4.1.3 *Wednesday*

Wednesday	
Definition	Accessible time window on wednesday.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Wednesday
Type	OpenCloseTimeType
Restrictions	–

For subelements see: 3.4.1.1 Monday

3.4.1.4 *Thursday*

Thursday	
Definition	Accessible time window on thursday.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Thursday
Type	OpenCloseTimeType
Restrictions	–

For subelements see: 3.4.1.1 Monday

3.4.1.5 *Friday*

Friday	
Definition	Accessible time window on friday.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Friday
Type	OpenCloseTimeType
Restrictions	–

For subelements see: 3.4.1.1 Monday

3.4.1.6 *Saturday*

Saturday	
Definition	Accessible time window on saturday.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Saturday
Type	OpenCloseTimeType
Restrictions	–

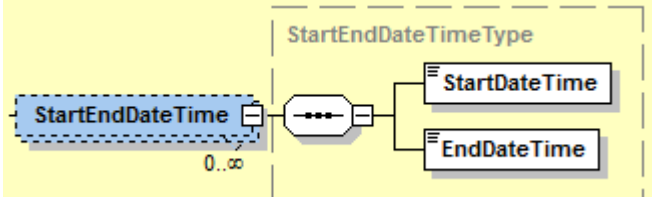
For subelements see: 3.4.1.1 Monday

3.4.1.7 *Sunday*

Sunday	
Definition	Accessible time window on sunday.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/Sunday
Type	OpenCloseTimeType
Restrictions	–

For subelements see: 3.4.1.1 Monday

3.4.1.8 *StartEndTime*

StartEndTime	
Definition	Special time window in which the container is accessible. This overrides the regular weekdays schedule for the given time window.
Multiplicity	0..n
<i>XML element</i>	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/StartEndTime
Type	StartEndTimeType
Restrictions	–
	

3.4.1.8.1 *StartDateTime*

StartDateTime	
Definition	The date and time after which the collection container is accessible.
Multiplicity	1..1
Format	ISO 8601 datetime format: YYYY-MM-DDThh:mm:ssTZD
Allowed values	
<i>XML element</i>	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/StartEndTime/StartDateTime
Type	xsd:dateTime
Restrictions	–

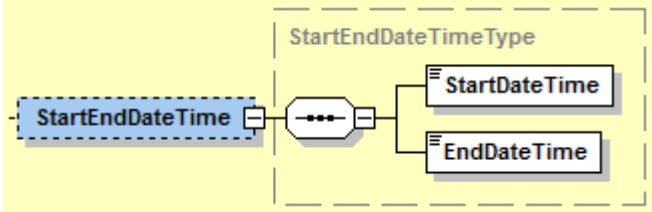
3.4.1.8.2 *EndDateTime*

EndDateTime	
Definition	The date and time after which the collection container is not accessible.
Multiplicity	1..1
Format	ISO 8601 datetime format: YYYY-MM-DDThh:mm:ssTZD
Allowed values	
<i>XML element</i>	
Path	AuthorizationAndConfiguration/Configuration/OpeningInformation/StartEndTime/EndDateTime
Type	xsd:dateTime
Restrictions	–

3.4.2 *ClosingInformation*

ClosingInformation	
Definition	Specification of time windows in which the container is not accessible (i.e. cannot be used). These time windows overrule the accessible time windows that are specified in the OpeningInformation element.
Multiplicity	0..n
XML element	
Path	AuthorizationAndConfiguration/Configuration/ClosingInformation
Type	ClosingInformationType
Restrictions	-
	<pre> classDiagram class ClosingInformation { } class StartEndDateTime { } ClosingInformation "0..∞" -- "*" StartEndDateTime </pre>

3.4.2.1 *StartEndTime*

StartEndTime	
Definition	Special time window in which the container is not accessible.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/ClosingInformation/StartEndTime
Type	StartEndTimeType
Restrictions	–
	

3.4.2.1.1 *StartTime*

StartTime	
Definition	The date and time after which the collection container is not accessible.
Multiplicity	1..1
Format	ISO 8601 datetime format: YYYY-MM-DDThh:mm:ssTZD
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/ClosingInformation/StartEndTime/StartTime
Type	xsd:dateTime
Restrictions	–

3.4.2.1.2 *EndTime*

EndTime	
Definition	The date and time after which the collection container is accessible again.
Multiplicity	1..1
Format	ISO 8601 datetime format: YYYY-MM-DDThh:mm:ssTZD
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/ClosingInformation/StartEndTime/EndTime
Type	xsd:dateTime
Restrictions	–

3.4.3 *LockTimeout*

LockTimeout	
Definition	The time in seconds that the lock is open after presenting a valid card to the reader at the collection container.
Multiplicity	0..1
Format	Integer
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/LockTimeout
Type	xsd:unsignedInt
Restrictions	maxIncl: 999 (3 digits)

3.4.4 *DefaultStatusOpen*

DefaultStatusOpen	
Definition	The default status of the container, defining whether the containers default is open. Based on this setting the opening and closing times can be interpreted.
Multiplicity	0..1
Format	Boolean
Allowed values	- true (i.e. default is 'accessible') - false (i.e. default is 'not accessible')
XML element	
Path	AuthorizationAndConfiguration/Configuration/DefaultStatusOpen
Type	xsd:boolean
Restrictions	–

3.4.5 *MaximumLoad*

MaximumLoad	
Definition	The maximum number of units that the container can contain. This element does not define whether or not a message must be send when the maximum load is reached, this is indicated by the element 'MaximumLoadMessage'.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/MaximumLoad
Type	cc:LoadType
Restrictions	–

3.4.5.1 *unit*

unit	
Definition	The unit of the specified amount.
Multiplicity	1..1
Format	Alphanumerical
Allowed values	- millilitre - gram - pieces - centimetres
XML element	
Path	AuthorizationAndConfiguration/Configuration/MaximumLoad/@unit
Type	xsd:string
Restrictions	Specified enumeration in allowed values

3.4.5.2 *Value*

Value	
Definition	Specified amount.
Multiplicity	1..1
Format	Integer
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/MaximumLoad/Value
Type	xsd:unsignedInt
Restrictions	maxIncl: 99999999 (8 digits)

3.4.6 *MaximumLoadMessage*

MaximumLoadMessage	
Definition	This element specifies a trigger. It specifies the number of units that should lead to the transmission of a message from the collection container to the back office when reached indicating that the container is full (or almost full). In case a trigger on the maximum load is not required or wanted, this element must not be specified
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/MaximumLoadMessage
Type	cc:LoadType
Restrictions	–

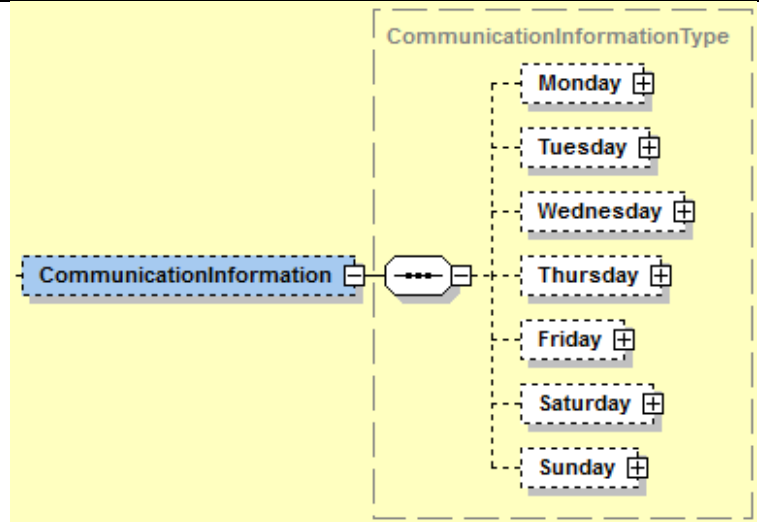
3.4.6.1 *unit*

unit	
Definition	The unit of the specified amount.
Multiplicity	1..1
Format	Alphanumeric
Allowed values	- millilitre - gram - pieces - centimetres
XML element	
Path	AuthorizationAndConfiguration/Configuration/MaximumLoadMessage/@unit
Type	xsd:string
Restrictions	Specified enumeration

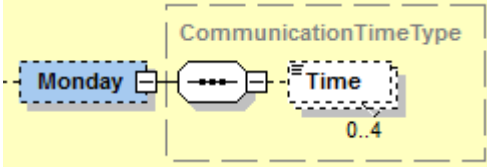
3.4.6.2 *Value*

Value	
Definition	Specified amount.
Multiplicity	1..1
Format	Integer
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/MaximumLoadMessage/Value
Type	xsd:unsignedInt
Restrictions	maxIncl: 99999999 (8 digits)

3.4.7 *CommunicationInformation*

CommunicationInformation	
Definition	Specification of the time(s) for each day of the week the container is transmitting information to the communication management system.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation
Type	CommunicationInformationType
Restrictions	-
	

3.4.7.1 Monday

Monday	
Definition	Times on monday the container communicates.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Monday
Type	CommunicationTimeType
Restrictions	–
	

3.4.7.1.1 Time

Time	
Definition	Specific communication time.
Multiplicity	0..4
Format	ISO 8601 time format: hh:mm:ssTZD
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Monday/Time
Type	xsd:time
Restrictions	–

3.4.7.2 *Tuesday*

Tuesday	
Definition	Times on tuesday the container communicates.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Tuesday
Type	CommunicationTimeType
Restrictions	–

For subelements see: 3.4.7.1 Monday

3.4.7.3 *Wednesday*

Wednesday	
Definition	Times on wednesday the container communicates.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Wednesday
Type	CommunicationTimeType
Restrictions	–

For subelements see: 3.4.7.1 Monday

3.4.7.4 *Thursday*

Thursday	
Definition	Times on thursday the container communicates.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Thursday
Type	CommunicationTimeType
Restrictions	–

For subelements see: 3.4.7.1 Monday

3.4.7.5 *Friday*

Friday	
Definition	Times on friday the container communicates.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Friday
Type	CommunicationTimeType
Restrictions	–

For subelements see: 3.4.7.1 Monday

3.4.7.6 *Saturday*

Saturday	
Definition	Times on saturday the container communicates.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Saturday
Type	CommunicationTimeType
Restrictions	–

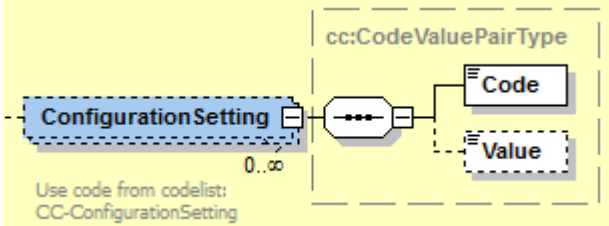
For subelements see: 3.4.7.1 Monday

3.4.7.7 *Sunday*

Sunday	
Definition	Times on sunday the container communicates.
Multiplicity	0..1
XML element	
Path	AuthorizationAndConfiguration/Configuration/CommunicationInformation/Sunday
Type	CommunicationTimeType
Restrictions	–

For subelements see: 3.4.7.1 Monday

3.4.8 *ConfigurationSetting*

ConfigurationSetting	
Definition	Specification of a collection container setting. The possible configuration items and their definitions can be found in the code list: CC-ConfigurationSetting.
Multiplicity	0..n
<i>XML element</i>	
Path	AuthorizationAndConfiguration/Configuration/ConfigurationSetting
Type	cc:CodeValuePairType
Restrictions	-
	

3.4.8.1 *Code*

Code	
Definition	Code to identify the specific configuration item that is sent.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: CC-ConfigurationSetting
<i>XML element</i>	
Path	AuthorizationAndConfiguration/Configuration/ConfigurationSetting/Code
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 9999 (4 digits)

3.4.8.2 *Value*

Value	
Definition	The value that must be stored as the new value for the specific setting.
Multiplicity	0..1
Format	Alphanumerical
Allowed values	
<i>XML element</i>	
Path	AuthorizationAndConfiguration/Configuration/ConfigurationSetting/Value
Type	xsd:string
Restrictions	maxLen: 100 characters

3.4.9 *EventSetting*

EventSetting	
Definition	Specification of an event setting. The possible events and their definitions can be found in the codelist CC-EventList.
Multiplicity	0..n
XML element	
Path	AuthorizationAndConfiguration/Configuration/EventSetting
Type	cc:CodeValuePairType (extended)
Restrictions	–

3.4.9.1 *Code*

Code	
Definition	Code to identify the event.
Multiplicity	1..1
Format	Integer
Allowed values	Codelist: CC-EventList
XML element	
Path	AuthorizationAndConfiguration/Configuration/EventSetting/Code
Type	xsd:unsignedInt
Restrictions	minIncl: 100 maxIncl: 9999 (4 digits)

3.4.9.2 *Value*

Value	
Definition	Optional threshold value for the event setting. The event occurs when the threshold value is exceeded for the setting as indicated by the code.
Multiplicity	0..1
Format	Alphanumerical
Allowed values	
XML element	
Path	AuthorizationAndConfiguration/Configuration/EventSetting/Value
Type	xsd:string
Restrictions	maxLen: 100 characters

3.4.9.3 *Trigger*

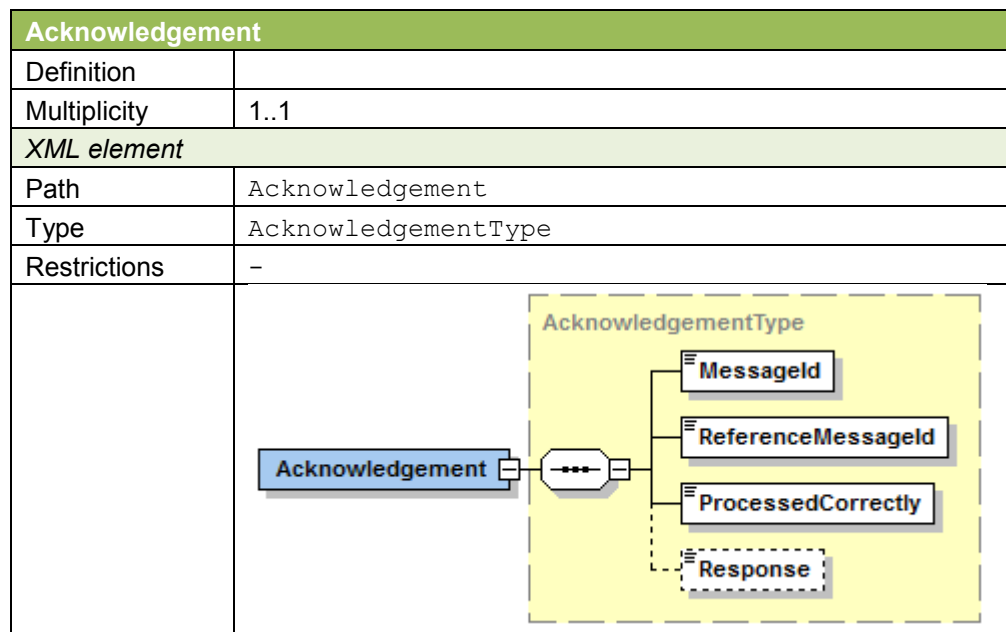
Trigger	
Definition	Whether or not this event must be a trigger to call-out and send a TransactionAndSystemInformation message to the back office.
Multiplicity	1..1
Format	Boolean
Allowed values	- true - false
XML element	
Path	AuthorizationAndConfiguration/Configuration/EventSetting/Trigger
Type	xsd:boolean
Restrictions	–

3.4.9.4 *Log*

Log	
Definition	Whether or not this event must be logged.
Multiplicity	1..1
Format	Boolean
Allowed values	- true - false
XML element	
Path	AuthorizationAndConfiguration/Configuration/EventSetting/Log
Type	xsd:boolean
Restrictions	–

4 Acknowledgement (3a and 3b)

This chapter presents the message model for the Acknowledgement.



4.1 MessageId

MessageId	
Definition	Number of the message.
Multiplicity	1..1
Format	Integer
Allowed values	Must be an increasing number. May restart at 1 after the maximum number is reached, or after changing the container.
<i>XML element</i>	
Path	Acknowledgement/MessageId
Type	cc:MessageIdType
Restrictions	–

4.2 ReferenceMessageId

ReferenceMessageId	
Definition	Number of the message this message is an acknowledgement for.
Multiplicity	1..1
Format	Integer
Allowed values	
<i>XML element</i>	
Path	Acknowledgement/ReferenceMessageId
Type	cc:MessageIdType
Restrictions	–

4.3 ProcessedCorrectly

ProcessedCorrectly	
Definition	Whether or not the acknowledged message has been processed correctly.
Multiplicity	1..1
Format	Boolean
Allowed values	- true - false
<i>XML element</i>	
Path	Acknowledgement/ProcessedCorrectly
Type	
Restrictions	–

4.4 Response

Response	
Definition	Description of the reason of the response.
Multiplicity	0..1
Format	Alphanumerical
Allowed values	
<i>XML element</i>	
Path	Acknowledgement/Response
Type	
Restrictions	maxLen: 250 characters