RFTS Capability

Transaction Banking

Maret 2020

FTS ID : Single Country Implementation Overview

UOB

Customer

Signs RFTS documentation and sends technical details (2 weeks)

RFTS Document (Signed)

SSH Key, IP Address, PGP Key (UAT)

UAT begins (2 weeks)

UAT signs off

Live (2 weeks)

In-country CFS Implementation

Book UAT Resource (1 week)

Raise setup request for UAT

RFTS credential, UOB's PGP public key (UAT)

Raise setup request for PROD

RFTS credential, UOB's PGP public key (PROD)

• ID BTS

Opens up Firewall for UAT and Prod (3 weeks)

In-country WORC

Register ROS customer for UAT (2 weeks)

Set up RFTS Credential for UAT (2 weeks)

In-country CMOC

Perform customer signature verification (1 week)

Register ROS customer for Prod (2 weeks)

Set up RFTS Credential for PROD (2 weeks)

Business Solution

UOB offers the following products on RFTS

Business Area	Description	File Format	UOB Product
Payments	Bulk Payments	ISO 20022 pain.001.001.03 pain.002.001.03	RTGS, TT, ATM, SKN
		UOB Text Formats	RTGS, TT, ATM, SKN, eTax, VAN (existing fixed length format)
Reports	End-of day statement	MT940 Camt053	
	Intraday Statement	MT941 (camt052) MT942 (camt053)	
	VA Reports (VA1-VA5)	Daily Transaction Report VAN Biller Maintenance Report	

FTS Customer Testing Procedure

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Test Case	Test Description	Test Procedure	Success Criteria
Connectivity Testing	To validate if firewalls on Customer and UOB ends are correctly configured	Customer to log onto RFTS server (Axway) using FTS ID and their SSH key	Customer can log into FTS successfully using SSH
Test File Upload Testing	To validate if customer's upload (IN) folder is setup correctly on RFTS UAT server To validate if customer can upload a test file to their (IN) folder. To validate if customer receives L1 acknowledgement after file is received by FTS.	Customer to navigate into their (IN) folder on FTS UAT server using SFTP client Customer to upload a test file to their (IN) folder FTS to send L1 acknowledgement after file is received.	Customer can access their (IN) folder on FTS UAT server using SFTP client Customer can upload a test file successfully to their (IN) folder Customer receives L1 acknowledgement after file is received by RFTS
File Download Testing	To validate if customer's download (OUT) folder is setup correctly on FTS UAT server To validate if customer can download a test result file (L1-L4) from their (OUT) folder To validate if customer can decrypt the dummy file and view its contents	Customer to navigate into their (OUT) folder on FTS UAT server using SFTP client Customer to download a test result file (L1-L4) from their (OUT) folder Customer to decrypt and view the file contents	Customer can access their (OUT) folder on RFTS UAT server using SFTP client Customer can download a test result file (L1-L4) successfully from their (OUT) folder Customer can successfully decrypt and view the file contents

RFTS Customer Testing Procedure

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Test Case	Test Description	Test Procedure	Success Criteria
File Format Validation	To validate if customer's payment or collection file meets the file format specifications	CFS will provide the test accounts to the customer. Customer will populate the test accounts into their payment and collection file for testing. Note: For Collections testing, Customer will provide their collections account number and DDA reference number to CFS. CFS will set these up in our test environments and confirm to customer once complete. Customer to upload payment or collection file populated with the test accounts provided by CFS into the (IN) folder on RFTS UAT server using SFTP client RFTS UAT server will route the file to ROS UAT server and subsequently to the local processing systems (e.g. REM, LLG, etc). Note: For TT payment testing, CFS will engage BTS to manually process the file in REM. Test results will be generated and sent by the local processing systems to the customers' OUT folder on RFTS UAT server. Customer will contact CFS if they do not receive any acknowledgements or test result in their OUT folder. CFS will check the ROS UAT server and engage BTS to check the RFTS UAT server	Customer receives L3 ack file and fate file without error.

What is required from customer?

Operating System Requirements

FTS solution does not restrict the O/S platform on client's end. However, it is recommended to have the minimum hardware specification.

Minimum Hardware Requirements for Windows/ UNIX Environment	
Processor	Intel Pentium Class 2.0 GHz or above CPU
RAM (memory)	512 MB
Hard Disk Space	10 GB free Hard Disk space
Network Card	Ethernet Network Interface Card
Drives	CD-ROM / USB drive

What is required from customer?

Software Requirements : SFTP and PGP/ GPG software

FTS solution does not dictate which SFTP and PGP software that the client has to install.
Examples of SFTP client includes WinSCP, FileZilla, Cyberduck etc.
Examples of PGP software includes Axway Activator, Symantec PGP command line,
Symantec PGP Desktop, GNU Privacy Guard, GoAnywhere OpenPGP Studio, etc

Minimum Software Requirements	
SFTP Client	SFTP client software has to be installed at Client's environment, according to their platform types. This client would be required to initiate files push and return files pull from Client's hosting environment. *Note that client has to provide their own SFTP script for remote connection setup when doing scheduled connection initiation.
PGP/ GPG	A PGP software needs to be made available at Client's hosting environment for payment files encryption and statement files decryption.

Bank's File reponse

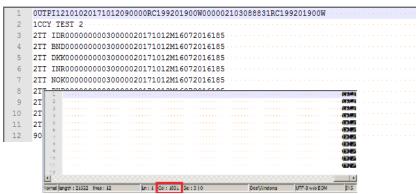| Status	Receive by Customer
Level 1 (file received)	Max 30 mins after file sent to Bank
Level 2 (file rejected)	Max 30 mins after Cust receive L1
Level 3 (file accepted)	**a. For non interops:** Max 30 mins after Cust receive L1 **b. For Interops:** Max 30 mins after Cust fully Authorise transaction in BIBPlus
Level 4 (process status)	H+1 processing date

File Formats

UOB Universal File Format (UFF)

- The file has variable record length
- Each record has data columns delimited by a separator.
- One file can contain multiple payment types (within a country).
- Suitable for corporates require multiple payment types in more than 1 country.
- Sample of the UFF file below shows variable record length with data columns delimited by ~

UOB Fixed Length Format

- The file has fixed record length.
- Each record has data columns start at fixed positions.
- One file can contain 1 payment type hence it is simple to generate by customer.
- Suitable for SMEs require 1 or 2 payment types.
- Sample of the TT file below shows fixed record length of 1800 characters.
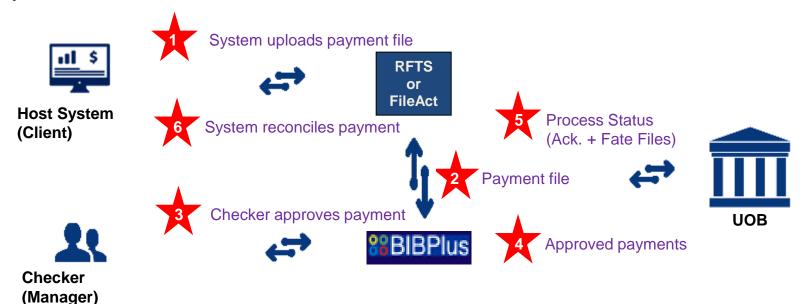
File Formats

XML (UFF)

- The file follows ISO 20022 standard, pain 001 and pain 002
- Each field has tags
- 1 file can contain multiple transaction types

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<Document xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:iso:std:
    <CstmrCdtTrfInitn>
        <GrpHdr> <!--HD1-->
            <MsgId>GP1131911102.xml</MsgId> <!--Filename-->
            <CreDtTm>2019-11-19T21:00:00</CreDtTm> <!--Creation date-->
            <NbOfTxs>3</NbOfTxs>
            <CtrlSum>300000254</CtrlSum>
            <InitgPty>
                <Nm>RTGS file</Nm>
                <Id>
                    <OrgId>
                        <BICOrBEI>BBIJIDJAXXX</BICOrBEI> <!--Kode bank sumber-->
                    </OrgId>
                </Id>
            </InitgPty>
        </GrpHdr>
```

Interoperability

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- Interoperability feature allows UOB's RFTS/ FTS and FileAct services to work along with BIBPlus Bulk Upload module to upload customer's bulk payment and collection files.

- Customer who requires authorization of bulk payment and collection files in BIBPlus can use our interoperability feature to streamline their payment and collection workflows.

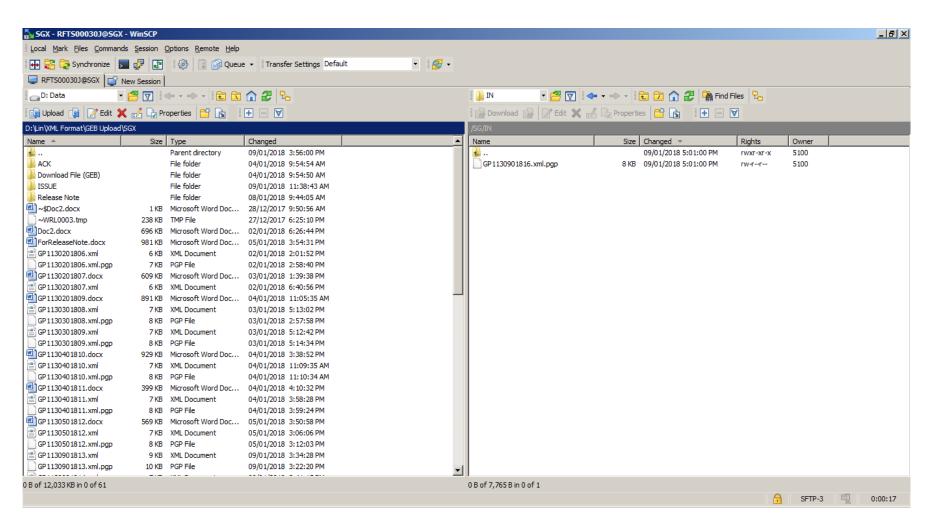- Interoperability is mostly used for sensitive payments such as Payroll or Treasury Payments

Host System (Client)

Checker (Manager)

1 System uploads payment file

6 System reconciles payment

5 Process Status (Ack. + Fate Files)

2 Payment file

3 Checker approves payment

4 Approved payments

RFTS or FileAct

BIBPlus

UOB

Notes:
- ✓ Process Status is sent back to BIBPlus and RFTS (or FileAct)
- ✓ As of Aug 2019, Interoperability is supported by UOBS and UOBC in UFF and XML formats.
- ✓ UOBI and UOBM will have interoperability option in UFF and XML formats with P9 live.
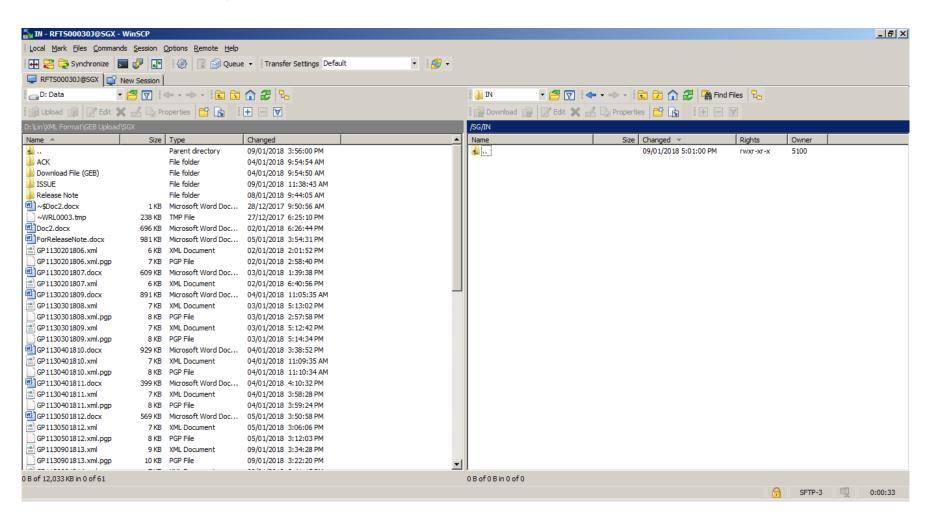
Interoperability – File Uploading & Authorize Flow

1) A XML payment file GP1130901816 with 3 bulks has been uploaded via RFTS

Interoperability – File Uploading & Authorize Flow

2) Once the back-end system picked the file and process, It will disappear from "IN" folder
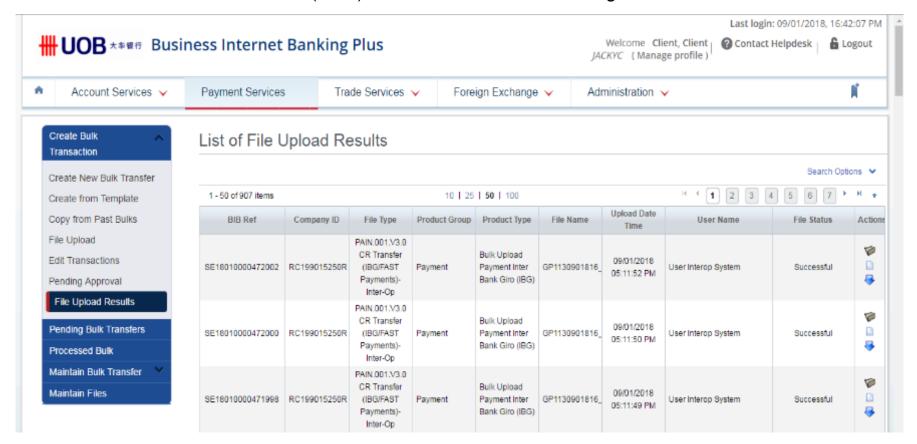
Interoperability – File Uploading & Authorize Flow

3) The XML payment file GP1130901816 with 3 bulks are split to 3 files (meta file) by DMP and routed to the BIBPlus. The entry status in BIBPlus is shown as "In Process".

Interoperability – File Uploading & Authorize Flow

4) The files are routed to DMP for transformation as per the existing BAU process, once DMP has transformed and sent back the file (h-file) to BIBPlus the status is changed to "Successful".
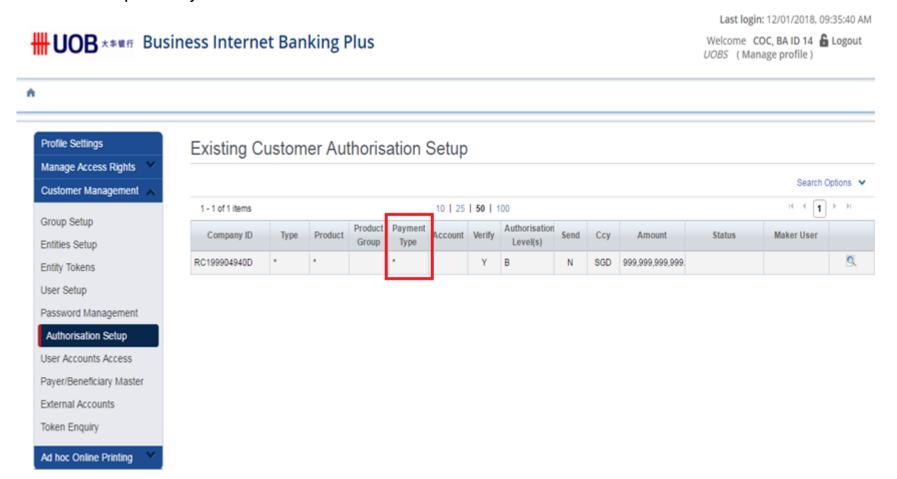
Interoperability – File Uploading & Authorize Flow

5) Below table shows the current authorization process flow before the transactions are sent to the bank for processing, as per existing BAU.

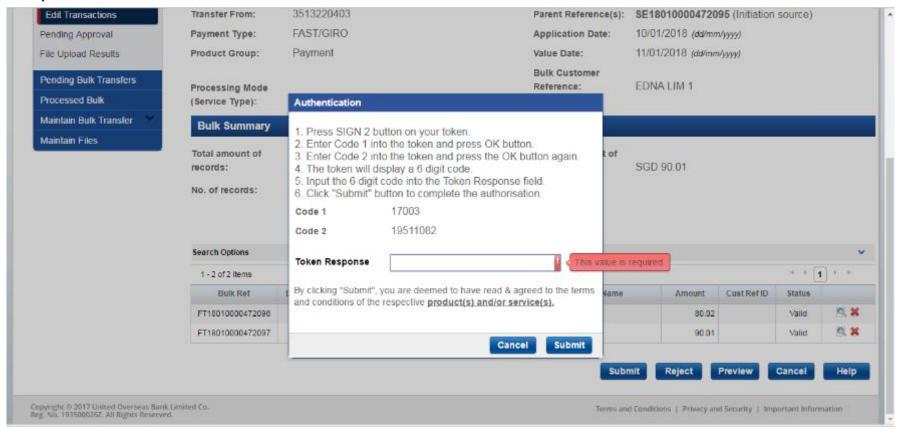| Authorization Method	Process Flow
Super User (1-step)	Super user submits the transaction under the "Edit Transaction", no further approval is needed.
Maker and Authorizer (2-steps)	Maker submits the transaction under the "Edit Transaction". Checker authorize the transaction under the "Pending Approval" or "To-Do List" (authorization groups supported).
Maker, Verifier and Authorizer (3-step)	Maker submits the transaction under the "Edit Transaction". Verifier verifies the transaction under the "Pending Approval" or "To-Do List". Checker authorizes the transaction under the "Pending Approval" or "To-Do List" (authorization groups supported).
Maker, Verifier, Authorizer and Sender (4-step)	Maker submits the transaction under the "Edit Transaction". Verifier verifies the transaction under the "Pending Approval" or "To-Do List". Checker authorizes the transaction under the "Pending Approval" or "To-Do List" (authorization groups supported). Sender sends the transaction under the "Pending Approval" or "To-Do List".

Interoperability – File Uploading & Authorize Flow

As per existing BAU current customer authorization setup has the "Payment Type" key which differentiates "Bulk Online" or "Bulk Upload", this can be used to setup a different customer authorization flow for Interoperability.

Interoperability – File Uploading & Authorize Flow

6) OTP using the Token is required in the process of verifying, authorizing and sending the transactions. as per BAU.

7) Transactions are sent to bank after the final approval.