



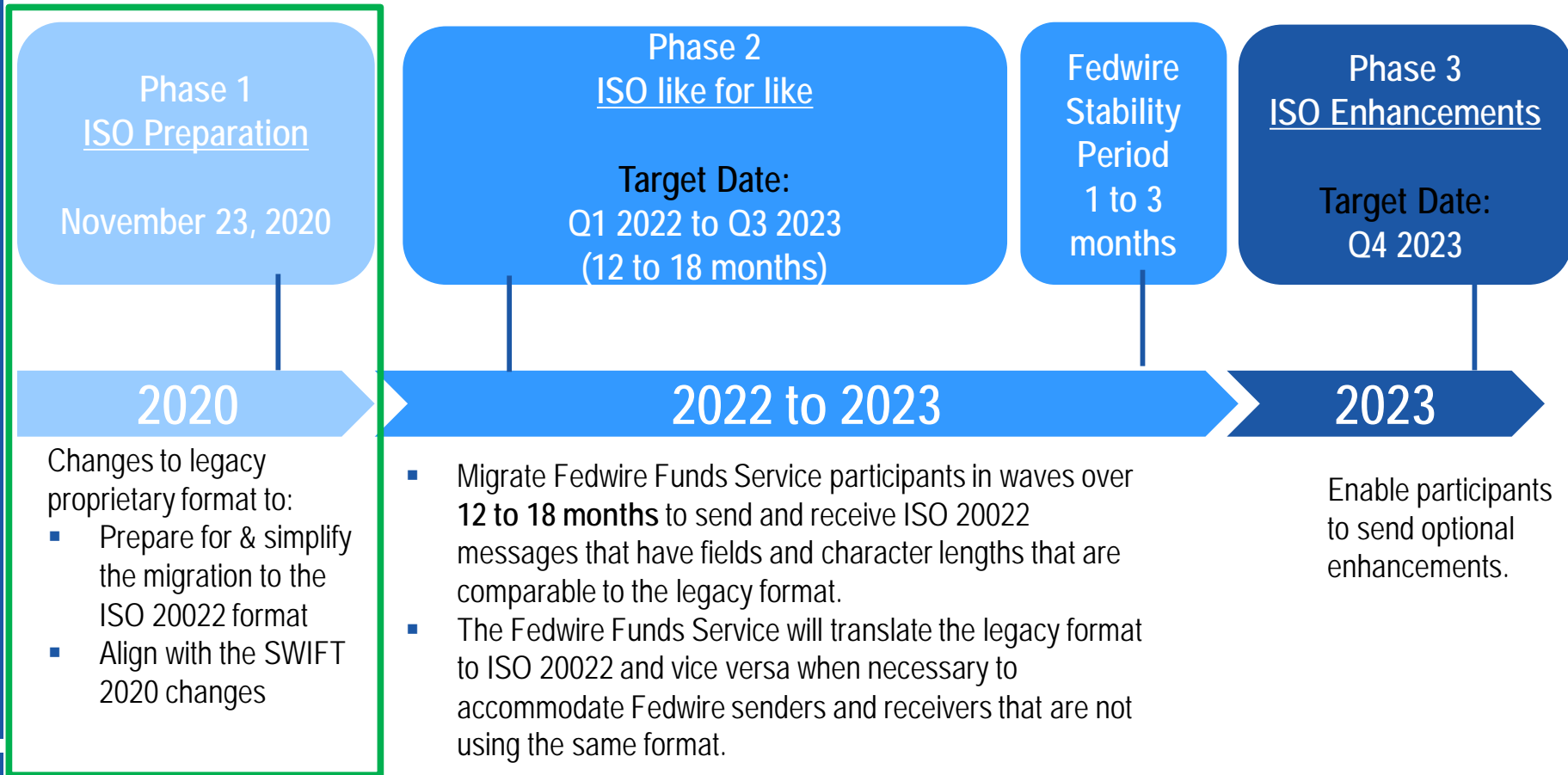
Phase 1 ISO 20022 Preparation for Fedwire[®] Funds Service (FAIM 4.0.2) Scope and Testing Strategy

March 20, 2019

Fedwire Funds Service

ISO 20022 Implementation Timeline

The Federal Reserve Banks plan to replace the proprietary format for the Fedwire Funds Service with the ISO 20022 format in 3 phases. Phase 1 is well underway.



Phase 1 Documentation Updates

FAIM 4.0.2

- The Federal Reserve Banks have updated the Fedwire Application Interface Manual (FAIM) document (now version 4.0.2) to accommodate additional industry feedback.
- The Fed considers FAIM 4.0.2 to be the 'locked down' version that will be implemented in November 2020 and will strive to avoid additional changes before that date.
- Fedwire Funds Service participants and software vendors that need to make changes to support the Phase 1 implementation should log in to MyStandards to obtain the FAIM 4.0.2 document.
- If you do not have access to MyStandards, contact your Federal Reserve account executive.

Phase 1 Documents

MyStandards Standards made simple Search the platform Standards Releases Business Domains Groups

Federal Reserve Banks

Usage Guidelines Open Communities Portals

Phase 1, ISO 2022 Preparation Technical version: 7

Phase 2, ISO 2022 Like-For-Like Technical version: 3, Version: Release 2018, Status: Final

Phase 3, ISO 2022 Enhancements Technical version: 3

File Name	Description
FAIM 4.0.2 as of February 2019	FAIM format version that will become effective on November 23, 2020
FedPayments Manager-Funds Import Export Format Specifications FAIM 4.0.2 February 2019	FAIM 4.0.2 format version of additional technical file specifications requirements for customers using the import/export feature
Phase 1 FAIM 4.0.2 Error Code Glossary	List of all error codes and corresponding description
Phase 1 FAIM 4.0.2 Scope and Testing Strategy February 2019	High-level overview of changes in Phase 1 release, including testing requirements
Phase 1 FAIM 4.0.2 FedLine Direct Test Script	Test script that FedLine Direct participants/service providers must successfully complete
Phase 1 FAIM 4.0.2 FedPayments Manager Funds Import Export Test Script	Test script that FedPayments Manager Funds participants using the import/export feature must successfully complete
Phase 1 FAIM 4.0.2 Attestation Form	To be signed and submitted to the Fed after successful completion of test script
Phase 1 FAIM 4.0.2 Service Provider Attestation Form	To be signed and submitted to the Fed after successful completion of test script (for use by FedLine Direct service providers only)

Changes to General Requirements

- Changed the maximum message length to reflect the FAIM 4.0.2 format
- Updated proper structure for identifiers (e.g., SWIFT BIC)
- Updated table that provides an overview of Fedwire Funds Service edits for each valid message type as follows:

Business Function Code	Type/Subtype*
<i>Value Messages</i>	
Bank Transfer (BTR)	1500, 1600 (bank transfer) 1502, 1602 (return of a bank transfer)
Customer Transfer (CTR)	1000, 1500 (customer transfer) 1002, 1502 (return of a customer transfer)
Drawdown Transfer (DRW)	1032, 1632 (drawdown transfer)
<i>Nonvalue Messages</i>	
Drawdown Request and Drawdown Refusal (DRR)	1631 (bank drawdown request) 1633 (bank drawdown refusal) 1031 (customer drawdown request) 1033 (customer drawdown refusal)
Return Request and Service Message (SVC)	1501, 1601 (return request) 1590, 1690 (service message)

*Type code 15 is a funds transfer that can be sent only to/from prescribed accounts at the Federal Reserve Bank of New York (generally accounts for foreign central banks and international organizations).

Valid Characters and Special Characters

- Valid characters and special characters permitted for all tags and data elements in the Fedwire Funds Service message format

Element Type	Valid Characters
Blank	Null (No data present between two delimiters or no data present between the end of a fixed-length data element and a delimiter).
Space	Translates to ASCII '20' or EBCDIC '40'
A	Alpha (A-Z, a-z, and spaces)
N	Numeric (0-9)
NS	Numeric (0-9) and special characters (see table below)
AN	Alphanumeric (A-Z, a-z, 0-9, and spaces)
ANS	Alphanumeric (A-Z, a-z, 0-9, and spaces) and special characters (see table below)
HEX	Refers to the base-16 number system, which consists of 16 unique symbols: the numbers 0 to 9 and the letters A to F.

Special Character	Name	ASCII HEX Equivalent	EBCDIC HEX Equivalent
.	Period	2E	4B
?	Question Mark	3F	6F
!	Exclamation Point	21	5A
,	Comma	2C	6B
;	Semicolon	3B	5E
:	Colon	3A	7A
_	Underscore	5F	6D
@	At Sign	40	7C
&	Ampersand	26	50
/	Forward Slash	2F	61
\	Backslash	5C	E0
'	Apostrophe	27	7D
"	Quote	22	7F

Special Character	Name	ASCII HEX Equivalent	EBCDIC HEX Equivalent
`	Grave Accent	60	79
~	Tilde	7E	A1
(Left Parenthesis	28	4D
)	Right Parenthesis	29	5D
<	Less Than	3C	4C
>	Greater Than	3E	6E
\$	Dollar Sign	24	5B
#	Pound/Number	23	7B
%	Percent	25	6C
+	Plus	2B	4E
-	Minus/Hyphen	2D	60
=	Equal	3D	7E

Restricted Special Character	ASCII HEX Equivalent	EBCDIC Hex Equivalent	Purpose
{ Left curly brace	7B	C0	Used to delineate the beginning of a tag.
} Right curly brace	7D	D0	Used to delineate the end of a tag.
* Asterisk	2A	5C	Used as a delimiter to terminate elements.

Changes to Tags {1100}, {1130}, and {1500}

Eliminate Interface Data

Change the Format Version from “30” to “40” in the following tags:

- Tag {1100} Message Disposition
- Tag {1500} Fedwire Sender-Supplied Information

Error Description in tag {1130}

- Increased character length in element 03 from 35 to 256
- Includes upper and lower case characters

Note: Error Code Description inquiry and response messages will be replaced by the Error Code Glossary.

Tag {1500} Fedwire Sender-Supplied Information change

- Eliminate User Request Correlation (URC) element in the payment message and associated acknowledgment and reject notification, because the IMAD can be used as a unique identifier.

Note: URC will remain in inquiry messages and associated response messages (i.e., Account Balance, Endpoint Totals, Detailed Summary, and Retrievals). In addition, the Fed will continue to populate the URC with spaces for broadcast messages and Fedwire Funds Service Subsidiary Statements.

{1510} Type and Subtype Codes

Eliminate the following type codes:

- Type code 10 in BTR messages (i.e., bank transfers and cover payments)
- Type code 16 in CTR messages (i.e., customer transfers)

Eliminate the following subtype codes:

- Subtype code 07 (return request of a prior day message) for all messages
 - Subtype 01 should be used regardless of the date when the original funds transfer was sent
- Subtype code 08 (return of a prior day message) for all messages
 - Subtype 02 should be used to return funds regardless of the date when the original funds transfer was received

{3600} Business Function Code

Eliminate the following business function codes in {3600}

- CKS (Check Same Day Settlement)
- DEP (Deposit to Sender's Account)
- FFR (Fed Funds Returned)
- FFS (Fed Funds Sold)
- DRB (Bank Drawdown Request) and DRC (Customer or Corporate Drawdown Request)
 - Replaced with DRR (Drawdown Request)
- CTP (Customer Transfer Plus)
 - Change CTP COVS to BTR COVS
 - CTR to be used for all customer transfers

References

Message Type	Renamed tag {3320} Instruction Identification (f/k/a Fedwire Sender Reference)	New Tag {3630} Unique End-to-End Transaction Reference (UETR)	Renamed tag (3500) Original Message Identification (f/k/a Previous Message Identifier)	Renamed tag {4320} End-to-End Identification (f/k/a Reference for Beneficiary)
Value messages (i.e., BTR, BTR COVS, CTR and DRW)	Optional	Mandatory (For DRW, should be the UETR of the original drawdown request DRR 31 if a UETR was provided in that message)	Not permitted	Mandatory (for BTR should restrict to 16 characters)
Returns (i.e., subtype 02)	Optional (should be the Instruction Identification of the original message)	Mandatory (should be the UETR of the original message)	Mandatory (should be the identification of the original message)	Optional (should be the Instruction Identification of the original message)
Return request (i.e., SVC subtype 01)	Optional (should be the Instruction Identification of the original message)	Mandatory (should be the UETR of the original message)	Mandatory (should be the identification of the original message)	Optional (should be the Instruction Identification of the original message)
Drawdown request (i.e., DRR subtype 31)	Optional	Optional	Not permitted	Mandatory
Drawdown refusal (i.e., DRR subtype 33)	Optional (should be the Instruction Identification of the original message)	Optional (should be the UETR of the original drawdown request DRR 31 if a UETR was provided in that message)	Mandatory (should be the identification of the original message)	Optional (should be the Instruction Identification of the original message)
Service message (i.e., SVC subtype 90)	Optional	Optional	Optional	Not permitted
Other changes	Changed character type from AN to ANS.	Fedwire Funds Service will edit for proper UETR format and preserve the lowercase characters.	Increased character length from 22 to 35.	Increased character length from 16 to 35. If there is no End-to- End Identification, the value should be "NOTPROVIDED".

{3620} Payment Notification

- Optional for the following messages:
 - BTR, BTR COVS, and CTR
 - Returns (i.e., subtype 02)
 - Return Request (i.e., SVC subtype 01)

- Not permitted for drawdown messages (DRW subtype 32, DRR subtype 31, and DRR subtype 33) and service message (i.e., SVC subtype 90)

- Eliminate element 07 End-to-End ID

- New element 02 for SWIFT gpi Service Level
 - Fed will only edit for 3 numeric characters and not for valid gpi service levels

- Clarified how the payment notification indicator can be used to support market practices.
 - Refer to FAIM 4.0.2 for complete details.

Charges

Tag {3700} Charges changes

- Required for CTR messages
- Optional for returns (i.e., subtype 02) for BTR, BTR COVS, and CTR messages
- Add new charge code: "O" (OUR) in element 01 Details of Charges
 - Market practices (e.g., SWIFT gpi, Fedwire convention for remittance transfers subject to section 1073 of the Dodd-Frank Act) and bilateral agreements may dictate how charge code "O" should be used
 - Suggested practice: use "S" in element 01 if there are no charges
- Element 02 Charges 1 is required with B and optional with S and O
- Elements 02-05 Charges 1-4 character length increased from 15 to 18

Tag {3710} Instructed Amount changes (CTR only)

- Required if {3700} element 02 Charges 1 is present

Tag {3720} Exchange Rate changes (CTR only)

- Required if {3710} is present and {3710} element 01 Currency Code is not USD; otherwise, not permitted

Changes to Party Fields

Tags {3100} Fedwire Sender and {3400} Fedwire Receiver

- Eliminate Short Name element

Added new tag {4210} Beneficiary Option A/F (CTR only)

- To mimic SWIFT MT field options 59A/59F
- Can use either tag {4200} or {4210}

Significant changes made to all of the other party fields:

- {4000} Intermediary FI
- {4100} Beneficiary's FI
- {4200} Beneficiary
- {5000} Originator
- {5010} Originator Option A/F
- {5100} Originator's FI
- {5200} Instructing FI

You must review [FAIM 4.0.2](#) for complete details.

FAIM 4.0.2 Edits for IRS Tax Payments

Only in a CTR message, when tag {3400} Fedwire Receiver is one of the Treasury tax payment routing numbers (i.e., 091036164 or 091036177), the following edits will apply to tags {4200} and {4320}:

Element	Tax Payment Field	Tag {4200} Tax Payment Edit
01 – ID Code	N/A	Must be 6
02 – Identifier BIC	N/A	Not permitted
03 – Identifier Other	Tax Identification Number (TIN)	Must be 9 numeric characters (no alpha, spaces or special characters) and must not be "999999999" & "000000000"
04 – Name	Taxpayer Name	Must include at least one valid nonspace character
05 – Line 1	Taxpayer Name continued	Optional
06 – Line 2	Taxpayer Name continued	Optional
07 – Line 3	Taxpayer Name continued	Optional

Element	Tax Payment Field	Tag {4320} Tax Payment Edit
01 – End-to-End Identification	Tax Type Code Tax Year Tax Month	This tag must be exactly 11 characters as follows: <ul style="list-style-type: none"> • Tax Type Code must be 5 alphanumeric characters (no spaces) followed by a slash • Tax Year must be 2 numeric characters followed by a slash • Tax Month must be 2 numeric characters to represent a valid month or "00" if the month is unknown

Examples:

{4200}6*123456789*THE PERSON OR COMPANY WITH SUCH A LONG NAME THAT IT EXCEEDS 35 CHARACTERS AND THEREFORE MUST CONTINUE ON THE NEXT THREE LINES OF TAG 4200*

{4320}9410B/19/06*

Returns

- Return messages (i.e., subtype "02") should include information about the entities/persons according to the role they will play in the return.
 - Provided additional guidance that should be considered

- Reason code must be provided in {6500}
 - Provided suggested reason codes that can be used

- Several tags will no longer be permitted in a return and reference tags {3320}, {3500}, and {3630} should include the identification of the original message.
 - Refer to FAIM 4.0.2 for complete details.

- For returns of Federal tax payments sent by the U.S. Treasury
 - Information that appeared in tag {4200} Beneficiary in the original message will appear in tag {5000} Originator of the return message.
 - While ID Code "6" is permitted for tax payments in tag {4200}, that ID Code is not permitted in tag {5000}.
 - Therefore, in the tax payment return message, "O" will appear as the ID Code in tag {5000}.

Cover Payments

Renamed business function code {3600} for cover payments

- Rename CTP COVS to BTR COVS to align with SWIFT MT 202 COV

Tag {3610} Local Instrument changes

- Permitted only for cover payments (BTR COVS)
- For element 01, only code permitted is "COVS". All other codes are eliminated (i.e., ANSI, GXML, IXML, NARR, PROP, RRMT, RMTS, S820, SWIF, and UEDI).
- Eliminate element 02 Proprietary Code

{7xxx} tags changes

- Permitted only for BTR COVS messages
- If 7xxx tag is used, element 01 SWIFT Field Tag and element 02 Line 1 are required
- Specified the values that can be included in element 01 SWIFT Field Tag of each 7xxx tag and corrected the character length accordingly

Drawdown Messages

Tag {3600} change

- DRB and DRC replaced by DRR

Tag {6500} changes

- For drawdown request and drawdown transfer, no longer allow tag {6500}
 - Information previously included in this tag can be included in tag {6000}
- For drawdown refusal, reason code must be provided in tag {6500}
 - Provided suggested reason codes that can be used

Eliminated tag {4400}

- Information previously included in tag {4400} Account Debited in Drawdown can be included in tag {5000}.

Updated mandatory versus optional tag requirements for drawdown messages

- You must review FAIM 4.0.2 for complete details.

Service Messages

For SVC subtype 01 messages

- All return requests should be done using subtype 01 in SVC messages
- Reason code must be provided in {6500}
 - Provided suggested reason codes that can be used

Do not permit type/subtypes 1033 & 1633 in SVC messages

- To refuse a drawdown request, type/subtypes 1033 & 1633 should be used with DRR messages.

For SVC subtype 90 messages

- Increase the length of tag {9000} to 1,750 characters

{6100} through {6420}

Eliminate the following {6xxx} tags*:

- {6100} Receiver FI Information
- {6110} Drawdown Debit Account Advice Information
- {6200} Intermediary FI Information
- {6210} Intermediary FI Advice Information
- {6300} Beneficiary's FI Information
- {6310} Beneficiary's FI Advice Information
- {6400} Beneficiary Information
- {6410} Beneficiary Advice Information
- {6420} Method of Payment to Beneficiary

*Information previously included in tags {6100} – {6420} can be provided in {6500}, which can be up to 6 lines of 35 characters each.

Remittance Information

For customer transfers

- Eliminate tag {8200} Unstructured Addenda Information.
- Eliminate the X12 and MX character sets that were permitted only for tag {8200}.
- Only permit one of the following options for remittance information:
 - Unstructured (i.e., {6000})
 - Related (i.e., {8250})
 - Structured (i.e., {8300} through {8750})
- Structured remittance information tags:
 - Eliminate {8650} Related Date (i.e., moved to tag {8400} in new element 05)
 - Restructured elements within tags to align with ISO 20022 messages
 - Changed the edits related to repeated versus nonrepeated tags

For bank transfers

- {6000} Originator-to-Beneficiary Information not permitted in BTR messages

Structured Remittance Data Edits

Tags {8300} through {8750}

- Tags {8300} through {8750} represent a set of structured remittance data and each set can be repeated up to a combined length of 9,000 characters (excluding tags and delimiters).
- All of the structured remittance tags are optional, except for tag {8450} Remitted Amount, which is mandatory.
- All structured remittance tags that are included in a set must be in ascending order.
- The following tags can only occur once within each set:
 - {8300} Invoicee
 - {8350} Invoicer
 - {8450} Remitted Amount
 - {8500} Due Payable Amount
 - {8700} Beneficiary Reference Information
 - {8750} Additional Remittance Information
- The following tags can occur more than once within each set:
 - {8400} Referred Document Information
 - {8550} Discount Applied Amount
 - {8600} Adjustment Amount and Reason

Testing Requirements

In Q2 2019, the Federal Reserve Banks will send a targeted communication to notify those participants and service providers that meet the testing criteria. The Federal Reserve Banks will require those participants and service providers to complete a test script and submit an attestation form following a successful test in both the Depository Institution Testing (DIT) and Production (PROD) environments. Phase 1 test scripts and attestation forms are posted to MyStandards.

Fedwire Funds Service Access Solution	Testing Requirements
FedLine Direct® solution	<ul style="list-style-type: none"> ▪ Mandatory FAIM 4.0.2 format DIT and PROD testing for those with their own FedLine Direct connection. ▪ Service providers must also test with at least one of their customers; the Federal Reserve Banks strongly recommend testing with all other customers <p>Note: As of September 2020, production testing for the FAIM 3.0.5 format will no longer be supported. Therefore, your institution must complete any testing for internal payment applications changes or operational readiness tests using the FAIM 3.0.5 format by the end of August 2020.</p>
FedPayments® Manager–Funds over the FedLine Advantage® solution	<ul style="list-style-type: none"> ▪ Mandatory DIT and PROD testing for some participants as designated by the Federal Reserve Banks (e.g., high-volume users) ▪ Strongly recommend DIT and PROD testing for all others
Offline service	<ul style="list-style-type: none"> ▪ No testing requirement

Testing Environments

The table below provides a high-level overview of the two environments that will be available for Phase 1 testing. In November 2019, the Federal Reserve Banks will publish the DIT and Saturday PROD testing schedules along with the Fedwire Application Test Request Form to sign up for testing.

Environment	Availability	Times	Certification & Attestation Requirements
DIT	February 2020 to mid-October 2020	Specific weekdays available for either FAIM 3.0.5 or FAIM 4.0.2 testing. DIT testing schedule to be published in November 2019.	Comprehensive functional testing, including all messages, inquiries, and reports.
PROD	Mid-October 2020 and November 2020	Select Saturdays for FAIM 4.0.2 testing. Those required to test will be assigned to groups with designated testing dates that will be announced in November 2019.	Limited functional testing
	March 2019 through August 2020	Select Saturdays for FAIM 3.0.5 operational readiness test (ORT). Follow same procedure as today to schedule ORT.	Limited functional testing

Resources

Fedwire Funds Service ISO 2022 Implementation Center

- [Available at https://www.frbservices.org/resources/financial-services/wires/iso-2022-implementation-center.html](https://www.frbservices.org/resources/financial-services/wires/iso-2022-implementation-center.html)
- Includes access to:
 - ISO 2022 Educational Opportunities
 - Educational Event Summaries and Recordings
 - Software Vendors with Products that Aid Participants in Using the Fedwire Funds Service
 - ISO 2022 Implementation Frequently Asked Questions

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