FEDWIRE Interface

Version-11.1

9NT1438–ORACLE FCUBS V.UM 11.1.US.1.0.0.0

[March] [2011]

Oracle Part Number E51715-01

ORACLE®
FINANCIAL SERVICES

ORACLE®

Document Control

Author: Documentation Team	Group: UBPG	
Created on: September 19, 2010	Revision No: Final	
Updated by: Documentation Team	Reviewed by: Development/Testing teams	Approved by: Software Quality Assurance Team
Updated on: March 18, 2011	Reviewed on: March 18, 2011	Approved on: March 18, 2011

ORACLE

Table of Contents

ORACLE®

1. About this Manual

1.1 Introduction

Oracle FLEXCUBE interfaces with the external system FEDWIRE in order to process the FEDWIRE payment transactions. These details can be uploaded into the system. This manual explains the following interfaces between FEDWIRE and Oracle FLEXCUBE:

- Incoming FEDWIRE File Processing
- Outgoing FEDWIRE Message Processing

1.1.1 Note on FEDWIRE

Fedwire is a RTGS (Real Time Gross settlement) system owned and operated by the Reserve Banks that enables participants to make final payments in central bank money. An institution that maintains an account with a Reserve Bank generally can become a Fedwire participant.

Participants use Fedwire to instruct a Reserve Bank to debit funds from the participant's own Reserve Bank account and credit the Reserve Bank account of another participant.

Fedwire processes and settles payment orders individually throughout the operating day. Payment to the receiving participant over Fedwire is final and irrevocable when the amount of the payment order is credited to the receiving participant's account or when the payment order is sent to the receiving participant, whichever is earlier.

Fedwire participants send payment orders to a Reserve Bank online, by initiating an electronic message, or off line, via telephone. Payment orders must be in the proper syntax and meet the relevant security controls.

1.1.2 Audience

This manual is intended for the following User/User Roles:

Role	Function
End of day operators	Processing during end of day/beginning of day
Financial Controller/Product Managers	Generation of reports

1.1.3 Abbreviations

The following abbreviations have been used in this manual.

Abbreviation	Expanded Form
EOD	End Of Day

ORACLE

2. Incoming FEDWIRE File Processing

2.1 Introduction

Oracle FLEXCUBE enables you to upload payment transaction details from FEDWIRE through an interface to FEDWIRE System. Oracle FELXCUBE generates the outgoing Fedwire messages in ASCII format besides editing them as well.

2.1.1 Interface Attributes

The attributes of an incoming FEDWIRE file are listed below:

Attribute Name	Attribute Value	Remarks
Direction	Incoming	
Response	Not Required	
Transport Protocol	Folder	
Message Format	ASCII text file	Contains the numeric field tags
Mode	Online	
Frequency	Ad hoc	Manually triggered
Volumes		

Incoming fed wire file contains the numeric tags with corresponding values. If the tags contain multiple values, each value is separated with "*".For e.g. tag {4200} has identifier and address information

{4200}DXXXXXXX*XXXX ENTERPRISES*777 MARYLAND AVE*XXXXX NJ 07503 USA*

Refer the chapter 'Generic Interface' in Generic Interface User Manual for details about maintaining interface definition including component details.

2.1.1.1 Incoming File Format

Each outgoing message sent from a depository institution to the Fedwire Funds Service will have the following mandatory tags:

Interface Data

- {1500} Sender Supplied Information
- {1510} Type Code, Subtype Code
- {1520} IMAD
- {2000} Amount

ORACLE®

- {3100} Sender Depository institution
- {3400} Receiver Depository institution
- {3600} Business Function Code (first element)

The Fedwire Funds Service Tags

The Fedwire Funds Service will append each message it processes and delivers to a depository institution with few tags. The tags appended by the fedwire funds service are listed below:

- {1100} Message Disposition
- {1110} Receipt Timestamp
- {1120} OMAD
- {1130} Error Tag (only applicable for outgoing messages sent from a depository institution that are rejected by the Fedwire Funds Service)

The format of the incoming file is given below:

Field Tag	Elements	Length	Mandatory	Format
{1510}	Type Code	2	Y	C
	SubType code	2		C
{1520}	IMAD	22	Y, Commonly appended by the originator software	
	- InputCycleDate	8		D
	- InputSource	8		C
	- InputSequence Number	6		C
{2000}	Amount(Up to $9,999,999,999.99)	12	Y	M
{3000}	Adjustment		Y, if {1510} is XX20	
	- As-of Effective Date (YYYYMMDD)	8		D
	- Reason Code			C
{3100}	Sender FI			
	- ABA (9 characters)	9	Y	C
	- Short Name (appended by Fedwire if left blank)			C

ORACLE

Field Tag	Elements	Length	Mandatory	Format
{3320}	Sender Reference Number			C
{3400}	Receiver FI			
	- ABA	9	Y	
	- Short Name (appended by Fedwire if left blank)			C
{3500}	Previous message IMAD	22	Y , if {1510} is XX02 or XX08	C
{3600}	Business Function code	3	Y	C
{3700}	Charges		Y {3600} must be CTR	
	Details of Charges (B, S)	1		
	Currency Code	3		C
	Sender's Charges	12		C
{3710}	Instructed Amount		Mandatory if {3720} is present.	
	Currency Code	3	{3600} must be CTR	C
	Instructed Amount	15		C
			{3600} must be CTR	
{3720}	Exchange Rate	12		C
{1100}	Message Disposition			
	- Format Version			
	- Test-Production Code	1	T for Test , P for Production	C
	- MSG duplication code	1	(' ' original, 'R' retrieval, 'C' copy, 'P' possible duplicate)	C

ORACLE

Field Tag	Elements	Length	Mandatory	Format
	- MSG Status Indicator—outgoing	1	('0' intercepted, '2' successful with accounting, '3' rejected,'7' successful without accounting)	C
	- MSG Status Indicator—incoming	1	('N' normal accounting, 'S' service message, no accounting)	C
{1110}	Acceptance Time stamp	12		
	- Date	4		DM
	- Time	4		HM
	- Appl ID	4		C
{1120}	OMAD			
	- Output Cycle Date	8		C
	- Output Destination ID	8		C
	- Output Sequence Number	6		C
	- Output Date	4		DM
	- Output Time	4		DM
	- Output FRB Appl ID	4		C
{1130}	Error Field			
	- Error Category	1	('E' edit failed, 'F' insufficient balance, 'X' duplicate IMAD, 'H' IMAD error, 'W' cutoff error, 'I' intercepted)	C

ORACLE

Field Tag	Elements	Length	Mandatory	Format
	- Error Code	3		C
	- Error Description			C

Following are some of the format details:

- C   Character
- D   Date in the format (YYYYMMDD)
- DM   Date in the format (DDMM)
- HM   Time in the format (HHMM)
- M   Money

Business Function Code (TAG: 3600):

Business Function Code is a standard three letter code that reveals the type of transfer.
The list of valid business function codes are listed below:

~~SVC~~ Function Code	~~Service Charges~~ Description
BTR	Bank Transfer(Beneficiary is bank)
CKS	Check same day settlement
CTP	Customer Transfer plus
CTR	Customer transfer (Beneficiary is not bank)
DEP	Deposit to sender account
DRB	Bank to Bank drawdown request
DRC	Customer or Corporate drawdown request
DRW	Drawdown payment
FFR	Fed funds returned
FFS	Fed funds sold

ORACLE

Incoming File Sample

The incoming file sample is shown below:

{1100}02PN{1110}04221123FT01{1120}20100422QMGFNP3101763704221123FT01{15
10}1000{1520}20100422B1QGC08C003297{2000}000000050000{3100}021000021JPM
ORGAN CHASE*{3320}0507300112ES*{3400}026012713VAKIBANK NYC*{3600}CTR
*{4200}D30101515*OZERA ENTERPRISES*102 MARYLAND AVE*PATERSON NJ
07503 USA*{4320}BMG OF 10/04/22*{5000}D892059841*OZERA ENTERPRISES
LLC*102 MARYLAND AVE*PATERSON, NJ 075032113*{6000}PAYMENT*

2.2 Incoming FEDWIRE File Processing

The incoming messages from the Fedwire system is processed by the interface and
stored in an ASCII file in a server directory.

The processing of the FEDWIRE interface is done in the stages explained below:

2.2.1 Uploading FEDWIRE Instructions

You can use the Fedwire Incoming Message File Upload screen to upload the incoming
file containing the FEDWIRE messages. You can invoke this screen by typing
'MSDFEDUP' in the field at the top right corner of the Application tool bar and clicking the
adjoining arrow button.
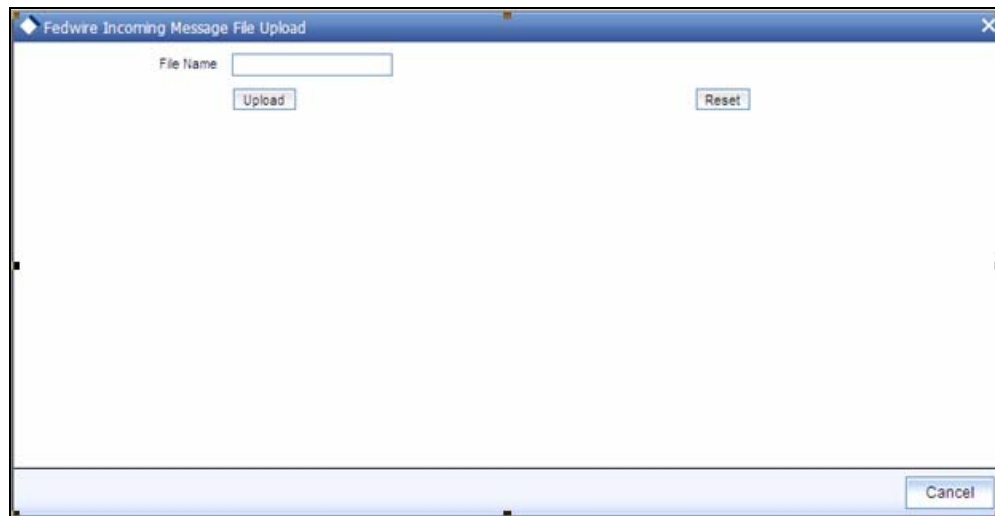
In this screen you can specify the name of the incoming FEDWIRE message file and click
upload to initiate the upload activity. The format of the incoming FEDWIRE file should be
as shown below:

Fed_in-1-<Sequence Number>.<yyyymmddhhmm>

Each message in the file is read and is uploaded into MSTB_FED_MSG_DETAIL table.
For each message a contract will be created in Flexcube.

ORACLE

Click reset button to re-enter the incoming file name and use the cancel button to cancel the upload activity of the chosen file.

🛑Note the following:

- The file upload will fail if the mandatory fields are missing.

- During the upload, for failed messages, the system will log the error details. System allows the user to re-upload the failed FEDWIRE uploads on changing the sequence no and by re-executing the intraday batch.

2.2.2 Running Intraday Batch

After uploading the incoming FEDWIRE Message file, you need to run the intraday batch for incoming upload.

Once you run the intraday batch, incoming payments are initiated & transaction status is uploaded. The system generates the FEDWIRE payments as per the payment details given in the file upload.

2.2.3 Viewing Uploaded FEDWIRE Details

You can use the FEDWIRE Message Browser screen to verify the incoming FEDWIRE details.You can invoke this screen by typing 'MSDFWBRS' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

ORACLE®

The system displays the following details:

- FCC Ref No
- Insert Time Date
- DCN
- Running Number
- Type Subtype (1510)
- Sender Ref (3320)
- Business Function (3600)
- Transaction Type
- Error Category (1130)
- Message Indicator
- IMAD Tag
- Sender DI no (3100)
- Receiver DI no (3400)
- Beneficiary Ref(4320)
- OMAD Tag(1120)
- Error Code
- Senders info(1500)
- Generated Status
- Sender Name
- Receiver Name
- Pre IMAD (3500)
- Action
- MSG Disposition (1100)
- Acceptance Time (1110)
- Error Description

ORACLE®

Main Tab details

The system displays the following details in the Main tab of the FEDWIRE Message Browser screen:

- Amount
- Charges
- Instructed amount (3710)
- Exchange rate tag (3720)
- Account Cr in (5400)
- Free format text (9000)
- Originator (5000)
- Beneficiary FI (6000)
- Account DR in (4400)
- Originator FI (5100)
- Beneficiary FI (4100)
- Beneficiary FI (4100)
- Instructing FI (5200)
- Beneficiary (4200)

ORACLE®

Other Details

The system displays the following details in the Other tab of the FEDWIRE Message Browser screen:

- Adjustment
- Beneficiary method (6420)
- Payment
- Draw debit acc advice (6110)
- Beneficiary advice info (6410)
- Intermediary FI advice (6210)
- Intermediary FI (4000)
- Beneficiary FI advice (6310)
- Intermediary FI advice (6210)

You can only view the information of all the above listed fields for an incoming message but not allowed to modify them.

ORACLE®

2.2.4 Viewing the History of the Fedwire Upload

You can use the FEDWIRE File Upload History screen to view the uploaded incoming message file details.

You can invoke this screen by typing 'MSDFEDHS' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.

FILE_NAME

Specify the name of the incoming FEDWIRE file. The adjoining option list displays a list of the valid files and their processing dates maintained in the system. You can choose the appropriate one.

After selecting the file name, click on the query button to view the details of the uploaded file.

The system displays the details of the uploaded incoming file:

LINE_NO

The system displays the line number of the file.

STATUS

The system displays the status of the message process.

PROCESSING_DATE

The system displays the processing date of the file.

ERR_CODE

The system displays the error code of the file.

ERR_MESSAGE

The system displays the error message for the failed upload.

ORACLE®

In this screen you can view the processing history of a file to check which messages for a file were processed successfully or were not processed successfully along with failure cause.

Once the processing of all the messages in the file is completed, the file will be moved to a processed directory in the server.

You can only view the incoming message details in this screen and you are not allowed to modify the details. The modify option is disabled for the incoming FEDWIRE files in this screen.

2.2.5 FEDWIRE Incoming File Processing Flow Chart

The following flow chart illustates the processing of the incoming FEDIRE file in Oracle Flexcube:

ORACLE
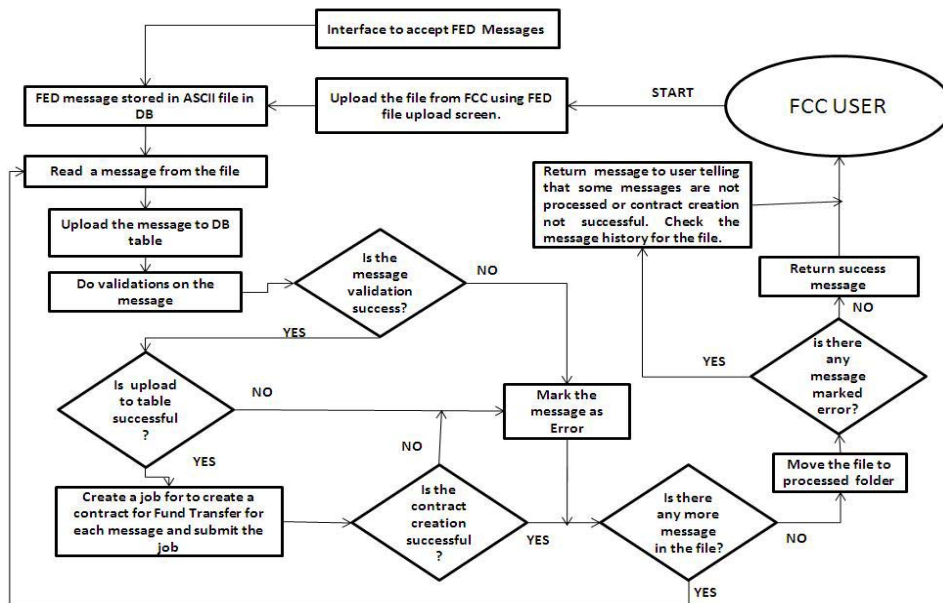
3. Outgoing FEDWIRE Message Processing

3.1   Introduction

While authorizing the funds transfer contract, system generates the corresponding SWIFT messages MT103, MT202, MT199 according to the configuration.

3.2   Interface Attributes

The attributes of an outgoing FEDWIRE message file are listed below:

Attribute Name	Attribute Value	Remarks
Direction	Outgoing	
Response	Not Required	
Transport Protocol	Folder	
Message Format	ASCII file	Contains the numeric field tags
Mode	Online	Contains the single instruction
Frequency	Ad hoc	Auto triggered from FCUBS system
Volumes		

3.2.1   Running the intra day batch

When you run the MSDFWBRS intraday batch, it will parse the SWIFT message and populate the FEDWIRE details table MSTB_FED_MSG_DETAIL. All the SWIFT messages where RTGS flag is 'FW' will be picked up for Fedwire Processing and its message status will be changed to 'HOLD' for suppressing EMS handoff

3.2.2   Confirming the FEDWIRE Message Details

The user confirmation flag in the FEDWIRE message table (MSTB_FED_MSG_DETAIL) indicates whether the FED message has been confirmed by the user or not.

The confirmation flag namely ACTION in the FEDWIRE message table will be updated based on the FED_MSG_CONFIRM parameter, which is maintained in the CSTB_PARAM.

ORACLE®

For details of the FEDWIRE Message Browser screen please refer the chapter 'Incoming FEDWIRE File processing' in this user manual.

You can either view or modify the outgoing Fedwire instruction details based on the configuration set up before triggering the outgoing message generation.

For confirmation flag as 'Y' & Authorisation as 'A', the following occur:

1. Outgoing fedwire details are generated on running the intraday batch MSDFWBRS.

2. System should not allow to modify the Fedwire details

3. System generates the Outgoing fedwire instruction in ASCII file format on running MSFILEGN intraday batch as per the format provided.

For the confirmation flag as 'M' & Authorisation as 'N', the following occur:

1. Outgoing fedwire instruction will be generated on running the intraday batch MSDFWBRS.

2. System should allow modifying and authorising the message details

3. System will generate the Outgoing fedwire message in ASCII file format on running MSFILEGN intraday batch as per the format provided.

For the confirmation flag as 'N' & Authorisation as 'A', the following occur :

1. Outgoing fedwire details are generated in Fedwire message browser screen on running the intraday batch MSDFWBRS.

2. System should allow modifying and confirming the message details. Once confirmed, the system will automatically authorise the Fedwire message.

3. System will generate the Outgoing fedwire message in ASCII file format on running MSFILEGN intraday batch as per the format provided.

3.2.2.1 <u>Generating the FEDWIRE payment details</u>

The outgoing message for the modified details will be generated only after the intraday batch (MSDFWBRS) is run. You will be allowed to view the outgoing Fedwire payment details in the FDEWIRE Message Browser screen.

For details of the FEDWIRE Message Browser screen please refer the chapter 'Incoming FEDWIRE File processing' in this user manual.

The system generates the outgoing ASCII file through inbuilt Intraday Batch Start screen (MSFILEGN). A separate folder for FED message will be created on the database server side to store all outgoing messages

Note: if FEDWIRE generation is configured, SWIFT message (MT103, 202,199) will be suppressed in Outgoing Browser

ORACLE®

3.2.3 Viewing the Outgoing FEDWIRE Message Details

You can view all the outgoing messages generated, through the FEDWIRE Message Browser Summary screen.

You can invoke this screen by typing 'MSSFWBRS' in the field at the top right corner of the Application tool bar and clicking the adjoining arrow button.
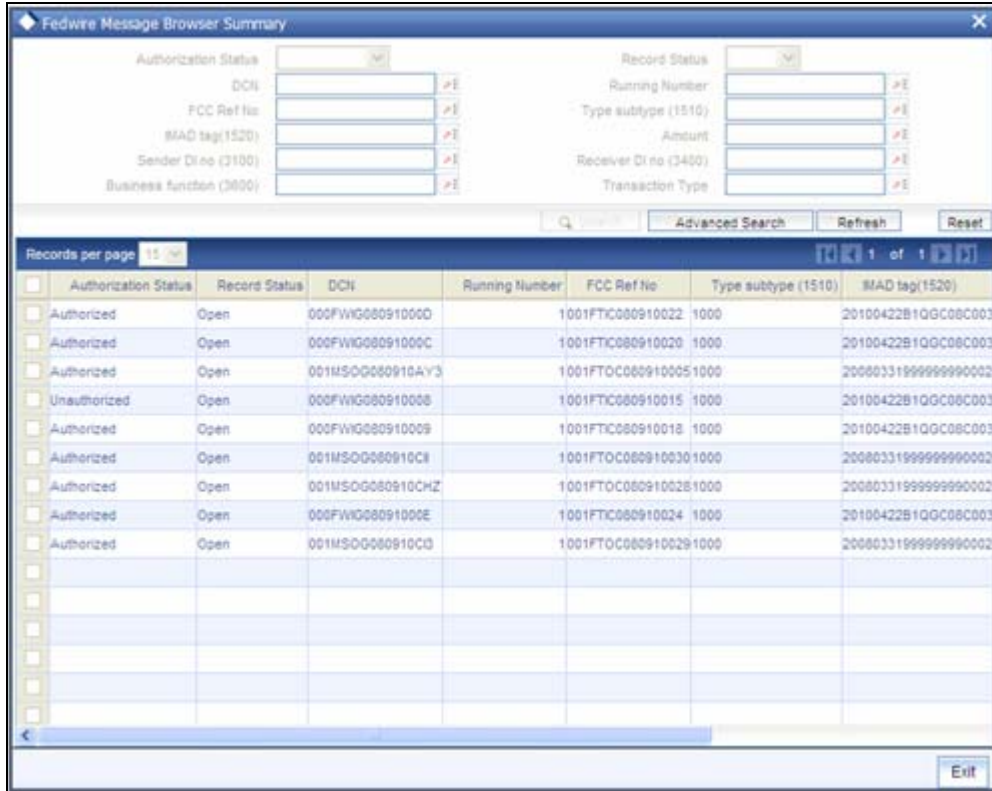

You can query the generated outgoing FEDWIRE messages based on any one or all of the following details:

- Authorisation status
- DCN
- FCC Ref #
- IMAD tag(1520)
- Sender DI#(3100)
- Business function (3600)
- Action
- Record Status
- Running Number
- Type Subtype(1510)
- Amount
- Receiver DI no (3400)
- Transaction Type

ORACLE®

3.2.4 Outgoing FEDWIRE Message flow Chart

The following flow chart illustrates the generation of the outgoing FEDWIRE messages:
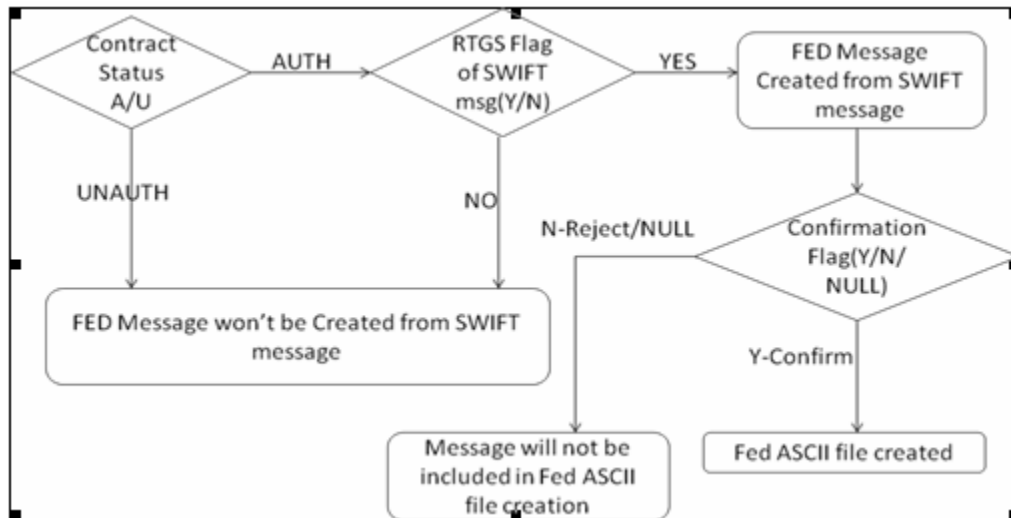
ORACLE®

ORACLE®

FEDWIRE Interface
[March] [2011]
Version 11.1

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200
www.oracle.com/ financial_services/

ORACLE®