

# **GDSN Warnings**

**Implementation details for system owners**

GS1 Sweden

March 21, 2024

## Changelog

Date	Change	Author
2024-02-06	Initial publication	N. Stonewall
2024-03-21	Correct <code>correctiveActionCode</code> code value reference to <code>ACTION_NEEDED</code> . Update <i>Warnings and validations to be introduced in GDSN 3.1.27</i> . Add link to Swedish Example CIC Warning file. Add minor clarifications to <i>Choreography</i> .	N. Stonewall

## What is a GDSN Warning?

New kind of data validation within GDSN. It aims to:

- Improve data quality and communication within the network.
- Allow data recipient to provide feedback to data source about items, *without stopping flow of data.*

## Warning versus Validation Rule

Rule type	Sent by	Result when triggered	Data forwarded to DR ?	DS must act?
Validation rule	DP, DR	Block + info to DS	No	Yes
Warning	DP, DR	Info to DS	Yes	No

*DP = Datapool (Validoo), DS = Data Source (supplier), DR = Data Recipient*

## Definitions

*Note: All of these concepts exist today in the context of validation rules.*

**Warning:** A non-blocking data validation.

**GDSN Warning:** A warning that has been approved by all of GDSN, and that is run on all items in the network.

**Swedish Warning:** A warning that has been approved by GS1 Sweden community, and that is run on all items sent to target market Sweden via Validoo datapool.

**Datapool Warning:** A type of *Swedish Warning*. A technical Warning implemented by Validoo datapool and applied to all trade items sent to same.

**Data Recipient Warning:** A warning created by a Data Recipient, outside of the GDSN process.

## Use case

Use Warnings to signal *non-critical issues* affecting an item or item hierarchy. Examples of *non-critical issues* might include:

- **GDSN Warning**

WARNING: `attributeX` is deprecated and will be removed in a future release.

WARNING: `areBatteriesBuiltIn` is included. Consider also providing `quantityOfBatteriesBuiltIn`.

- **Swedish Warning**

WARNING: `attributeX` is missing and will be made mandatory for target market Sweden starting in GDSN 3.1.x.

WARNING: attributes `x`, `y`, `z` are missing. For dangerous goods in GPC Family 40000000, Swedish data recipients generally need this information.

- **Datapool Warning**

WARNING: The company prefix referenced in your GTIN appears to be invalid. Please investigate at `{url}` ...

- **Data Recipient Warning**

WARNING: For items in GPC Segment 50000000, `{data recipient}` requests that you provide `attributeX`.

WARNING: For this particular item, I, your data recipient, would like to request `attributeX`.

## Suggestions to data recipients

- Think of Warnings as a replacement for an email or phone call to your supplier.
- You can send as many Warnings as you wish.
- Warning sent latest defines item status.
- Help your masterdata administrators respond to a CIN in free text using Warning.
- *Remember that Warnings are what we as a community make of them.*

## What do I need to do? I am a ...

- ... **System provider.**

1. You need to be able to process Catalogue Item Confirmation (CIC) Warning messages sent from Validoo datapool.

See sections:

- *CIC Warning message structure* for XML structure your system can expect
- *Choreography* for scenarios in which you may receive a CIC Warning

2. You need to be able to expose to your user the information contained in a CIC Warning sent from Validoo datapool.

- ... **Data recipient who sends my own CIC messages.**

1. You need to begin providing your `gln` in attribute `messageCreatorGln` in your CIC messages.

Applies to **all** CIC messages starting GDSN 3.1.27. See section *New attributes in CIC message*.

2. You need to be able to generate CIC messages in the format expected by Validoo datapool.

See sections:

- *Using CIC states & Choreography* for how to correctly construct a CIC.
- *CIC Warning message structure* for XML structure your system will need to be able to generate.

- ... **Data recipient who does not yet send CIC messages, but plans to start doing so.**

The same requirements apply as for data recipients who already send their own CIC messages.

## New attributes in CIC message

To support Warnings, new attributes are introduced in CatalogueItemConfirmation message type.

Attribute	XPath	Mandatory
messageCreatorGln	catalogueItemConfirmation/catalogueItemConfirmationState/messageCreatorGln	Yes
messageCreatorName	catalogueItemConfirmation/catalogueItemConfirmationState/messageCreatorName	No

**messageCreatorGLN:** Global Location Number (GLN) of party responsible for creating the content in the (CIC) message.

**messageCreatorName:** The name of the party responsible for creating the content contained in the (CIC) message.

XML representation:

```
<xsd:complexType name="CatalogueItemConfirmationStateType">
  <xsd:sequence>
    <xsd:element name="catalogueItemConfirmationStateCode"
      type="gdsn_common:SynchronisationConfirmationStateEnumeration"/>
    <xsd:element name="recipientGLN"
      type="shared_common:GLNType"/>
    <xsd:element minOccurs="0" name="recipientDataPool"
      type="shared_common:GLNType"/>
    <xsd:element name="messageCreatorGLN"
      type="shared_common:GLNType"/>
    <xsd:element minOccurs="0" name="messageCreatorName"
      type="xsd:string"/>
  </xsd:sequence>
</xsd:complexType>
```

## Using CIC states

CIC states are how data recipients define item status. To correctly send Warning, use an appropriate CIC state.

- A data recipient can send Warning with either:

1. catalogueItemConfirmationStateCode = SYNCHRONISED
2. catalogueItemConfirmationStateCode = REVIEW

Validoo datapool will treat these identically.

- For Warning-only CIC, use catalogueItemConfirmationStateCode = SYNCHRONISED.
- For CIC Error (with or without Warning), continue using catalogueItemConfirmationStateCode = REVIEW.
- catalogueItemConfirmationStateCode = RECEIVED sent by data recipient should not contain warnings.
- See *Choreography* table in Appendix for a more detailed breakdown of CIC states and various parties' roles in CIC choreography.

## CIC Warning message structure

CIC Warning structure has minor changes compared to current CIC message structure. To correctly send CIC Warning – and CIC Error – use the structure presented in this section. Below structure will apply to all CIC messages starting GDSN 3.1.27.

```
<catalogueItemConfirmationStatus>
  <confirmationStatusCode>CIC999</confirmationStatusCode>
  <confirmationStatusCodeDescription languageCode="en">Free Form Text to be populated
  by the Data Recipient</confirmationStatusCodeDescription>
  <additionalConfirmationStatusLongDescription languageCode="en">[warning_id]
  WARNING: Datapool's or data recipients description of issue to be communicated
  to data source.
</additionalConfirmationStatusLongDescription>
  <correctiveAction>
    <correctiveActionCode>WARNING</correctiveActionCode>
  </correctiveAction>
</catalogueItemConfirmationStatus>
```

This section steps through the structure to highlight changes. Each XML snippet is preceded by one of:

**[no change]** No change compared to current CIC implementation

**[new]** Contains a change compared to current CIC implementation

- **[no change]** `confirmationStatusCode` shall equal *'CIC999'*.

```
<confirmationStatusCode>CIC999</confirmationStatusCode>
```

Datapools use *'CIC999'* for both Warnings and validation errors.

- **[new]** `confirmationStatusCodeDescription` shall equal (exactly):

Free Form Text to be populated by the Data Recipient

Validoo datapool currently (meaning: prior to GDSN 3.1.27) includes rule ID here:

```
<confirmationStatusCodeDescription languageCode="sv">730641</confirmationStatusCodeDescription>
```

Rule ID will be moved to `additionalConfirmationStatusLongDescription` (see next bullet).

- **[new]** `additionalConfirmationStatusLongDescription` shall contain the Warning error message ID and corresponding error message. It shall follow this format:

```
<additionalConfirmationStatusLongDescription languageCode="en">[warning_id] WARNING: Datapool's or data recipient's description of issue to be communicated to data source.</additionalConfirmationStatusLongDescription>
```

- **[new]** `correctiveAction` class block shall be used.

```
<correctiveAction>
  <correctiveActionCode>WARNING</correctiveActionCode>
</correctiveAction>
```

The presence of `correctiveActionCode = WARNING` is what distinguishes a Warning from a validation rule error.



## CIC Error message structure

- **[new]** In CIC Error (**validation error CIC**), location of rule ID and affected GTIN will be changed to match **CIC Warning**. A single structure for CIC Error and CIC Warning will enable unified handling.

Current validation error CIC structure:

```
<catalogueItemConfirmationStatusDetail>
  <confirmationStatusCatalogueItem>
    <dataSource>7300010000100</dataSource>
    <gtin>07305822201189</gtin>
    <targetMarketCountryCode>752</targetMarketCountryCode>
  </confirmationStatusCatalogueItem>
  <catalogueItemConfirmationStatus>
    <confirmationStatusCode>CIC999</confirmationStatusCode>
    <confirmationStatusCodeDescription languageCode="sv">730641
  </confirmationStatusCodeDescription>
    <additionalConfirmationStatusLongDescription languageCode="sv">
      [Gtin: 07305822201189]Typ av databärare kod (T4310) saknas för denna artikel.
    </additionalConfirmationStatusLongDescription>
  </catalogueItemConfirmationStatus>
</catalogueItemConfirmationStatusDetail>
```

Validation error CIC structure starting GDSN 3.1.27:

```
<catalogueItemConfirmationStatusDetail>
  <confirmationStatusCatalogueItem>
    <dataSource>7300010000100</dataSource>
    <gtin>07305822201189</gtin>
    <targetMarketCountryCode>752</targetMarketCountryCode>
  </confirmationStatusCatalogueItem>
  <catalogueItemConfirmationStatus>
    <confirmationStatusCode>CIC999</confirmationStatusCode>
    <confirmationStatusCodeDescription languageCode="en">Free Form Text to be
      populated by the Data Recipient</confirmationStatusCodeDescription>
    <additionalConfirmationStatusLongDescription languageCode="sv">
      [730641] Typ av databärare kod (T4310) saknas för denna artikel.
    </additionalConfirmationStatusLongDescription>
    <correctiveAction>
```

```
        <correctiveActionCode>ACTION_NEEDED</correctiveActionCode>
    </correctiveAction>
</catalogueItemConfirmationStatus>
</catalogueItemConfirmationStatusDetail>
```

Changes:

- Rule ID moved from `confirmationStatusCodeDescription` to `additionalConfirmationStatusLongDescription`.
- `gtin` no longer included in `additionalConfirmationStatusLongDescription`; it is available from its own XPath.
- `correctiveAction` block used with code `ACTION_NEEDED`.

## New validation rule

CIC from data recipient will be subject to new validation rule.

```
If catalogueItemConfirmationStateCode equals 'CIC999'
then additionalConfirmationStatusLongDescription
SHALL be used.
```

Ensures supplier can act on data recipient's validation/warning by requiring an error message.

## Schedule

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Date	Event
<2024-03-05 Tue>	Validoo pre-prod environment for GDSN 3.1.27 (+ Warnings) available
<2024-05-18 Sat>	GDSN 3.1.27 (+ Warnings) goes live globally

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## Testing

Besides GDSN's own 3.1.27 Warnings, Validoo datapool will implement the following test warning in pre-prod environment:

```
tradeItemMarketingMessage SHALL NOT contain substring
'WARNINGS_TEST'.
```

To trigger it, send a CIN containing 'WARNINGS\_TEST' in attribute `tradeItemMarketingMessage` (T3746).  
Testable in pre-prod by `<2024-03-05 Tue>`.

## Additional documentation

- GDSN's documentation for 3.1.27 release
  - 3.1.27 schema
    - \* *Schemas/gs1/gdsn/CatalogueItemConfirmation.xsd*
    - \* *Instance File/CatalogueItemConfirmation.xml*
  - Validation Rule document, including Warnings
- Swedish Example CIC Warning file at `gs1.se`

**Note:** GDSN's 3.1.27 documentation is subject to change; this document reflects the latest information available as of its publication. See GDSN's 3.1.27 release page for latest information.

## Appendix

### Warnings and validations to be introduced in GDSN 3.1.27

- Relevant validations

**1854:** If `confirmationStatusCode` equals 'CIC999' then `additionalConfirmationStatusLongDescription` SHALL be used.
- Warnings

**101867:** If `targetMarketCountryCode` equals '250' (France) and `additionalTradeItemIdentification/@additionalTradeItemIdentificationTypeCode` equals 'SUPPLIER\_ASSIGNED', then `additionalTradeItemIdentification` SHALL be less than or equal to 35 characters.

**737692:** If Document Command (T0153) equals 'ADD' then company prefix used in Trade item identification, GTIN (T0154) SHALL be valid.

## Choreography

Below table summarizes how different actors are intended to use CIC states, where a *CIC state* is defined by the combination of `catalogueItemConfirmationStateCode` and `correctiveActionCode`.

<code>CICstateCode</code>	<code>correctiveActionCode</code>	CIC (Source Datapool)
RECEIVED	WARNING	Validates all GDSN Warnings.
RECEIVED		Indicates data received.
REVIEW	ERROR <sup>1</sup>	Validates all GDSN validations.
REVIEW	WARNING	n/a
REVIEW	ERROR & WARNING	Validates all GDSN validations and Warnings.
SYNCHRONISED	WARNING	n/a; reserved for DR.
SYNCHRONISED		n/a; reserved for DR.
CIC (Recipient Datapool) - DP representing DR		
RECEIVED	WARNING	Validates all local + DR Warnings.
RECEIVED		Indicates data received.
REVIEW	ERROR	Validates local + any DR validations.
REVIEW	WARNING	n/a
REVIEW	ERROR & WARNING	Validates local + any DR validations and Warnings.
SYNCHRONISED	WARNING	n/a; reserved for DR.
SYNCHRONISED		n/a; reserved for DR.
CIC (Data recipient)		
RECEIVED	WARNING <sup>2</sup>	Should not send.
RECEIVED		Indicates data received, no business decision.
REVIEW	ERROR	Validates any DR validations.
REVIEW	WARNING <sup>3</sup>	
REVIEW	ERROR & WARNING	Validates any DR validations and Warnings.
SYNCHRONISED	WARNING	Send once data integrated.
SYNCHRONISED		Send once data integrated.

## Questions/help

- Email [drift@validoo.se](mailto:drift@validoo.se).

<sup>1</sup>ERRORs are represented using `correctiveActionCode = ACTION_NEEDED`.

<sup>2</sup>RECEIVED + WARNING should only be sent by datapool. Indicates data received, no business decision yet.

<sup>3</sup>Not recommended for DR. Use SYNCHRONISED + WARNING instead.