

# System to System Interface Guide

## Overview

### *What does this guide cover?*

This guide describes the interface definition to firms intending to submit their TRS Product Sales Data (PSD) or Securities Trades Reporting (Markets) XML documents using the System to System Interface.

### *What is not covered?*

This guide discusses only PSD or Markets interfaces. It does not cover the Retail Mediation Activities Return (RMAR) or the Mortgage Lending and Administration Return (MLAR). Please refer to <http://www.fsa.gov.uk/Pages/Doing/Regulated>Returns/IRR/index.shtml> for the latest information on Integrated Regulatory Reporting.

This document does not cover the format of the XML files to be uploaded. This information is covered in a number of separate Data Reference Guides available for download as PDF files.

For PSD please refer to:

<http://www.fsa.gov.uk/Pages/Doing/Regulated>Returns/psd/technical/index.shtml>

For Markets please refer to:

<http://www.fsa.gov.uk/Pages/Doing/Regulated>Returns/mtr/technical/index.shtml>

### *Who should read this guide?*

This document is intended for the TRS primary / principal user or his / her designated technical representative and explains the System to System process in sufficient detail to enable firms to prepare for TRS report submissions using this interface. Firms intending to use Web Input & Web Upload need not read this document.

## System to System

### *Introduction*

Firms that produce off-line XML files containing their TRS reports can use either the Web Upload or the System to System processes to pass their reports to the FSA. This document describes the System to System method of XML file transfer which uses a Secure File Transfer Protocol (SFTP).

SFTP is a secure interactive file transfer program, similar to FTP. Each firm will have a specific Userid and Password for access to the TRS SFTP server allocated to them by the FSA. SFTP uses a 'secure' method of transfer, known as 'SSH2', similar to the HTTPS process for web pages. This secure method of transfer use encryption processes before sending the data and appropriate decryption processes at the receiving end. Therefore, the communication channel performs the encryption and is not reliant on any proprietary vendor software outside of TRS. For more information please visit <http://www.rz.uni-karlsruhe.de/~ig25/ssh-faq/>.

You will need to acquire a copy of a Secure File Transfer Protocol (SFTP) client that is then installed on your PC. This software is generally available in two modes of operation. One mode uses a Windows interface, whereby the screen is typically (although not always) divided into two windows, and files (containing reports) are transferred between you and the FSA by dragging the file references with a mouse. The other mode utilises a command level interface which can be automated by means of a call to SFTP to run a predefined script. We regret we are unable to recommend specific software products; however, for more information please visit <http://www.thefreecountry.com/webmaster/freetftpclients.shtml> or <http://www.openbsd.org/openssh/windows.html>.

Although not absolutely necessary, we would envisage that firms using the System to System approach will use some form of automation with a scheduled script run at an appropriate time in the day; rather than performing this manually. For example this could be an XML report file of transactions captured as part of a business process during the working day and sent automatically to the FSA later in the evening.

### *Test submissions*

To enable firms to test their initial XML documents, a Trial facility will be made available within TRS. Firms will be able to submit as many trial XML uploads as is required before committing to a Certification process, to demonstrate their capability of producing well-formed TRS XML and thereby on Certification gaining access to the Live TRS.

Trial Connection details will be made available to the primary/principal user by email immediately before the Registration & Certification period to enable trial transmissions to take place before they are taken through the Registration and Certification process. For PSD firms we expect this to be in **August 2005**, and for Markets firms we expect this to be in **October 2005**. During the Registration process we will publish individual connection details.

### *Live submissions*

The advantage of System to System is that it is not size constrained, can run as a background task and can be used to transmit any size report. System to System approaches tend to be more efficient as they compress the data making the size of the report to be transmitted as small as possible and therefore, decreasing the transfer time. To avoid long transmission times firms may elect to supply reports via multiple uploads. Markets firms do not have as much flexibility in this area as do PSD firms as reports must be provided daily, but nonetheless can perform more than one upload if appropriate. PSD firms are able to make full use of this approach by uploading reports on a periodic basis during the quarter rather than waiting until the 20 day reporting period to submit the data from a complete quarter.

PSD firms are reminded that as the FSA will have no way of knowing when ALL submissions have been completed for a given quarter, it is the responsibility of the primary/principal user to inform the FSA when this has happened. This needs to cover not only System to System submissions, but also any other XML submissions within your organisation, whether via other System to System or via Web Upload interfaces together with all Web Input interfaces. More information on the Quarter Completion process will be covered in the Online Web based Computer Based Training (CBT) facility which is expected to be made available during **July/August 2005**.

Verifying the validity of your XML report by running it through an XML parser should avoid unnecessary delays in uploading XML reports that may contain errors that need to be resolved and ultimately reduce the amount of future effort in resolving data errors and so is encouraged. Whilst specific address references to the FSA website schemas are expected to be available to parsers for validation purposes, FSA considers it advantageous for performance that you download the appropriate TRS XML Schemas from the FSA website before you run an XML parser process and use the schemas off-line. We regret we are unable to recommend specific software products; however, for more information please visit:  
[www.garshol.priv.no/download/xmltools/cat\\_ix.html#SC\\_XMLVal](http://www.garshol.priv.no/download/xmltools/cat_ix.html#SC_XMLVal).

## *Timeline*

April 2005	As part of pre-Registration the FSA will contact all PSD firms to finalise firm and contact details, and to confirm the planned method of data input. We will also at this time provide firms with their target Registration (and Certification) date.
April 2005	System to System Interface details published on the FSA website.
April 2005	PSD Technical FAQs updated.
April 2005	PSD General FAQs published.
April 2005	Markets Technical FAQs updated.
April 2005	Markets General FAQs published.
July/August 2005	Trial Online Domain name/IP address, Userid and Password & Trial SFTP Domain name/IP address, Userid and Password supplied to XML PSD firms to enable them to use the Trial service for test XML submissions ready for XML Certification.
July/August 2005	Online Web based Computer Based Training (CBT) facility made available. Connection details will be made available at this time.
August 2005	Registration of PSD firms. At Registration all firms will be provided with their specific Online Userid and Password. Additionally, firms using System to System will be provided with their SFTP Domain name/IP address & Userid and Password. Web Upload and firms using System to System will be Certified if they have successfully uploaded a well-formed XML report to the Trial system. Firms will only have their profiles extended to cover XML submission once they have passed Certification.
October 2005	Trial Online Domain name/IP address, Userid and Password & Trial SFTP Domain name/IP address, Userid and Password supplied to XML Markets firms to enable them to use the Trial service for test XML submissions ready for XML Certification.
November 2005	Registration of Markets firms. The FSA will contact all Markets firms to finalise firm and contact details, and to confirm the planned method of data input. At Registration all firms will be provided with their specific Online Userid and Password. Additionally, System to System firms will be provided with their SFTP Domain name/IP address & Userid and Password. Web Upload and firms using System to System will be Certified if they have successfully uploaded a well-formed XML report to the Trial system. Firms will only have their profiles extended to cover XML submission once they have passed Certification.

## *System interfaces*

Following an upload of the report to the FSA, it will be validated by TRS. Because the upload of the report and the validation of the report are two distinct detached phases, sufficient time must be left between them before checking validation results. There is no notification sent to show that validation results are available; and it is recommended that at least 30 minutes is allowed after upload before viewing or downloading validation results.

The results of the validation process can be reviewed using two different methods. They can either be viewed online by using the TRS Submitted Reports function, or by downloading the validation results that will have been placed in an XML format file within the download folder, via the SFTP process. If you are downloading the validation results you will have either created a specific application to present the results in a defined format, or will display the results by utilising one of the XML parser utilities capable of presenting the XML results in a more readable format.

## *File content*

Where firms have a requirement to report on more than one product, they must create separate XML files for each. However, products may be split across multiple XML files.

## *Folder and File naming conventions*

The SFTP server will have two folders set up for each firm, namely “report\_upload” & “results\_download”. Folder “report\_upload” is used to upload your reports to the FSA. Folder “results\_download” is used to download the validation results of the previous upload to the FSA.

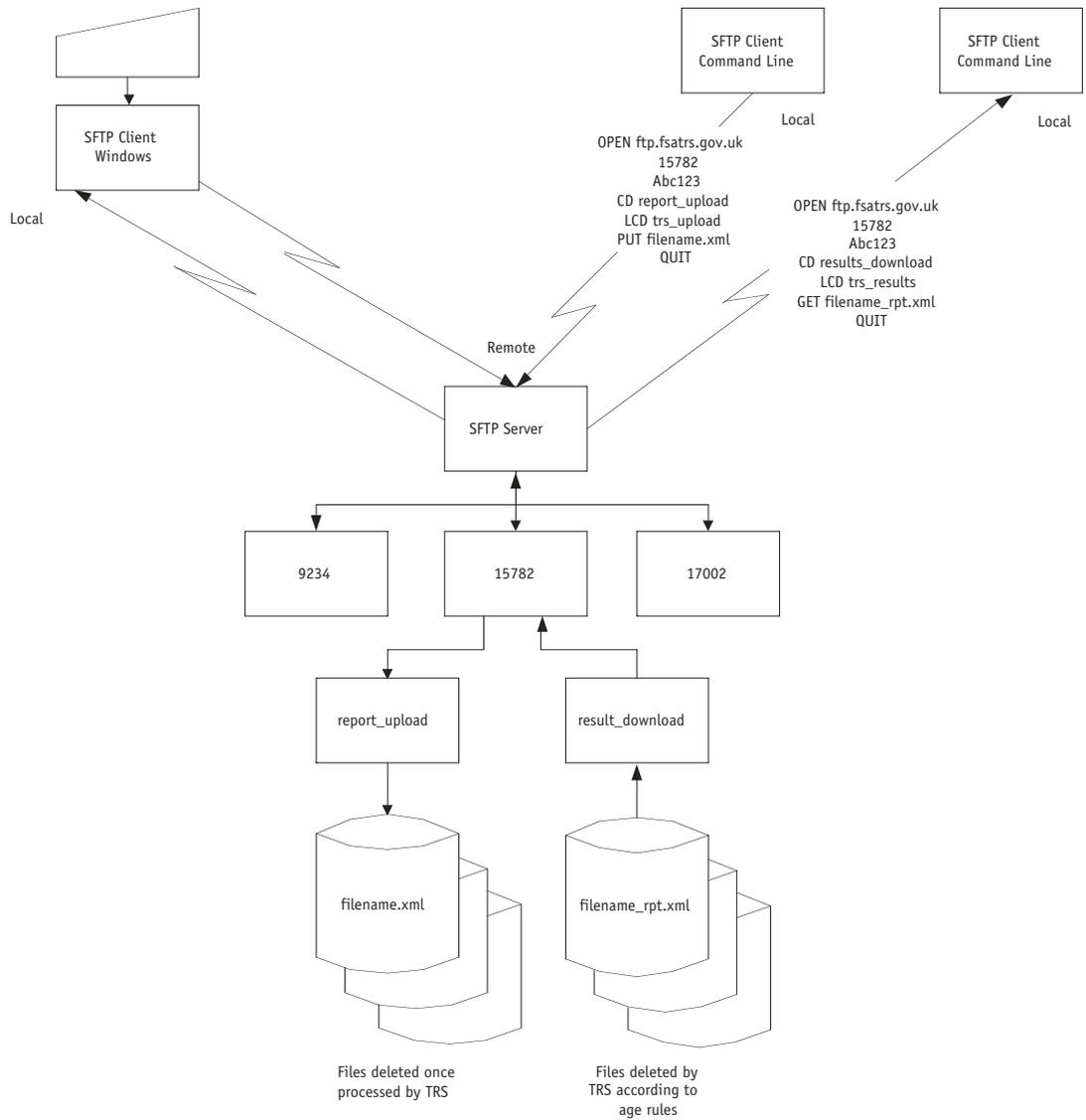
Whilst any form of file name can be used for the report (and indeed the same file could be used over and over again), it is in your interests to use a file name that can be identified from an audit perspective. File names that contain the date with some form of version number, for example, can help in identifying the file. You should keep copies of individual files or take backups of your system that covers files sent to the FSA. Files are not kept by the FSA, and any requirement to amend data previously sent will need to be produced from copies or backups of files taken on your own system.

The results of the previous upload are always placed in the results\_download folder using a file of the same name as used in the upload process, with the addition of an “\_rpt” file name suffix. Should a validation result already exist with the same name, the file name is modified to include a sequence number, e.g. filename\_rpt.xml would be created as filename\_rpt1.xml etc., etc.

You should take your own backups of these files once downloaded, as these files will be deleted from the TRS server on a regular basis.

The following diagram shows the process / file relationship. Please note in this diagram the “9234”, “15782” & “17002” folders represent different TRS firms. You will not see the subordinate files for “9234” & “17002”, as our example Userid is “15782”.

*The system to system approach*



### *Report & Transaction naming conventions*

The Report identification (or Report ID), referred to in the XML Schema with the tag “ReportIdentifier” and the Business name of “Document Reference” should be unique within all uploads on a given day, unless further qualified by different optional departments. Where an upload is rejected for the reason of “XML Fail”, Document References may be re-used. However, where an upload shows any number of valid results, the Document Reference cannot be re-used within the same day; therefore re-uploads correcting the offending transaction must be submitted using a new Document Reference. It may be good practice to always use new Document References as a means of an audit trail, and that the name contains either the date, or some other method of uniquely identifying it.

The Transaction identification, referred to in the XML Schema with the tag “TransRef” and the Business name of “Transaction Reference” should be unique within any upload, except where it cancels a previous Transaction of the same reference.

### *SFTP*

TRS will utilise an SSH2 / SFTP Server. SFTP uses SSH2 in data connections, so the file transport is as secure as possible. There are two main advantages in using SFTP instead of FTP:

- Passwords are never transferred in clear text, preventing any sniffer attack.
- Data is encrypted during the transfer, making difficult to spy or modify the connection.

Client SFTP installations use a similar command set to the more traditional FTP process. During our testing of various SFTP client software we have not found any reason to make specific configuration changes, and therefore, standard installation settings haven been adequate.

Please note, the Trial Userid & Password will be given to you before you register for TRS; this is expected to be during **July 2005** for PSD users and **October 2005** for Markets users. Your Live Userid will be an automatically generated numeric reference number given to you along with your Password at your allocated registration time.

### *Example of an SFTP Upload script*

- a) OPEN ftp.fsatrs.gov.uk
- b) 15782
- c) Abc123
- d) CD report\_upload

- e) LCD trs\_transmit
- f) PUT filename.xml
- g) QUIT
- a) Instructs SFTP to establish a communication with the FTP server called ftp.fsatrs.gov.uk. Please note this is only a sample name, we will not confirm the domain names or IP addresses until all testing has been completed. This domain name or address will be provided when you register for TRS use. Please note the domain name will be different between the Trial system and the Live system.
- b) This is your Userid. This numeric reference number is automatically generated and will be given to you when you register with the FSA and certify for TRS use.
- c) This is your Password. The FSA will give you this when you register and certify for TRS use.
- d) This command (Change Directory) changes the FTP server directory to the upload directory, which will always be 'report\_upload'. Please note all reports loaded to this directory will be passed to TRS for processing.
- e) This command (Local Change Directory) changes the desktop directory to the appropriate upload directory, which is set by you.
- f) This command uploads the specified XML report, in this example 'filename.xml' is the name of the desktop file to be uploaded, which is set by you. Please note that reports are no longer available once they have been accessed by TRS as they are moved from the upload directory to an internal processing area almost immediately in preparation for the processing. So it is in your interests to keep copies of reports that have been entered for transmission on your desktop – just in case you need to re-transmit them at a later stage.
- g) This command closes the SFTP process.

*Example of an SFTP Download script*

- a) OPEN ftp.fsatrs.gov.uk
- b) 15782
- c) Abc123
- d) CD results\_download
- e) LCD trs\_results
- f) GET filename\_rpt.xml
- g) QUIT

- a) Instructs SFTP to establish a communication with the FTP server called ftp.fsatrs.gov.uk. Please note this is only a sample name, we will not confirm the domain names or IP addresses until all testing has been completed. This domain name or address will be provided when you register for TRS use. Please note the domain name will be different between the Trial system and the Live system.
- b) This is your Userid. This numeric reference number is automatically generated and will be given to you when you register with the FSA and certify for TRS use.
- c) This is your Password. We will give you this when you register and certify for TRS use.
- d) This command (Change Directory) changes the FTP server directory to the download directory, which will always be 'results\_download'.
- e) This command (Local Change Directory) changes the desktop directory to the appropriate results directory, which is set by you.
- f) This command downloads the specified XML file. In this example, 'filename\_rpt.xml' is the name of the desktop file to be downloaded, which is set by you and is formed from the name of the report previously uploaded but with a '\_rpt' suffix before the 'xml' file extension. Files under this directory will be subject to a housekeeping process, under which files will be deleted according to a set of file ageing rules.
- g) This command closes the SFTP process.