



CF2/MQ Transmission Guides

17.16 Automated Custody Swings via CF2 (CUSCON): User's Guide

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1. CF2 Overview

DTC's Computer-to-Computer Facility II (CF2) is a medium that enables the transmission of data back and forth between the Depository Trust Company and its Participants and Users. Users transmit data to DTC (Transmission File) and then receive data in reply (Acknowledgment File).

CF2 transmissions to and from DTC use one of the following:

- IBM Sterling Commerce CONNECT:Direct (aka Network DataMover (NDM));
- File Transfer Protocol (FTP) software.

To transmit data to DTC via CF2, it is necessary to perform the following steps:

1. Prepare an input transaction file in the DTC-specified format;
2. Transmit the file to DTC's computer system.

1.1 Objectives of This Chapter

The objectives of this chapter are to give information about:

- The Automated Custody Swing process via CF2 (CUSCON) function;
- The format of required information records.

1.2 Transmitting Transactions to DTC

To transmit data to DTC via CF2, it is necessary to prepare JCL (Job Control Language) as specified in any of the following User Guides:

- *CONNECT:Direct (aka NDM) Guide*
- *File Transfer Protocol (FTP): Function User's Guide*

For a fuller understanding of specific JCL requirements, please consult the *FTP* or *CONNECT:Direct (NDM)* User Guides.

After creating a file of input transactions in the appropriate FTP or NDM format, users transmit the DTC-specified JCL in order to initiate a job within DTC's computer system. DTC then validates the password record. Once validated, all data records are processed. Once all data records have been transmitted, DTCC's applications group will run the data through an edit process for data validation.

2. CUSCON Function: Introduction

This document describes DTC's CUSCON function, used for transmission of DTC automated Custody swing transactions via DTC's Computer-to-Computer Facility II (CF2). CF2 is described in the *File Transfer Protocol (FTP)* and the *CONNECT:Direct (NDM) User's Guides*, available from DTC. It is recommended that Users be familiar not only with that guide, but also with DTC's operating procedures and computer operations in general, before reading this document.

The information in this document reflects Release I of the CF2 software.

2.1 System Overview

CF2 Users can use the CUSCON function to transmit Custody swing input information records to DTC. Users that consider any particular input transmission to be critical are advised to prepare procedures to be used when CF2 is unavailable.

The Custody Inventory Swing file allows for a swing of custody participant "X" custody inventory to custody participant "Y". This file can be accepted at DTC via NDM or FTP.

Participant "X" (the withdrawing/debit participant), will complete all fields on the **CUSCON** file, with the exception of **NEW REF ID #**, **NEW ACCT ID #**, **DESTINATION BOX**. Participant "Y" (the receiving/deposit participant), will complete the file with these 3 requirements. When participant "X" completes its section of the file, with the data from the inventory currently on deposit, participant "X" will forward said file to participant "Y" to fill in the remaining 3 fields.

Once all the data fields have been completed, the file should be transmitted to DTC via the CUSCON function.

In order to gain access via NDM or FTP, please send an email to PIPREQUESTS@DTCC.COM requesting that your Participant Name/ID Number be activated for CUSCON in both U (UTOR) and Production regions.

2.2 CUSCON Transmission Cutoff Schedule

Participants can use the CUSCON function for all Custody swing instructions as often as necessary. There is no cutoff time for the CUSCON function.

2.3 Initiating a CUSCON Transmission

In order to initiate a CUSCON transmission, it is necessary to transmit to DTC appropriate JCL (Job Control Language), either FTP or NDM-based. For further information on JCL requirements, please consult one of the following: *CONNECT:Direct (Network Data Mover (NDM)) User's Guide* or *File Transfer Protocol (FTP) User's Guide*. These guides are available from DTC.

2.4 CUSCON Transmission and Acknowledgment Files

The characteristics of the CUSCON Transmission and Acknowledgment Files are described below.

2.4.1 Transmission Files

The CUSCON Transmission File consists of 110-character records.

- When transmission takes place via CF2/NDM or FTP, the actual CUSCON 110 - character records are transmitted to DTC.

2.4.2 Acknowledgment Files

CUSCON Acknowledgment Files consist of 110-character records

- When an acknowledgment is transmitted via CF2/NDM or FTP, the actual CUSCON 110-character records are transmitted to the User.

All CUSCON record-format descriptions in this document pertain to the 110-byte record.

2.5 Testing the CUSCON Function

Users can specify whether a transmission is for test or production purposes by specifying T or P in the processing option field of the Transmission Header Record. (See 4.1 CUSCON Transmission Structure) DTC has created the Test option in order to facilitate development of CF2 functions in Participants' computer systems.

Test. The Test option applies to "No Custody swing Instruction" transactions that affect Participant accounts. Such transactions are listed at DTC and are returned to Participants if invalid. "Test" listings are available from DTC upon request.

Production. The Production option applies to all Custody swing transactions that comply with CUSCON edit criteria, are deemed fully valid, and affect Participants' accounts.

3. Transmission File (Input)

The CF2 Custody swing Input Transmission consists of two different types of records – a Security record and a Data record. The Security record is for control purposes only. The remaining Data record—consisting of one header and multiple detail records—contains the specific CUSCON transactions.

The two record types that may appear in the CF2 Custody swing System Input Transaction file, along with the basic rules for their processing within the CF2 system, appear on the following pages.

3.1 Transmission Records

1. **CF2 Transmission Security Record (PSW)** specifies the transmitter's Signon ID and legitimate password, together with the unique identifying number of the transmission. The Security (PSW) record must be the first record in the file, but is considered a CF2 record rather than a CUSCON transmission record. Since this record is for security purposes only, it is not returned in DTC's acknowledgment file.
2. **Custody Swing Input Transaction Data Record (CUSCON Header/Detail)** contains detailed information regarding each CUSCON transmission. The CUSCON record contains two types of records – 1. header information (Process date, old part#, new part#) – just once, as the first record and; 2. detail information (positions to swing) – one detail record per position swing.

3.2 Transmission Editing

There is just one-level of error editing for the CUSCON file at the transmission stage:

Security Error. A security error causes an entire transmission file to be refused. This happens when the security (PSW) record fails to properly identify the transmitter to DTC's CF2 system. When a security error is detected, the Acknowledgment File contains a single error (ERR) record.

Edit Error. Editing of the CUSCON data will be performed once the data is received further downstream as part of a batch edit report.

3.3 Transaction Editing

The CF2 Custody swing Input Instruction system data transmission will accept all data records. Any edit errors will appear in the PBS SMART/Messages' SMART /Search utility under the Custody Swing edit report.

4. Transmission Record Formats

Input Transmission Record Formats are described in the following subsections.

To ensure that standard CF2 editing criteria are followed, it is important to observe the following:

Numeric Fields: Right aligned with leading zeroes; numeric data only; if blank, initialize to zeroes.

Character and Alphanumeric Fields: Left aligned with trailing spaces; if blank initialize to spaces.

Failure to observe these rules causes a record to be rejected during the Custody Swing edit process.

Note: The CF2 transmission process will not reject data records.

Please ensure that all fields that are not used—optional, reserved, not allowed—are initialized as described above. Any such field that contains low values is considered an edit error and results in the rejection of the record.

Note that all “Filler” fields are for DTC use only and must not be used.

4.1 CUSCON Transmission Structure

There should only be ONE type PSW record and ONE header record, to go with the detail/data records, per CUSCON transmission.

The following is an example of a CUSCON transmission:

- (1) PARTICIPANT
- CF2 PASSWORD RECORD (type “PSW”)
- CUSCON HEADER RECORD
- CUSCON DETAIL RECORD Data record

4.2 Transmission Security Record (PSW)

The CF2 Security Record transmitted to DTC introduces and identifies the transmitter to the CF2 system. This is done via the Signon ID and Password, which must be always valid and up-to-date. Where security is a consideration at a User’s site, that record can be linked in a series in front of the data file from another source.

The Security Record is for input purposes only and is not returned in DTC’s acknowledgment file. The format for **NDM users** is described below:

Position	Length	Format	Field Name	CF2 Transmission Security Record Format Description
1	3	Character	Record Type	Must contain value PSW.
4	6	Character	Signon ID	aaaaaa -valid DTC Participant number

Position	Length	Format	Field Name	CF2 Transmission Security Record Format Description
				Gaaaaa - group User ID Note: Left aligned with trailing spaces.
10	6	Character	Password Field	Valid password, obtainable from DTC's Participant Interface Planning group.
16	6	Character	Activity Type	CUSCON
22	3	Numeric	Transmission ID	Unique transmission identifier; must agree with entry in TranID field in HDR record.
25	276	Character	Filler	DTC use only; do not use.

The format for **FTP users** is described below:

Position	Length	Format	Field Name	CF2 Transmission Security Record Format Description
1	3	Character	Feedback Indicator	Must contain SPACE.
2	1	Character	Production or Test Indicator	P (for Production) or T (for TEST).
3	6	Character	Password literal	Must contain value 'PASSWD'.
9	2	Character	Suffix	Must contain value '01'.
11	2	Numeric	Version Number	Must contain value '02'.
13	14	Character	Spaces	Must contain spaces.
27	9	Character	The RACF Signon	The entity portion (first 5 characters), a hyphen (-), the individual portion (last 3 characters). For example: for user with RACF id 99999001 this field will be 99999-001.
36	8	Character	Password Field	Valid password, obtainable from DTC's Participant Interface Planning group. Value should be left justified. For example password ABC123 will have spaces in the last two bytes.
44	6	Character	Activity Type	CUSCON.
50	4	Numeric	Transmission ID	Unique transmission identifier; must agree with entry in TranID field in HDR record.

Position	Length	Format	Field Name	CF2 Transmission Security Record Format Description
54	5	Numeric	Record length	Value 00110 for CUSCON.
59	242	Character	Filler	Filled with spaces.

4.3 CUSCON Transaction Header Data Record

The CUSCON transaction header requires a single 110-character record, described below:

Position	Length	Format	Field Name	CUSCON Transaction Header Data Record Format Description
1	8	Numeric	Process Date	CCYYMMDD (Date the swing will be done in Production).
9	1	Character	Filler	Filled with spaces.
10	8	Numeric	Old Participant Number	The participant from which the inventory will be withdrawn.
18	1	Character	Filler	Filled with spaces.
19	8	Numeric	New Participant Number	The receiving participant (omit for one-sided COD-only swing).
27	84	Character	Filler	Filled with spaces.

4.4 CUSCON Transaction Detail Data Record

The CUSCON transaction requires a single 110-character record per Custody position, described below:

Position	Length	Format	Field Name	CUSCON Transaction Detail Data Record Format Description
1	8	Numeric	Route Number	Sequence number 00000001, 00000002, ...).
9	1	Character	Filler	Filled with spaces.
10	12	Alphanumeric	Old CUSIP	Issue identifier – two leading zeroes, one trailing zero; ex: 00XXXXXXXXX0 (Case sensitive – use uppercase characters only).
22	1	Character	Filler	Filled with spaces.
23	13	Numeric	Quantity-Whole	Each deposit whole quantity.
36	1	Character	Filler	Filled with spaces.
37	5	Numeric	Quantity-	If no fractional, the field will be 00000.

Position	Length	Format	Field Name	CUSCON Transaction Detail Data Record Format Description
			Fractional	
42	1	Character	Filler	Filled with spaces.
43	16	Alphanumeric	Old Reference ID	Ref ID/ARF from AIM file (AIMCDI). Note: This field should never be duplicated on the CUSCON file – all position records should be on a unit-of-work level (i.e., CUSIP/Account), and not on a certificate level (i.e., CUSIP/Cert/Account)
59	1	Character	Filler	Filled with spaces.
60	16	Alphanumeric	New Reference ID	Receiving participant will provide (omit for one-sided COD-only swing).
76	1	Character	Filler	Filled with spaces.
77	20	Alphanumeric	New Account ID	Receiving participant will provide (omit for one-sided COD-only swing).
97	1	Character	Filler	Filled with spaces.
98	7	Alphanumeric	Destination Box	Custody box location receiving participant will provide – format: bbbnnn (where ‘b’=blank; n=number) participant (omit for one-sided COD-only swing). Note: The destination box of the receiving participant may differ from that of the sending participant – please plan, accordingly.
105	6	Character	Filler	Filled with spaces.

5. Acknowledgment Files (Output)

The CF2 CUSCON Input Instruction Acknowledgment file consists of either an error (ERR or CF2ERR) record only, if a security violation occurs.

5.1 Acknowledgment Records

The six record types that can appear in the CF2 Custody swing Input Instruction Acknowledgment file are listed below, together with basic conditions for their appearance.

- **CF2 Acknowledgment Error Record.** Whenever the CUSCON Security PSW record Signon and/or password fail DTC's security check, the Acknowledgment File contains only an Error Record. There are two formats of error records: ERR for NDM users and CF2ERR for FTP users.
- **Rejected CUSCON Transaction Data (CUSCON) Records.** No edit checking will be performed during the data transmission process. Instead, an edit report of the data will be executed further downstream as part of the Custody Swing process. The edit report will be made available to participating brokers via the PBS SMART/Messages' SMART/Search utility.

6. Acknowledgment Record Formats

6.1 CF2 Acknowledgment Error Record (ERR/CF2ERR)

The CF2 system creates a CUSCON Acknowledgment Error (ERR) record, shown below, whenever a security violation occurs; that is, if the Security (PSW) record contains incorrect information. In such cases, the error record is the only acknowledgment record.

ERR record for NDM users:

Position	Length	Format	Field Name	CF2 Acknowledgment Error Record (ERR) Format Description
1	3	Character	Record Type	ERR = the only record returned because of detection of a security violation.
4	8	Character	Signon ID	Equals Signon ID value received in the PSW record transmission, regardless of validity.
12	8	Character	Filler	DTC use only; do not use.
20	6	Numeric	Process Date	mmddyy - date when the CUSCON file was received and edited.
26	6	Character	Activity Type	Activity type submitted in the PSW record.
32	3	Numeric	Transmission ID Number	Transmission ID specified in the PSW record.
35	2	Character	Filler	DTC use only; do not use.
37	3	Character	Error Status	Indicator of type of security violation detected by DTC's CF2 system 222 = invalid password detected; use correct password, or contact DTC to obtain correct password. 333 = ineligible Signon detected; Signon ID submitted is ineligible for CUSCON function; contact DTC.
40	5	Character	Filler	DTC use only; do not use.
45	6	Numeric	Arrival Time	<i>hhmmss</i> Time when this CUSCON transmission arrived at DTC.
51	6	Numeric	Edit Completion Time	<i>hhmmss</i> time when DTC completed editing this CUSCON transmission.
57	70	Character	Error Description	Free-form text description of the security violation.

Position	Length	Format	Field Name	CF2 Acknowledgment Error Record (ERR) Format Description
127	114	Character	Filler	DTC use only; do not use.

CF2ERR record for FTP users:

Position	Length	Format	Field Name	CF2 Acknowledgment Error Record (ERR) Format Description
1	1	Character	Feedback Indicator	Value '?' denotes an error record.
2	1	Character	Test/ Production Indicator	'T' for test 'P' for production.
3	8	Character	Record Type with suffix and version number	CF2ERR0101
13	6	Character		Filled with zeros.
19	8	Character	filler	Filled with spaces.
27	8	Character	Signon ID	Equals Signon ID value received in the PSW record transmission, regardless of validity. It is 8-byte entity only number. For user 99999001 this field will have value 00099999.
35	6	Numeric	Process Date	mmddyy - date when the CUSCON file was received and edited.
41	6	Character	Activity Type	Function code: CUSCON.
47	4	Numeric	Transmission ID Number	Transmission ID specified in the PSW record.
51	3	Numeric	Error Status	Indicator of type of security violation detected by DTC's CF2 system 222 = invalid password detected; use correct password, or contact DTC to obtain correct password. 333 = ineligible Signon detected; Signon ID submitted is ineligible for CUSCON function; contact DTC.
54	6	Numeric	Arrival Time	<i>hhmmss</i> Time when this CUSCON transmission arrived at DTC.

Position	Length	Format	Field Name	CF2 Acknowledgment Error Record (ERR) Format Description
60	6	Numeric	Edit Completion Time	<i>hhmmss</i> time when DTC completed editing this CUSCON transmission.
66	70	Character	Error Description	Free-form text description of the security violation.
137	204	Character	Filler	DTC use only; do not use.