# Central Services

## Messages involved

### Messages involved in Customs Applications

In the business area ‘Central Services’, the Information Exchanges can be distinguished in four categories:

* Those exchanged between CS/RD2 and any other application operating in the Common Domain, as defined in DDRDA [R26].

The National CS/RD2 teams are invited to create subscriptions that will extract the needed information on regular basis for ICS-P1, ECS-P2, AES-P1, NCTS-P4, NCTS-P5 and NCTS-P6. During the elaboration phase, the information will be available to the National Project Teams via CS/RD2 CONF.

In addition, the codelists that are of interest for the traders (i.e. those related to the ED messages, only).

* Those exchanged between CS/MIS2 and ICS-P1, ECS-P2, AES-P1, NCTS-P4, NCTS-P5 and NCTS-P6 in the Common Domain:
  + Notification of System Unavailability to Common Domain C\_UNA\_COM (IE070);
  + Sending of Statistics Data C\_STA\_SND (IE411).
* There are also those available to download through the User Interface of CS/MIS2:
  + Notification of System Unavailability to National Domain C\_UNA\_NAT (IE071);
  + Full Unavailability Schedule C\_UNA\_DAT (IE971).

For AES-P1, NCTS-P5 and NCTS-P6, CS/MIS2 functionality will also cover the following IEs:

* + NCA Availability Request C\_AVA\_REQ (IE974);
  + NCA Availability Response C\_AVA\_RSP (IE975);
  + Inter-Domain Linking C\_MRN\_LNK (IE078 for NCTS and IE578 for AES).
* Those exchanged between TAXUD ieCA/TED and any other application operating in the Common Domain, as defined in ieCA SAD [R19].

In addition to this, although not strictly an Information Exchange, the technical CCN/CSI statistics and audit files also need to be considered.

The following messages from the Core Business area are also used for the CCN/CSI based exchanges:

* Internal CCN/CSI messages [CCN/CSI Confirm on Delivery Acknowledgement C\_COD\_ACK (IE908), CCN/CSI Confirm on Arrival Acknowledgement C\_COA\_ACK (IE909), CCN/CSI Expiration Notification C\_EXP\_NOT (IE910), and CCN/CSI Exception Notification C\_EXC\_NOT (IE911)]. These messages are related to the internal usage of CCN/CSI and, when correctly used, are transparent to the user. Details concerning the technical CCN/CSI messages are included in Transport of messages via CCN/CSI;
* Messages for error reporting:
  + **EDIFACT NACK** C\_EDI\_NCK (IE907) is used for reporting EDIFACT formatting errors when the message is exchanged in EDIFACT format;
  + **XML NACK** C\_XML\_NCK (IE917) is used for reporting XML formatting errors when the message is exchanged in XML format;
  + **Functional NACK** C\_FUN\_NCK (IE906) is used for reporting Functional errors (e.g. violation of Information Exchange building rules);
  + **ENS rejection by Office Of Departure** C\_DEP\_REJ\_ENS (IE056) is used for reporting ENS filing errors between TED and ICS2-CR.
  + **Warning Message** C\_MSG\_WRN (IE903) is used for reporting partial submission of Business Statistics or for reporting errors in consistency check validations of Business Statistics.

The usage of those above messages is further explained in the section Design principles, chapter V.3 (Exception Handling).

Central Services can be split into five functionally different components:

* The exchange of common reference data (including the Customs Office List);
* The exchange of conversion request/responses;
* The exchange of availability data (IE070, IE071 and IE971);
* The exchange of business statistics data (IE411);
* Monitoring of messages and movements (CCN/CSI audit files) and statistics on the messages (CCN/CSI technical statistics) and on the error messages that are generated to reject erroneous messages.

The first item (Reference Data and Customs Office List) is covered centrally by the CS/RD2 CDCA tool. For more information, please refer to DDRDA document [R26]. Availability data, statistics (business & technical) and monitoring of movements are applicable only for the movement systems and are covered by the CS/MIS2 CDCA. In addition, the information about start date of operations in the “To-Be” operational mode in Common Domain for NCTS-P5,NCTS-P6 and AES-P1 will be managed by CS/MIS2 CDCA, with information also available in CS/RD2.

## The different sections of the CS/MIS2 tool

Statistics and availability management for the movement systems are supported by a centrally developed Customs application (CDCA) called CS/MIS2 (Central Services/Management Information System). This system collects the statistics and availability data from the various NAs via two physical media[[1]](#footnote-2)(the Web and CCN/CSI) and distributes the information to the NAs after centralised consolidation[[2]](#footnote-3).

This section deals with the following Information Exchanges:

Common IEs:

* Statistics: Technical CCN/CSI statistics;
* MRN nursing for Movement Monitoring: CCN/CSI Audit files;
* Availability data: IE070, IE071 and IE971;
* Business Statistics: IE411 and IE903.

**The role of the CS/MIS2 tool**

CS/MIS2 is a system in the Common Domain, located at the ITSM site. Its role is threefold:

* Keep track of system unavailability;
* Manage and distribute statistics on system, business and resources regarding the Customs systems;
* Monitor of Customs movements (MRN nursing).

CS/MIS2 web site is integrated into the ITSM Portal site.

### CCN/CSI technical statistics

Separate CCN/CSI technical statistics will be generated for the CCN/CSI network resources and the use of the Common Domain for each Customs system. Technical CCN/CSI statistics provide information collected on the CCN gateways used by Customs Applications. The reports generated here inform the user about utilisation of the CCN/CSI network resources (e.g. number of messages).

Technical statistics report on the use of the Common Domain (CD) by a Customs application. CCN message transport information is collected daily on each NA CCN gateway. It is forwarded daily to the ITSM Contractor and from there further on to the CCN gateway accessed by ITSM. There, the statistics data is captured by CS/MIS2 and stored on disk.

Note that the generation of technical statistics data and the collection and forwarding of this data will be performed by the ITSM Contractor. Therefore, this process is transparent to the NA and no specific implementation from the NA side is required. However, NAs will be able to view and download the statistics from CS/MIS2 web site.

Technical statistics will be sent across the CCN/CSI platform as a flat file. A separate queue will be created in the Taxation and Customs Union DG gateway for the collection of the Technical statistics for each Customs system (see section VIII paragraph VIII.2.19).

### Movement Monitoring

CCN/CSI audit files from all the Customs Systems’ gateways will be collected by ITSM Contractor and sent to Taxation and Customs Union DG gateway at ITSM. Separate queues will be created in the Taxation and Customs Union DG gateway for the collection of the CCN/CSI audit files from all the CCN gateways for each Customs system (see section VIII paragraph VIII.2.19).

CS/MIS2 will then consolidate these audit files daily.

A user will be able to perform “MRN Tracking” in one of two ways to get all the data available about a particular MRN:

* The user can directly enter the MRN into a web form;
* The user can make a query (using a web form) to get a list of the MRNs matching the query and then select a particular MRN from that screen.

In the above cases the result will be a screen displaying all the messages and reports related to that MRN or query. The user shall also be able to request downloading an Excel file that incorporates the results of the submitted query.

In addition to the “MRN Tracking” functionality, the system also presents the “Message Tracking” functionality. Message Tracking gives the user the ability to retrieve a list of messages matching the criteria selected in the Messages query web form and then select a particular message from that screen.

The Messages query results are displayed in a list of entries displaying the type of the message(s), the related CORREL ID(s) and reports.

The CS/MIS2 application will incorporate the “Movement Explorer” functionality, which will enable the user to retrieve information about the number of movements (number of distinct MRN) exchanged per country pair, according to the selection criteria of the Movement Explorer web form.

The user will be able to view the data using CS/MIS2 Web interface or download them in an Excel format.

CCN/CSI audit files from all the Customs Systems’ gateways will be collected by ITSM Contractor and sent to Taxation and Customs Union DG gateway at ITSM.

CS/MIS2 will then consolidate these audit files daily.

#### Information about inter-linked movement (NCTS-P5/AES and AES/EMCS)

National administrations will collect information about linked movements and submit this information to CS/MIS2 via

* an IE078 (NCTS-P5) linking an NCTS MRN to one or more AES MRNs;
* and IE578 (AES-P1) linking an AES MRN to one or more EMCS ARCs.

The activities to be performed by CS/MIS2 upon the arrival of the linking message (IE078/IE578) are the following:

* Extract the linking information from the message;
* Locate the linked movements in CS/MIS2, set a flag indicating the fact that they are linked and set a reference for locating the linked information;
* Store the linking information.

Error handling:

* In case the received IE078 or IE578 is invalid, CS/MIS2 will respond to the NA with an IE917 (for formatting errors) or IE906 (for business rule violation).

### Business statistics

Business statistics serve to provide information to the user on Customs operations from the business perspective.

NCTS, ECS and ICS business statistics are collected on a monthly basis in the National Domain under automatic procedures by the NCA. Business statistics are provided to CS/MIS2 application either by using CCN/CSI or by uploading them via CS/MIS2 Web interface by means of the Sending of Statistics Data C\_STA\_SND (IE411).

NAs may send IE411 statistical messages that include data for multiple domains (NCTS and/or ECS and/or ICS) and/or IE411 statistical messages that include data for one single Customs domain.

The IE411 can be submitted to CS/MIS2 using two different CCN queue configurations:

1. Multi-queues configuration: For the IE411 related to **only one domain** (i.e. only one iteration of the Data Group “System applicability” in the IE411) the message shall be submitted to the CCN queue of this specific domain that the IE411 contains (e.g. CD411D-MSG.NCTS for business statistics related to transit and CD411D-MSG.ECS for business statistics related to export );
2. Single-queue configuration: For the IE411 related to **more than one domain** (i.e. more than one iteration of the Data Group “System applicability” in the IE411) the message shall be submitted in the NCTS queue (with a message CD411D-MSG.NCTS ).

If the NA send the IE411 to a single-queue, it must send them to the queue configured as their NCTS queue in CS/MIS2. The replies sent by CS/MIS2 to them will be sent to the queue configured as the NCTS reply queue. The name space of the IE411 XSD shall be related to NCTS even if the data included in the IE411 is for other than NCTS domains (e.g., AES).

For more information, please read CSMIS2-INTGM-Integration Manual v1.40 (*section 3.1.1.3 CCN Message Types*) [R46].

If an NA sends more than one IE411 message concerning a given month and Customs domain, the latest information will overwrite any previously communicated data (i.e. if in the first message IE411 for a statistic type a value has been transmitted and the second message IE411 does not contain this certain statistic type, the first value remains valid; if a statistic type value is transmitted in both messages, the second value is valid). Furthermore, for each statistic type, IE411 should contain only one value reported per period and per country pair.

### Availability monitoring & alerting

Monitoring of Customs Systems informs the NAs about the unavailability of any NA, so that they can take measures to prevent the transmission of messages to the disabled NA.

Three different types of unavailability may be communicated:

1. The NA may plan a scheduled unavailability in advance. This information is entered into CS/MIS2, using a Notification of System Unavailability to Common Domain C\_UNA\_COM (IE070) with System Unavailability Type “S”, kept in a central database and submitted via email with the Notification of System Unavailability to National Domain C\_UNA\_NAT (IE071) to the other countries that have registered for this functionality (in case the information was entered into CS/MIS2 via IE070).
2. Unscheduled unavailability may be communicated by any non-system means to the Central Help Desk. It is then entered into CS/MIS2 and monitored by the Central Help Desk. It can also be communicated through a web form on CS/MIS2 web site or by uploading a Notification of System Unavailability to Common Domain C\_UNA\_COM (IE070) with System Unavailability Type “U”. This information will be submitted via email with the Notification of System Unavailability to National Domain C\_UNA\_NAT (IE071) to the countries that have registered for this functionality.
3. Apart from this, the NA should inform the CS/MIS2 application about the non-implementation of a particular business service, in order to advise the other NAs not to send messages related to this business service to the specific NA. In order to achieve this, the NA will upload a Notification of System Unavailability to Common Domain C\_UNA\_COM (IE070) with System Unavailability Type “N” for the particular business service. This information will be submitted via email with the Notification of System Unavailability to National Domain C\_UNA\_NAT (IE071) to the countries that have registered for this functionality.

Every NA prepares its own unavailability schedule that is distributed to all other NAs that have registered for this functionality, in order to prepare the other NAs for the disruption of service. FTSS [R25], FSS-AIS [R14], FSS-AES [R13] and FSS-NCTS-P6 [R43] foresees a mechanism for this purpose: the NA sends its unavailability schedule to the CS/MIS2, which stores the information and submits via email the unavailability to all other countries.

Three messages will be used for this:

* An IE070 message contains an update from a NA to its currently known schedule;
* An IE071 message is sent by CS/MIS2 as an e-mail attachment to all countries that have registered for this functionality, to update their local unavailability information about the other NAs.[[3]](#footnote-4) The IE071 message can also be downloaded in XML format using the Web Interface of CS/MIS2;
* An IE971 in XML format can be downloaded using the Web Interface of CS/MIS containing the complete schedule of unavailability.

CS/MIS2 web site will provide the functionality to manually upload the IE070 message in XML format. A separate instance of this message will be used for each Customs system.

There can be many causes of unscheduled interruptions to the services. Therefore, any means of non-system communication (telephone, fax, e-mail) as well as an IE070 having Type “U” (Unscheduled) may be used to advise the ITSM operator about this kind of event. The modifications to the unavailability are broadcast by ITSM to all NAs by means of an IE071 in XML format attached to e-mail.

Statistics on unscheduled unavailability are reported by CS/MIS2.

Users will also be able to request from the CS/MIS2 web site an IE971 in XML format containing the complete schedule of unavailability. They will also be able to see live on the CS/MIS2 web site which countries are currently unavailable.

#### Availability monitoring & alerting for AES-P1, NCTS-P5 and NCTS-P6

In CS/MIS2 the monitoring and alerting functionality is extended for AES-P1, NCTS-P5 and NCTS-P6. The Operational Status of an NA can be detected as: ‘Available’, ‘Suspicious’ and ‘Unavailable’.

* The NA is considered ‘Available’ when it shows ‘*normal*’ activity over the Common Domain and no other source (Central Monitoring Service) has raised an issue;
* The NA is considered ‘Suspicious’ when there is no message sent over the Common Domain for the configured interval (e.g. 30 minutes) though there are requests sent to this NA, with response pending, or messages cumulating in the queue;
* The NA is considered ‘Unavailable’ when it is in the “Suspicious” state and the IE974/IE975 request/response ping mechanism has confirmed the unavailability or some other source (Central Monitoring Service) has raised an unavailability issue.

The IE974/IE975 request/response ping mechanism is used by CS/MIS2 for confirming a detected potential unavailability. It is triggered by the detection of a potential unavailability of a NA. This process enables the system to detect performance decrease or potential undeclared unavailability of National Applications based on the analysis of movement monitoring data (i.e. their activity over the Common Domain sensed by the events recorded by the audit records). A decision for an alert is taken considering contextual information (e.g. declared unavailability, activity patterns, National holidays, strikes, pandemics), the information provided by existing central monitoring services and the IE974/IE975 ping mechanism. In case of absence of message IE975, during a period that is configurable per country and per system in CS/MIS2, an alert is sent via e-mail (at least) by CS/MIS2 to a distribution list that includes the NHD of the country where the unavailability is detected, and the Central Project Team (ITSM Business Monitoring team).

### Duplication of the error messages

The messages IE906, IE907, IE917 and IE056 exchanged between National Applications or National Application and TAXUD ieCA/TED or between National Applications and ieCA/TED will be automatically duplicated at CCN level, in a transparent manner for the National project teams, for possible analysis for the CS/MIS2 users, and in particular for the ITSM Business Monitoring team who will be able to analyse the error reasons. This process does not require any change of the configuration or developments by the National teams.

The duplication of the messages (IE906, IE907, IE917 and IE056) will be activated by ITSM Contractor by using the CCN MDS component on the CCN GW of the sending NAs. A copy of all error messages will be generated and dispatched to the specific CCN queues of CS/MIS2.

CS/MIS2 must be capable of storing and processing the data elements of the error messages that are relevant for the business monitoring. Those elements will be automatically deleted from CS/MIS2 after a configurable period of time (e.g. 12 months).

For each CS/MIS2 domain, it will be possible to query the error messages, and to export into an MS-Excel file the result of the query, for further manual processing and analysis.

The information that will be available in CS/MIS2 will include:

For CD906A and CD906B:

* MRN
* Error type
* Error pointer
* Error reason \*
* Original attribute value \*

For CD907A:

* EDIFACT errors (INTERCHANGE, MESSAGE -> SEGMENT-> DATA ELEMENT)

For CD906C/CD906D:

* MRN
* Error pointer
* Error code
* Error reason \*\*
* Original attribute value \*

For CD917C/CD917D:

* MRN
* Error line number
* Error column number
* Error pointer \*\*\*
* Error code
* Error text
* Original attribute value \*

For CD056D:

* MRN
* ENS MRN
* Business rejection type
* Rejection date and time
* Error pointer \*\*\*
* Error code
* Error reason
* Error description

*\* Optional fields*

*\*\* Optional field during the Transitional Period (ECS-P2/AES and NCTS-P4/NCTS-P5)*

*\*\*\* Required field (except if the XPath string is to be truncated).*

### Information for the identification of Recipient NA operational mode during the Transitional Period of NCTS-P5 and AES-P1, and Transitional Period of NCTS-P6

Section IV [R40], [R39] and [R44] defines how the Recipient NA operational mode shall be identified by the Sender in “To Be” and what shall checks must be performed prior to the submission of IE to Common Domain.

This requires the following information:

1. Information about start date of operations in the NCTS-P5/AES-P1/NCTS-P6 operational mode in Common Domain
2. Information about functionalities not implemented or not supported by some NAs (AES-P1/NCTS-P5/NCTS-P6).

The following sub-sections define where this information should be defined.

#### Information about start date of operations in the NCTS-P5/AES-P1/NCTS-P6 operational mode in Common Domain

Each NA shall declare and maintain (when necessary) the start date of operations in the “To-Be” operational mode in Common Domain. This information is critical for the operations during the Transitional Period of NCTS-P5 and AES-P1.

This information will be declared by each NA and by updating the respective information in CS/MIS2. The information about start date of operations in the “To-Be” operational mode in Common Domain for NCTS-P5 and AES-P1will be disseminated to NAs via an interface with similar protocol to CS/RD2.

The above exact functionality will be used during the Transitional Period of NCTS-P6, when each NA shall declare and maintain (when necessary) the start date of operations in the NCTS-P6 operational mode in Common Domain.

Finally, an interface will also be established between CS/MIS2 and CS/RD2.

#### Information about functionalities not implemented or not supported by some NAs (AES-P1/NCTS-P5/NCTS-P6)

Each NA running in the “To Be” NA operational mode in Common Domain must also declare any functionality not implemented/operated via the “Availability Management” in CS/MIS2.

In particular, the *Business service not implemented (System Unavailability Type “N”)* shall be used for “specific” functionalities (if any) not implemented yet by pertinent NA in the scope of “To Be” phase. These functionalities cannot be any of functionalities/scenarios of the “To Be” phase guarantying the business continuity as defined in Section IV of [R40] and [R39].

Finally, this unavailability must be declared in CS/MIS2 before the start of operations. Please refer to section II.2.4 for availability management in CS/MIS2.

##### Information about Opt-In/Opt-Out NCTS-P6 NAs

Each NA running in the NCTS-P6 operational mode in Common Domain must also declare if it offers the combined declarations to their traders, the so called “Opt-In” NAs, via the “Availability Management” in CS/MIS2.

Finally, this unavailability must be declared in CS/MIS2 before the start of operations. Please refer to section II.2.4 for availability management in CS/MIS2. The information about Opt-In/Opt-Out NCTS-P6 NAs is maintained in CS/RD2. Information from CS/RD2 shall be re-used in CS/MI2.

## Message exchanges with CS/MIS2 via Web interface

This chapter describes the mechanism for exchanging the following messages with CS/MIS2:

### IEs for Availability

* Availability: IE070, IE071, IE971.

CS/MIS2 offers separate data capture screens for the case of IE070 (notification of unavailability) messages. Dedicated instances of these messages will be used/available for each separate Customs system. The user can supply the information to CS/MIS2 via a form provided in one of these screens. The following table shows the possibilities and in which direction each message is sent (Upload = from NCA to CS/MIS2, Download = from CS/MIS2 to NCA).

|  |  |  |  |
| --- | --- | --- | --- |
| **IE** | **Upload/ Download** | **Data capture on screen of CS/MIS2** | **Manual operation via browser** |
| IE070 | Up | X | X |
| IE071 | Down | - | X |
| IE971 | Down | - | X |

Table 9: Messages exchanges with CS/MIS2 via the Web Interface

No error reporting is foreseen via dedicated error message exchanges but error notification is displayed to the user.

The messages sent to the CS/MIS2 application will be generated by the HTML GUI according to the data entered by the user.

### IEs for statistics

Information exchanges IE411 is used for the exchange of Business Statistics data.

CS/MIS2 allows the manual upload of IE411 messages on the Web Interface. Either dedicated instances of these messages will be uploaded for each separate Customs system or one instance including data for all Customs systems. The user can simply supply the information to CS/MIS2 via a form provided in a screen.

The following table shows the possibilities and in which direction each message is sent (Upload = from NCA to CS/MIS2, Download = from CS/MIS2 to NCA).

|  |  |  |  |
| --- | --- | --- | --- |
| **IE** | **Upload/ Download** | **Data capture on screen of CS/MIS2** | **Manual operation via browser** |
| IE411 | Up | - | X |
| IE903 | Down | - | X |

Table 10: Additional CS/MIS2 interfaces across the Web

No error reporting is foreseen via dedicated error message exchanges but only basic transfer.

## Message exchanges with CS/MIS2 via CCN/CSI

This section deals with the IE411, the CCN/CSI technical statistics, the CCN/CSI audit files and the exchange of MRN Follow up queries and responses.

### Sending IE411 data to CS/MIS2

#### For NCTS-P4, ECS-P2, ICS-P1

The IE411 message has EDIFACT (CD411B) or XML (CD411C) as its format and is either sent to the CS/MIS2 application across CCN/CSI.

CS/MIS2 has a dedicated address on the CCN/CSI network and a dedicated queue for capturing the business statistics.

If the IE411 message is sent to the CS/MIS2 application across CCN/CSI, in the message descriptor the value ‘CSIMQMT\_DATAGRAM’ must be used for the data element ‘MsgType’.

If CS/MIS2 has problems with parsing IE411, an IE906, IE907 or IE917 message is returned to the originator.

**Note:** The replacement of CS/MIS by CS/MIS2 will not impact the configuration of the National Applications sending the CD411B or CD411C.

#### For AES-P1, NCTS-P5 and NCTS-P6

The CD411D message must have only XML format. It must be sent to the CS/MIS2 application across CCN/CSI or it is manually uploaded on CS/MIS2 Web interface.

CS/MIS2 has a dedicated address on the CCN/CSI network and a dedicated queue for capturing the business statistics.

If the CD411D message is sent to the CS/MIS2 application across CCN/CSI, in the message descriptor the value ‘CSIMQMT\_DATAGRAM’ must be used for the data element ‘MsgType’.

If the CS/MIS2 application detects an XML error when parsing the CD411D, it replies by sending a message CD917C/CD917D (XML error) or CD906C/CD906D (functional error) to the originator.

##### Partial submission of business statistics via multiple submissions of CD411D

The entire set of the mandatory Statistics Types that are specified in the CS/RD2 codelist CL057 (*StatisticsType*) for a specific period can be provided in more than one submission of the CD411D. However, all the ‘Series Elements’ of a Statistics Type are expected to be provided in the instance of the CD411D that provides the pertinent data for this specific Statistics Type and reporting period.

In CS/MIS2, the ‘*Reporting completion date’* defines the time interval for providing the entire set of Statistics Types for a specific period.

In case of partial submissions, the relevant warnings (CD903 message) will be reported back to the sending NA (please see II.4.1.2.3) when the allotted time elapses.

##### Update of already provided Statistics Types related data

An instance of CD411D can be also sent by an NA to update (i.e. replace) already submitted data (received by CS/MIS2 via a previous submission of CD411D) for a specific reporting period, before or after the expiration of the ‘*Reporting completion date’*.

An operator at the ‘STATISTICAL CHARACTERISTICS’ level denotes if the provided data for a specific Statistics Type in a submission of an CD411D is intended for new registration or for update (i.e. replacement) of already submitted data (which was forwarded by a previous submission of an CD411D for the same period).

It is emphasised that in case of update, the entire set of ‘SERIES ELEMENTS’ for a specific Statistics Type must be provided; any previously registered values will be replaced by the new ones. It is noted that the update will be also used in case that an NA wants to ‘de-support’ data for previously submitted Statistics Type.

Erroneous use of the operator will lead to rejections of the CD411D. Indicatively, such cases could be the submission of more than one “new” registrations for the same Statistics Type for a specific period as well as the submission of update of data that have not been previously submitted or received.

##### Validations performed by CS/MIS2 on a received CD411D

If the message is correct (no CD906C/CD906D nor CD917C/CD917D exchanged), the CS/MIS2 Central Application shall immediately validate the content of the Business Statistics messages (CD411D) submitted by the NA, in terms of data quality. The first step of the validation is to verify that the Business Statistics message contains all the mandatory Statistics Types applicable (as defined in CS/RD2 code list CL057). The second validation will perform predefined *Consistency Checks* on the actual submitted values. In case of findings, CS/MIS2 will send to the originator of the CD411D the warning message (CD903D) that includes the relevant Consistency Check code(s) (as defined in CS/RD2 code list CL903).

### Sending the Technical Statistics

Generation of technical statistics is performed under the supervision of the ITSM Contractor. The ITSM Contractor therefore installs and configures the necessary software on the CCN gateways. The only thing that is required from the NA is support during the configuration of the CCN gateway. Technical statistics are sent to CS/MIS2 at ITSM in a dedicated statistics queue created for each Customs system. They will be sent as a flat text file.

### Sending the CCN audit files

Generation of CCN audit files is performed under the supervision of the ITSM Contractor. The ITSM Contractor therefore installs and configures the necessary software on the CCN gateways. The only thing that is required from the NA is support during the configuration of the CCN gateway. Audit files are sent to CS/MIS2 in the dedicated audit files queue created for each Customs system. They will be sent as a flat text file.

### Duplicating the Error Messages

Duplication of error messages is performed under the supervision of the ITSM Contractor. The ITSM Contractor therefore installs and configures the necessary software on the CCN gateways. The only thing that is required from the NA is support during the configuration of the CCN gateway. Duplicated messages are sent to CS/MIS2 in dedicated queues created for each domain.

### Exchanging the proactive monitoring messages

As described in section II.2.4.1, the IE974/IE975 request/response ping mechanism is used by CS/MIS2 for confirming a detected potential unavailability and it is triggered by the detection of inactivity period of a NA. Specifically, CS/MIS2 constantly monitors Gateways and Applications of the NAs and uses the ping mechanism of the IE974/IE975 to verify unavailability.

The IE974C is sent to an NCA when it is considered ‘Suspicious’ for unavailability, since there is no activity over the common domain based on the analysis of movement monitoring data (i.e. their activity over the Common Domain sensed by the events recorded by the audit records). The ping mechanism (i.e. exchange of the IE974/IE975 messages) confirms the unavailability, when the NCA does not reply with the IE975C within a specific timeframe (i.e. configurable per NA). As a result, the CS/MIS2 dispatches alert notifications with the relevant information to the National Administration where the unavailability is detected and to the Central Project Team (i.e. ITSM Business Monitoring team).

In the following Figure 6, we see NCA1 receives the IEx02 message[[4]](#footnote-5) from NCA2, but NCA1 does not respond with IEx03 message. Additionally, there is no specific activity from the NCA1 for quite some time in the common domain. In that case, the CS/MIS2 sends the IE974C. However, no IE975C is received from NCA1 and CS/MIS2 records that NCA1 is unavailable and alert notifications are sent via e-mail.



Figure 6: Dispatch of the IE974 from CS/MIS2 for a detected unavailability

In the following Figure 7, we see that CS/MIS2 sends the IE974 at specific intervals to check the availability status of the NCA1. Indeed, when NCA1 is available again, it responds to NCA2 with IEx03 and with the IE975 to CS/MIS2[[5]](#footnote-6).



Figure 7: Dispatch of the IE975 to CS/MIS2 when NCA1 becomes available

### Sending the IE078 and IE578 for linked MRNs

#### Sending the IE078 for linked MRNs (NCTS-P5/AES-P1)

When a transit movement is released for transit and includes one or more AES movement(s) as previous procedures (i.e. Export MRN(s) declared as ‘PREVIOUS DOCUMENT’), then together with the dispatch of CD001C (for international transit) or the dispatch of CD003C (for international diversion of a national transit, with no CD001C exchanged on the Common Domain) to the Office of Destination, the message CD078C is also sent by the NTA (i.e. the Office of Departure) to CS/MIS2[[6]](#footnote-7). The CS/MIS2 application will process this message and use this inter-domain linking information to update the *Movement Monitoring* section and eventually [DDS2-MRN](https://ec.europa.eu/taxation_customs/dds2/mrn/mrn_home.jsp?Lang=en). This will enable the CS/MIS2 users (i.e. NCTS users and AES users) to easily monitor the status of their transit movement(s) that follow the export movement(s). Please refer to section III.II.7 of the NCTS-P5 DDNTA Main Document [R40] or to section III.II.5.8 of NCTS-P6 DDNTA Main Document [R44] for more details.



Figure 8: Dispatch of the Inter-Domain Linking message (IE078) in case of Export followed by Transit

#### Sending the IE578 for linked e-ADs (AES-P1/EMCS)

When an export movement is released for export and includes one or more EMCS movement(s) as previous procedures (i.e. EMCS e-AD(s) declared under Goods Item/Previous Document), then together with the dispatch of CD501C (or CD503C in case of direct export becoming indirect export) to the Office of Exit, the message CD578C is also sent by the NECA (i.e. the Office of Export) to CS/MIS2, which will process this message and use this inter-domain linking information to update the *Movement Monitoring* section[[7]](#footnote-8). This will enable the CS/MIS2 users (i.e. AES users) to easily monitor the status of their export movement(s) that include goods under excise duty suspension arrangement. Please refer to section III.4.1.6 of the DDNXA Main Document [R39] for more details.

A screenshot of a computer

Description automatically generated

**Figure 9: Dispatch of the Inter-Domain Linking message (IE578) in case of Export of Goods under Excise Duty Suspension Arrangement**

1. Please refer to CS/MIS2 Integration Manual [R06] and Service Specification Document [R07]. [↑](#footnote-ref-2)
2. The EO statistics are out of the CS/MIS2 and CS/RD2 scopes and are provided by the EOS CDCO. [↑](#footnote-ref-3)
3. The IE071 is also sent to the country from which the IE070 originated. [↑](#footnote-ref-4)
4. This ping mechanism is applicable to AES-P1, NCTS-P5 and NCTS-P6 movements. [↑](#footnote-ref-5)
5. Only one (1) IE975C is sent as a reply to the latest IE974C when NCA1 is available again. [↑](#footnote-ref-6)
6. Please refer to CS/MIS2 Operation Manual (OM) [Rxx] for more information on the CCN user profiles requirements pertaining to CCN applications/queues. [↑](#footnote-ref-7)
7. It covers both international and national EMCS movements.

   At this stage, EMCS movements (ARC Follow up) are visible in CS/MISE and not in CS/MIS2. In case of national EMCS movements, where MSA of Dispatch = MSA of Export, the national domain exchanges between MSA of Dispatch and MSA of Export may not be visible via CS/MISE (if loopback mode not implemented yet). [↑](#footnote-ref-8)