Global Repository Services – EMIR

User Guide

CME European Trade Repository Limited

Version 2.4

Table of Contents

Page

1 Introduction

This manual provides an overview of the CME European Trade Repository (**CME ETR**) operating under the brand CME Repository Services delivering a derivatives trade reporting service for compliance with the European Markets Infrastructure Regulation (**EMIR**). It covers registration for access, data submission (formats and specifications), an overview of the User Website, recovery of data via reports (Collateral, Transaction and Valuation) and customisation functionality. CME ETR will leverage existing CME Group connectivity, functionality and processes in order to accept, store and report trade data, where applicable and in adherence to regulatory frameworks.

1.1 Contact Information

CME ETR website address:

http://cmegroup.com/etr

CME ETR New Release (Test) website address:

https://etruinr.cmegroup.com/etrui/

Business Team:

repository@cmegroup.com

Support Team:

repositorysupport@cmegroup.com

CME ETR Support phone number:

Number + 44 (0) 203 379 3180

CME ETR Hours of Operation:

CME ETR service is available to client's twenty four hours a day starting Sunday 1500 hrs and ending Saturday 0600 hrs (GMT). Please note this does not allow for British Summer Time changes.

2 Access to CME ETR

2.1 Registering for EMIR Test Environment

In order to assist clients with their preparation for EMIR reporting compliance, CME ETR has created a Test Environment. All registered firms have access to the Test Environment. Access can be granted prior to execution of the CME ETR Legal Agreements by completing an informational form. Production Environment access may only be granted to Users and Service Providers with completed registrations; including Legal Agreements (please see section 2.2(a) and 2.2(b) for further information on the Legal Agreements).

If a firm wishes to access the CME ETR Test Environment the following steps should be followed:

1. Complete the User Agreement or Test Environment form which can be used for both testing of ETR and our US SDR from the CME ETR Website at http://www.cmegroup.com/trading/global-repository-services/cme-european-trade-repository.html. The URL for the test environment https://etruinr.cmegroup.com/etrui/ is separate to the production environment. If you complete our user agreement form to sign up to our Production environment then you will automatically have a test environment account created.

2. Upon completing the test form, use the form's submit button and the form will auto generate an email to the ETR Registration Team.

3. Once the form has been received, CME will process the request. Upon completion, CME ETR will send an email to the administrator contact confirming the registration and provide information on how to get started.

Note:

- Submission of the data can be made in a number of ways (please see Section 3 Systems Integration for further information).

- Viewing/Downloading Data and Reports – CME ETR has developed functionality to assist clients with quick and easy access to the data stored at CME ETR (please see Section 4 Accessing CME ETR and Viewing Data for further information).

2.2 Registering with CME European Trade Repository to Report and Access Derivative Data

This section outlines the steps required in order to register with CME ETR to submit and to access derivative data for EMIR reporting compliance.

1. To register for a Production account, please go to http://www.cmegroup.com/trading/global-repository-services/cme-european-trade-repository.html. The user agreement is made up of schedules: Schedule A – CME ETR registration form. This must be completed to specify the type of registration being submitted. To register additional LEI's, Schedule C must be completed which can also be found at the above URL. Firms are required to specify at least one Verification Officer upon registration. The Verification Officer will act as the account administrator, approving any new requests or access modifications, etc. In addition to a Verification Officer regular Users can also be requested. Verification Officers have a choice of admin roles or view only roles. Admin roles allow users to upload, amend and view while a View Only role allows for read only access to the ETR.

2. As part of the registration process, CME ETR requires Users to provide their Legal Entity Identifier(s) (LEIs). Users may register with http://www.leiroc.org/ to receive a global Legal Entity Identifier or may use their Global Markets Entity Identifier (GMEI), formerly known as the CICI if in possession of one for their legal entity.

CME LEI structure is provided below:

EMIR Table 2, Field 31: CCP ID (Clearing Venue LEI)

CMECE
- CMECE LEI: **6SI7IOVECKBHVYBTB459**
- CMECE CCP MIC: CMEC
- CMECE UTI Namespace: 000CMEC000
- CME Europe Exchange: CMED

CME Inc
- CME Inc. LEI: **SNZ2OJLFK8MNNCLQOF39**
- CME Inc. UTI Namespace: 1010000023
- CME Inc. MIC: vary by venue, please go to http://www.iso15022.org/MIC/homepageMIC

Optional

CME ETR
- CME ETR LEI: **21380081PDAH48F3ME36**

3. Validation of Reporting Party LEI

CME ETR validates the Reporting Party LEI against open source pre LEI centralised database, www.p-lei.org

Records with LEIs in the Reporting Party LEI field that fail validation (where the pre LEI is not listed on the pre LEI centralised database) will be rejected by the CME ETR and will require parties to take action for resolution.

ESMA requires all TRs to perform this validation as the industry moves towards improving data quality. Please contact the CME ETR support team with any follow up questions.

Legal Agreements

CME ETR has two agreements for access to the CME ETR systems.

(a) CME European Trade Repository User Agreement.

1. Required to be executed by entities reporting to CME ETR or viewing reports from CME ETR.

2. The user agreement (1) enables a counterparty, to submit derivative data and (2) permits a counterparty or CCP to view its own derivative data which has been reported by itself or delegated service provider. In order to execute the CME ETR User Agreement:

   (i) Download the agreement from the CME ETR website www.cmegroup.com/etr. Complete the user agreement and click the send button to electronically submit the agreement to the CME ETR Registration team.

   (ii) The User Agreement will be received and processed by the CME ETR Registration Team. You will receive a notification of receipt of your submission and a subsequent notification when the registration has been completed. That second communication will include instructions on how to contact the registration team to receive your login information over the phone (for security reasons).

(b) CME ETR Delegated Reporting Service Provider Agreement

This document is required to be executed by any entity that is not a direct party to the trade; yet is reporting on behalf of one or both counterparties to the trade.

(i) Contact ETR Business Team to receive agreement, repository@cmegroup.com.

(ii) Completed and signed Service Provider agreements should be sent as a high quality scanned PDF attachment to repository@cmegroup.com.

(iii) CME ETR business team will countersign and process the agreement with the CME ETR Registration team. Once the username and password (and/or equivalent credentials specific to the mode of connectivity) are created, an email with instructions and next steps will be sent to the Service Provider.

Note: For security usernames and passwords are only provided over the phone after contacting the CME ETR Registration team (via the telephone number provided in the next steps email).

2.3 Additional User Access Requests

Once registered, accounts may authorise additional users to access the data (i.e. internal staff, fund administrators, other intra-group entities, etc. Please follow the instructions within the form.

2.4 Regulatory Authority Access

A Regulatory Authority wishing to gain access to CME ETR is required to contact CME ETR's Regulatory Compliance Officer (RCO), Matthew Hill at matthew.hill@cmegroup.com or +44 (20) 3379 3805 at CME ETR.

Once the Regulatory Authority's identity and level of access are confirmed by the CME RCO, the Regulatory Authority will provide the CME ETR, via an email to repository@cmegroup.com, the persons who require access and their role per the permissioning role levels below. Each person will receive a separate welcome email from CME ETR Registration which includes instructions on how they may obtain a username and password.

2.5 Permissioning: The various levels of user access to the Trade Repository are below:

CME ETR Administrator:

- Rights to create, modify and remove user accounts

- Rights to view data for all accounts
- Rights to upload data for all accounts
- Rights to run all reports and download the results for all accounts

CME ETR Full Access:

- Rights to view data for accounts
- Rights to upload data for accounts
- Rights to run all reports and download the results for accounts

CME ETR View Only Access:

- Rights to view data for accounts

Queries regarding permissioning for Regulatory Authorities should be directed to repositorysupport@cmegroup.com**.**

Trade Submissions to CME ETR

The following diagrams depict high level flows trade flow from bilateral execution through to clearing (if applicable) and ultimately into the CME ETR.

2.6 Assumptions and Notes to Trade Scenarios

1. The trade scenarios depicted in this document assume all cleared trades will be cleared via CME owned CCPs, and hence will utilise common CME foundational technologies, such as CME's ClearPort Gateway. It is CME's view that CME owned CCPs will be equipped to discharge any and all cleared trade EMIR reporting obligations in the most efficient manner possible; however, CME ETR will accept cleared trades inbound from any and all non-CME CCPs via one of the modes of submission listed in Section 4.

2. For a given cleared trade, the CCP clearing the trade will submit a report to CME ETR in order to discharge the CCP's EMIR reporting obligation. As part of this obligation, on an on-going basis, the CCP will report valuations and collateral to CME ETR at the omnibus level.

3. For a given cleared trade, each of the original trade counterparties may delegate their EMIR reporting obligation to the CCP clearing the trade. As part of such delegated reporting obligations, the CCP will make the initial report, valuation, collateral and any other reports to the CME ETR, which are necessary to be made on behalf of the original counterparties. As needed, the CCP will make such delegated reports at the account level, on the basis of information received from clearing members.

4. Alternatively, each of the original trade counterparties may report directly to CME ETR.

5. Clearing Members will be expected to provide additional information beyond the scope of a cleared trade submission in order to satisfy EMIR reporting requirements of the client.

6. Bilateral counterparties who transact in either cleared or non-cleared trades may report their trades directly to the CME ETR via the CME ClearPort Gateway infrastructure or via third party service providers.

7. The trade scenarios depicted in this document assume that EU domiciled counterparties will provide reports to the CME ETR, either directly or via their CCP.

8. As this document primarily concerns EMIR reporting obligations, any Dodd-Frank flows into the CME Swap Data Repository (**SDR**) (as part of CME's multi-jurisdictional reporting services) will be abstracted to just high level details.

9. Trade activity on execution and clearing facilities by EU entities outside of EMIR jurisdiction will be reported by the EU entity involved unless delegated to the foreign CCP acting as a service provider or another third party service provider.

10. The trade scenarios depicted in this document do not describe all the types of reporting which are possible under the EMIR and, for simplicity purposes, only refer to CME entities.

2.7 Cleared Trade submission to CME ETR: Clearing occurring at T=0

Trade Scenario

In the trade flow below, Client A **(Beneficiary)** requests that **Firm A** obtain its required OTC derivatives position. **Firm A** arranges **for Execution Broker (B)** to place this request at an **Execution Venue**. **Firm H** acts on its own behalf and also places trades with the **Execution Venue**. Clearing occurs at T=0, hence only trades at the clearing level are reported to the CME ETR in this scenario. Both counterparties are assumed to be EU domiciled in this scenario. Clearing occurs at T=0 in this scenario.

Trade Flow Summary

1. Orders are placed by each party in the order chain until they are placed at the **Execution Venue**.

2. Once placed at the trade venue, orders are filled back along the order chain.

3. The contract is novated to a European clearing house (depicted in figure 1 as **CMECE**). Clearing occurs at T=0.

4. The CCP terminates the original trade and executes two new equal and opposite contracts with itself as a counterparty to each, facing its clearing members **Clearing Member (C)** and **Clearing Member (J)**.

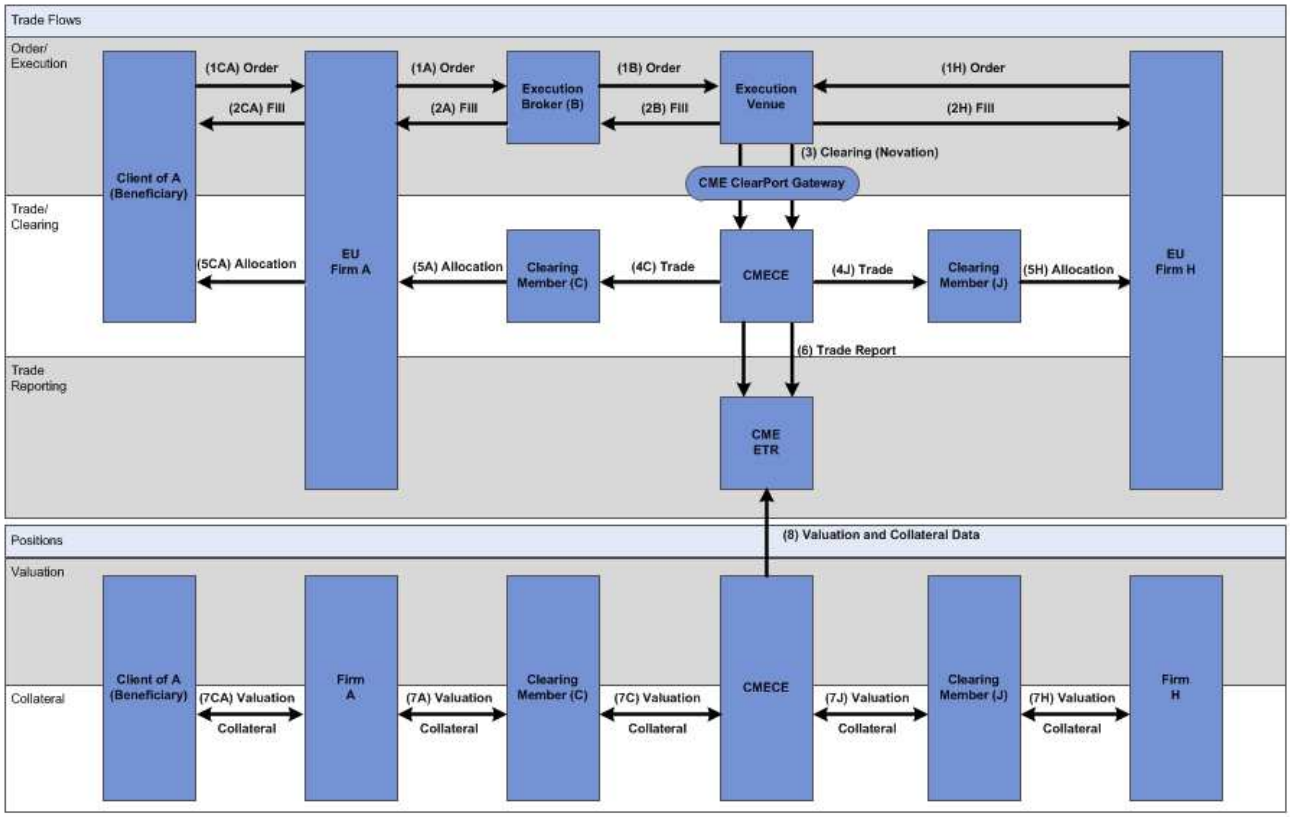
5. Clearing members allocate their contracts to the underlying firms (**Firm A** and **Firm H**). Firm A allocates the contract to its Client (**Beneficiary**) by executing trades with Firm A and Firm H respectively.

6. Trade reports for Firm A and Firm H are submitted to the European Trade Repository (**CME ETR**) by the CCP.

7. Positional valuations and collateral values are determined by the CCP, and propagated downstream to clearing members, original counterparties, and beneficiaries as necessary.

8. The CCP reports valuations and collateral to the CME ETR.

Figure 1: Cleared Trade submission to CME ETR: Clearing occurring at T=0



2.8 Cleared Trade submission to CME ETR: Clearing occurring after T+0

Trade Scenario

This scenario depicted below mirrors the previous scenario involving an OTC Derivative trade, with the exception that Clearing occurs after T+0 in this case. As such, the trade is initially reported bilaterally (i.e. as a non-cleared trade) by the two firms, with clearing being subsequently reported to the CME ETR.

Trade Flow Summary

1. Orders are placed by each party in the order chain until they are placed at the **Execution Venue**.

2. Once placed at the trade venue, orders are filled back along the order chain.

3. Since clearing takes place after T+0, Firm A and Firm H make their initial reports directly to the CME ETR via the CME ClearPort Gateway.

4. The contract is novated to a European clearing house (depicted in figure 2 as **CMECE**). Clearing occurs at T=0.

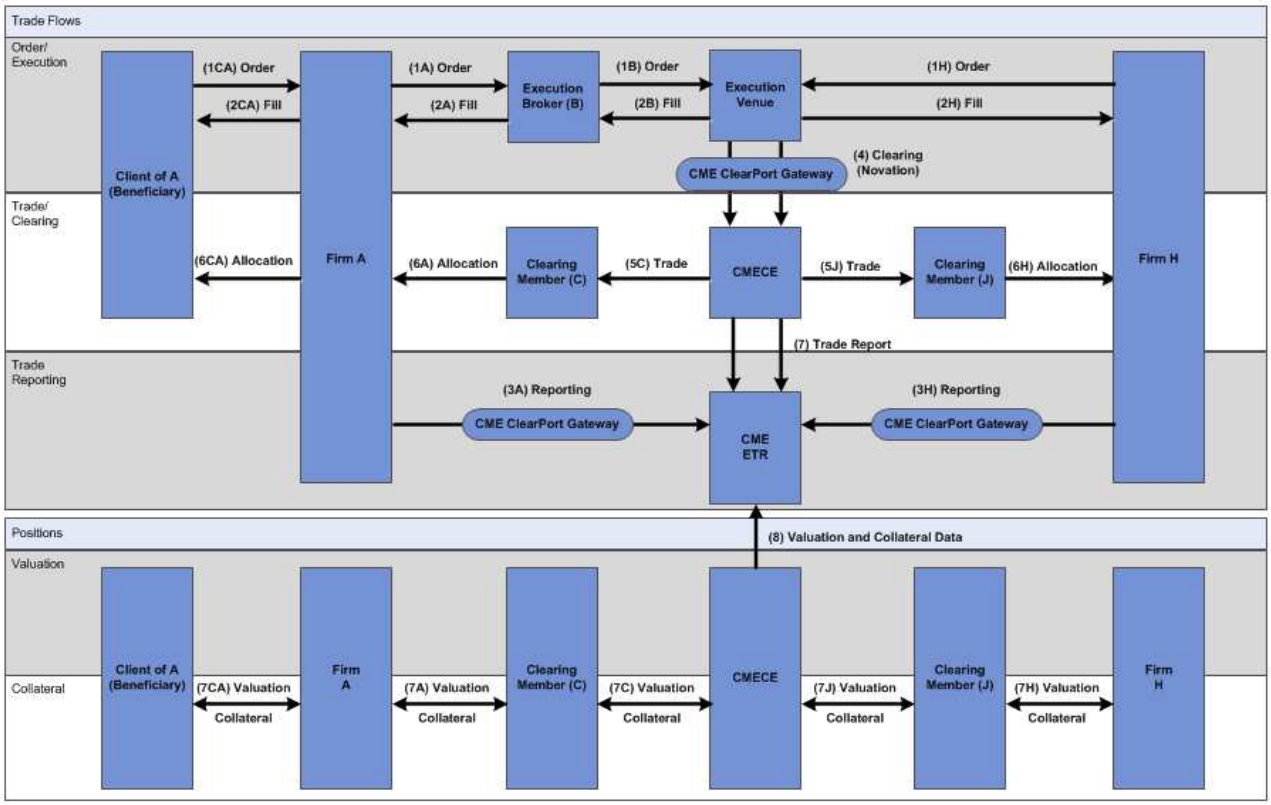
5. The CCP terminates the original trade and executes two new equal and opposite contracts with itself as a counterparty to each, facing its clearing members **Clearing Member (C)** and **Clearing Member (J)**.

6. Clearing members allocate their contracts to the underlying firms (Firm A and Firm H). Firm A allocates the contract to its Client (**Beneficiary**) by executing trades with Firm A and Firm H respectively.

7. CMECE submits the trade to CME ETR, and positional valuations and collateral values are determined by the CCP. These values are propagated downstream to clearing members, original counterparties, and beneficiaries as necessary.

8. The CCP reports valuations and collateral to the CME ETR.

Figure 2: Cleared Trade submission to CME ETR: Clearing occurring after T+0



In the above trade flow, as the initial bilateral report to the CME ETR is made prior to clearing, an associated cleared report will be subsequently reported to the CME ETR once clearing occurs. Per EMIR regulations, this subsequent cleared trade report must be associated to the original bilateral report as a modification.

In order to accurately and efficiently provide such linkages between cleared reports and preceding bilateral reports within the CME ETR, CME utilises an approach whereby the Unique Trade Identifier (**UTI**) of the bilateral trade is referenced as a data attribute of the new cleared trades which have new UTIs.

2.9 Bilateral Trade submission to CME ETR: Two EU counterparties

Trade Scenario

In this scenario Execution Broker (B) acts as agent (introducing broker). It is not signing or entering into any derivative contract with Firm A or Firm H and is therefore not considered a counterparty under EMIR. Execution Broker (B) has no duty to report under this scenario.

Firm A and Firm H are both EU counterparties and have a duty to report.

Trade Flow Summary

1. Orders are placed by Firm A's Client with Firm A and by Firm A with Execution Broker (B).

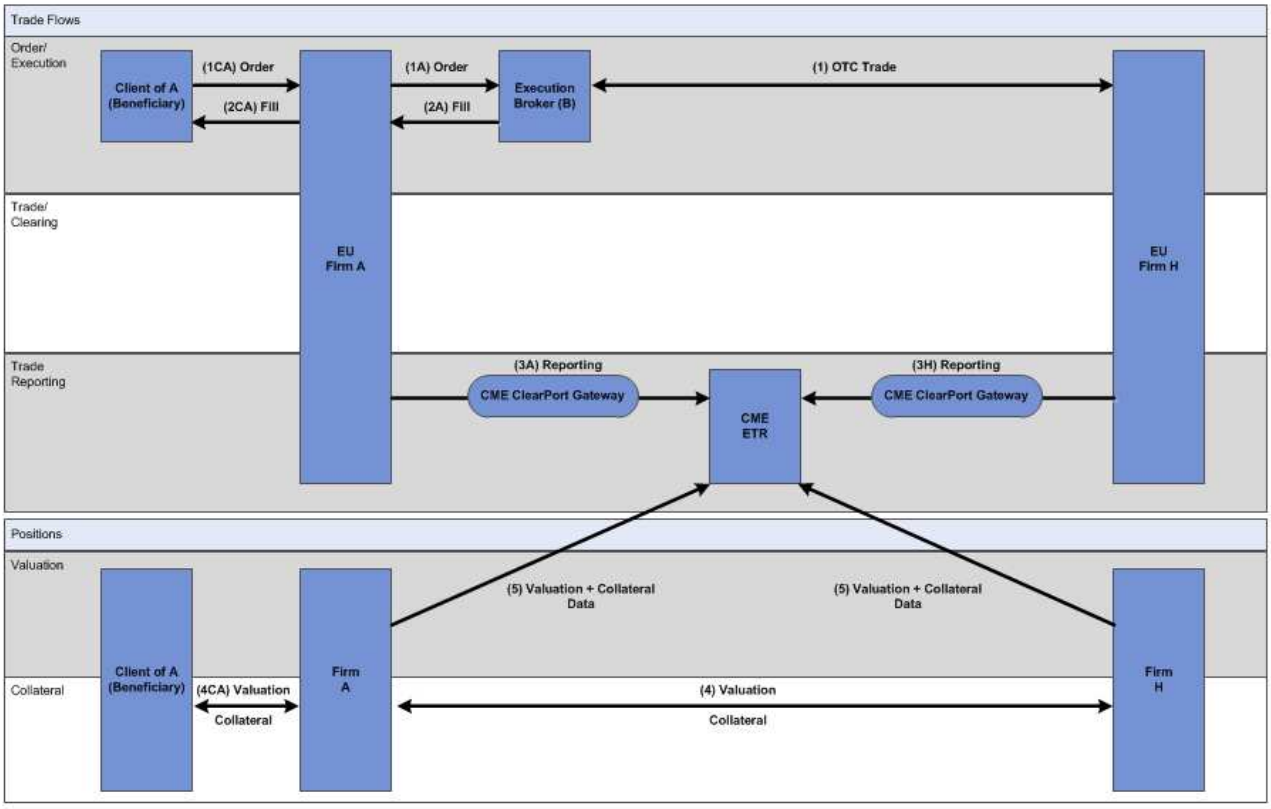
2. Execution Broker (B) and Firm H execute the bilateral OTC trade and orders are then filled back along the chain to Firm A's Client.

3. Firm A and Firm H report their trade details directly to the CME ETR via the CME ClearPort Gateway.

4. Valuations and collateral values are determined by Firm A and Firm H, and propagated downstream to beneficiaries as necessary.

5. Firm A and Firm H report valuations and collateral values to the CME ETR.

Figure 3: Flow for Bilateral Trade submission to CME ETR: Two EU counterparties



2.10 Bilateral Trade submission to CME ETR: 1 EU, 1 US counterparty

Trade Scenario

This scenario differs from the prior scenario in that one of the bilateral counterparties is US domiciled, while the other is EU domiciled. The US domiciled counterparty will be required to report to an SDR, per the flow for this scenario. All other aspects of this scenario are identical to the prior scenario.

Trade Flow Summary

1. Orders are placed by Firm A's Client with Firm A and by Firm A with Execution Broker (B).

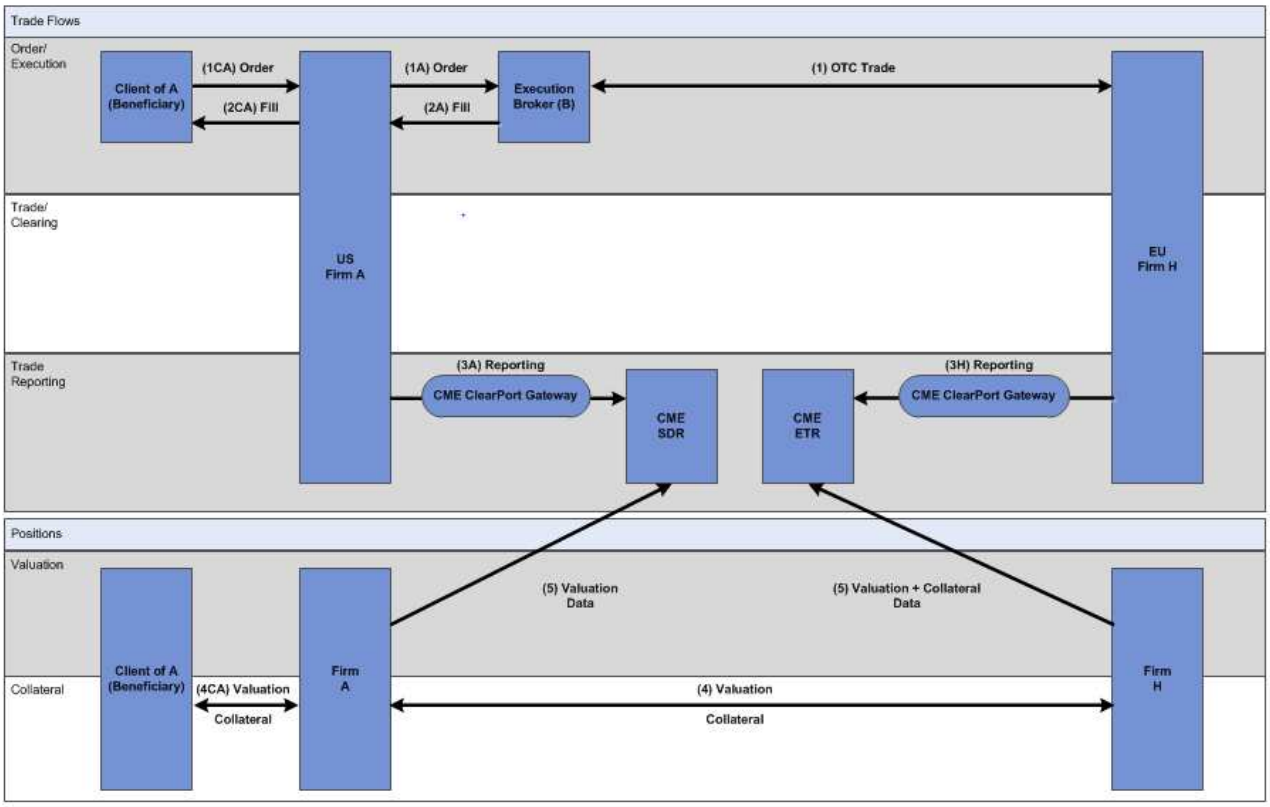
2. Execution Broker (B) and Firm H execute the bilateral OTC trade and orders are then filled back along the chain to Firm A's Client.

3. Firm A and Firm H report their trade details directly to the CME ETR and CME SDR as necessary via the CME ClearPort Gateway.

4. Valuations and collateral values are determined by Firm A and Firm H, and propagated downstream to beneficiaries as necessary.

5. Firm A and Firm H report valuations and collateral values to the CME ETR and CME SDR as necessary.

Figure 4: Bilateral Trade submission to CME ETR: 1 EU, 1 US counterparty



2.11 Cleared Trade submission to a US CCP: 1 EU and 1 US counterparty: Clearing occurring at T=0

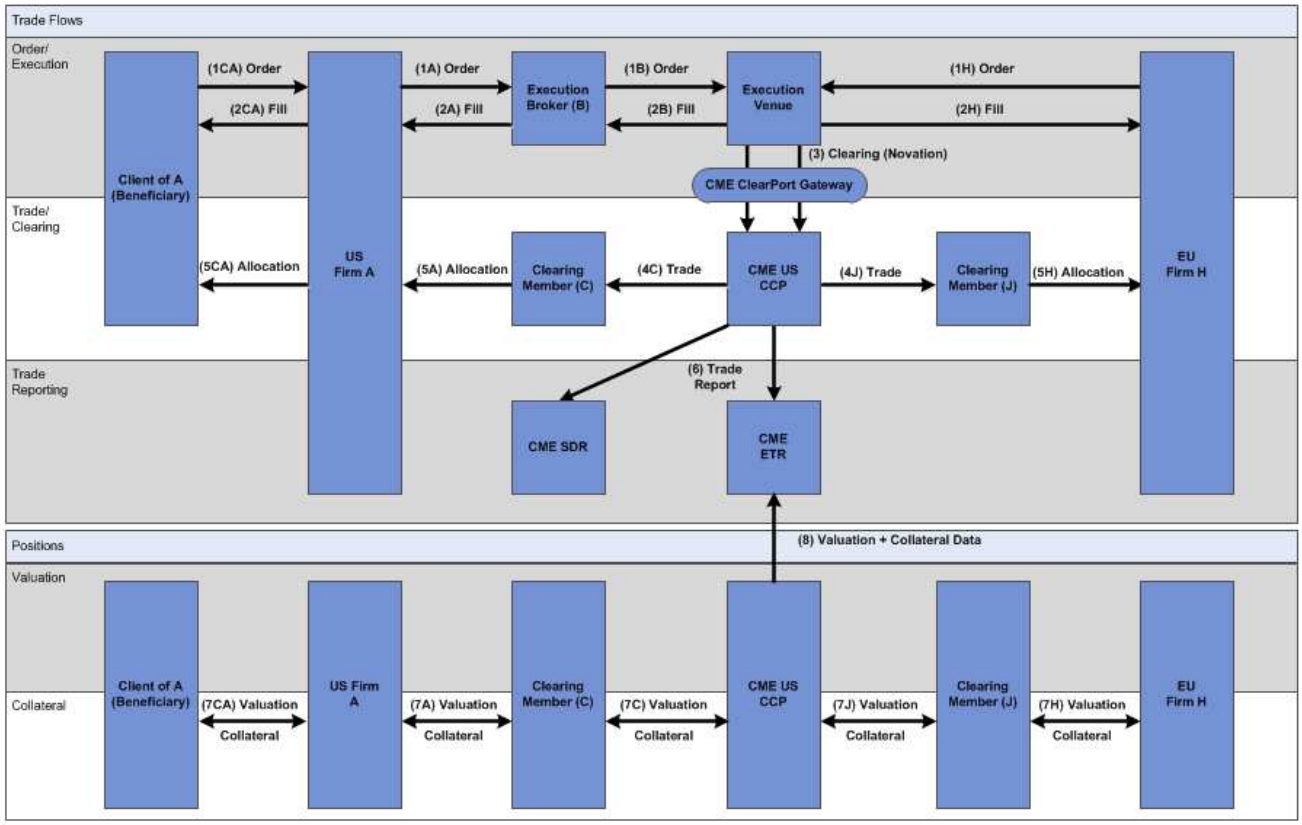
Trade Scenario

In this scenario, the cleared trade is submitted to the CME US CCP, with one counterparty domiciled in the US, while the other counterparty is domiciled in the EU. The EU counterparty is required to make a report to the CME ETR.

Trade Flow Summary

1. Orders are placed by each party in the order chain until they are placed at the **Execution Venue**.
2. Once placed at the trade venue, orders are filled back along the order chain.
3. The contract is novated to a US clearing house (depicted in figure 5 as **CME US CCP**).
4. The US CCP terminates the original trade and executes two new equal and opposite contracts with itself as a counterparty to each, facing its clearing members **Clearing Member (C)** and **Clearing Member (J)**.
5. Clearing members allocate their contracts to the underlying firms (**Firm A** and **Firm H**). Firm A allocates the contract to its Client (**Beneficiary**) by executing trades with Firm A and Firm H respectively.
6. The US CCP submits the cleared trade to the CME ETR.
7. Positional valuations and collateral values are determined by the US CCP.
8. The US CCP reports valuations and collateral to the CME ETR.

Figure 5: Flow for Cleared Trade submission to a US CCP: 1 EU and 1 US counterparty



2.12 Cleared Trade submission to a US CCP: 1 EU and 1 US counterparty: Clearing occurring after T+0

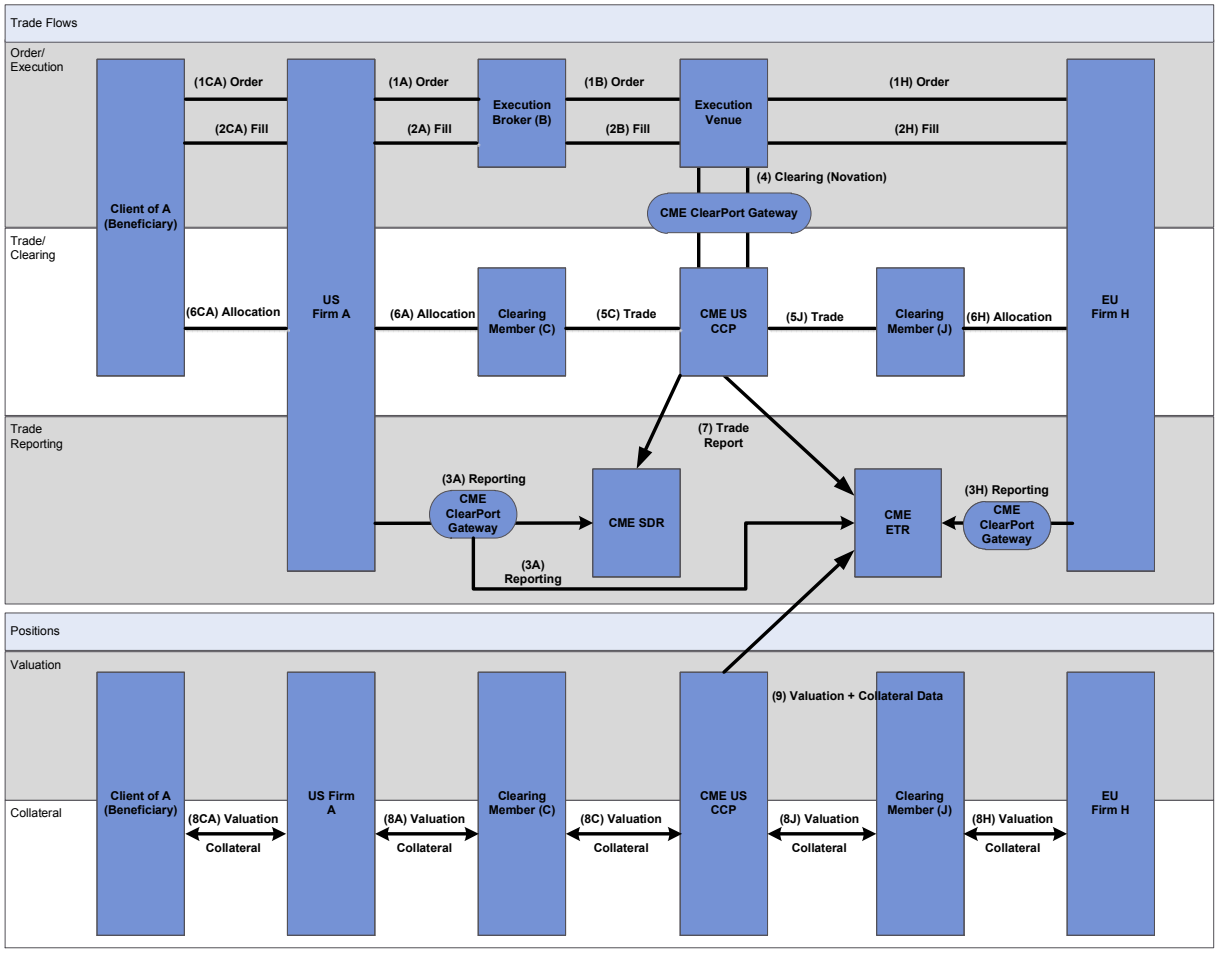
Trade Scenario

In this scenario, the cleared trade is submitted to the CME US CCP, with one counterparty domiciled in the US, while the other counterparty is domiciled in the EU. The EU counterparty is required to make a report to the CME ETR. Clearing occurs after T+0 in this scenario.

Trade Flow Summary

1. Orders are placed by each party in the order chain until they are placed at the **Execution Venue**.
2. Once placed at the trade venue, orders are filled back along the order chain.
3. Since clearing takes place after T+0, Firm A and Firm H make their initial reports directly to the CME ETR via the CME ClearPort Gateway.
4. The contract is novated to a US clearing house (depicted in figure 6 as **CME US CCP**).
5. The US CCP terminates the original trade and executes two new equal and opposite contracts with itself as a counterparty to each, facing its clearing members **Clearing Member (C)** and **Clearing Member (J)**.
6. Clearing members allocate their contracts to the underlying firms (**Firm A** and **Firm H**). Firm A allocates the contract to its Client (**Beneficiary**) by executing trades with Firm A and Firm H respectively.
7. The US CCP submits the cleared trade to the CME ETR.
8. Positional valuations and collateral values are determined by the US CCP.
9. The US CCP reports valuations and collateral to the CME ETR.

Figure 6: Flow for Cleared Trade submission to a US CCP: 1 EU and 1 US counterparty: Clearing occurring after T+0



In the above trade flow, as the initial bilateral report to the CME ETR is made prior to clearing, an associated cleared report will be subsequently reported to the CME ETR once clearing occurs. Per EMIR regulations, this subsequent cleared trade report must be associated to the original bilateral report as a modification.

In order to accurately and efficiently provide such linkages between cleared reports and preceding bilateral reports within the CME ETR, CME utilizes an approach whereby the Unique Trade Identifier (UTI) of the bilateral trade is referenced as a data attribute of the new cleared trades which have new UTIs.

2.13 Cleared Trade submission to an EU CCP: 1 EU and 1 US counterparty: Clearing occurring at T=0

Trade Scenario

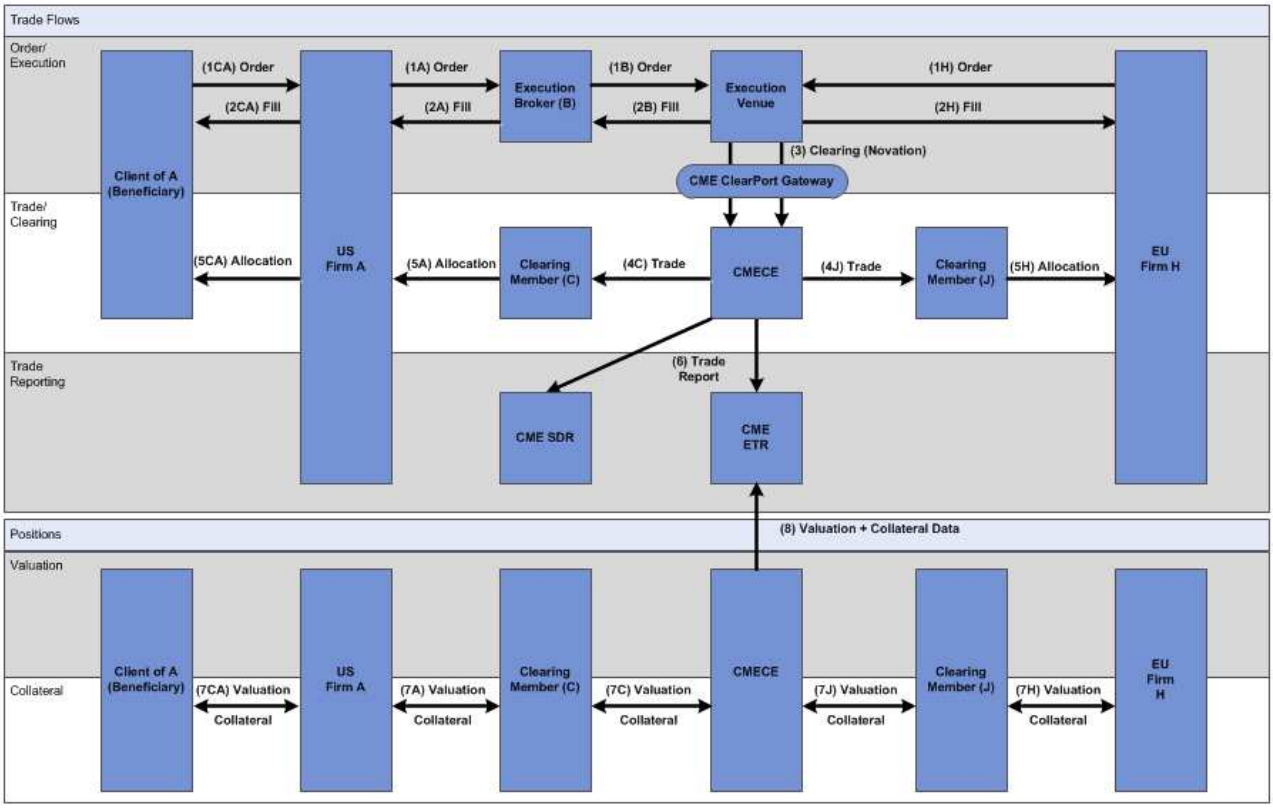
In this scenario, the cleared trade is submitted to a European CCP, such as CMECE, with one counterparty domiciled in the US, while the other counterparty is domiciled in the EU. The EU counterparty is required to make a report to the CME ETR. Clearing occurs at T=0 in this scenario.

Trade Flow Summary

1. Orders are placed by each party in the order chain until they are placed at the **Execution Venue**.
2. Once placed at the trade venue, orders are filled back along the order chain.
3. The contract is novated to a European clearing house (depicted in figure 6 as **CMECE**).

4. The CCP terminates the original trade and executes two new equal and opposite contracts with itself as a counterparty to each, facing its clearing members **Clearing Member (C)** and **Clearing Member (J)**.
5. Clearing members allocate their contracts to the underlying firms (**Firm A** and **Firm H**). Firm A allocates the contract to its Client (**Beneficiary**) by executing trades with Firm A and Firm H respectively.
6. The CCP submits the cleared trade to the CME ETR.
7. Positional valuations and collateral values are determined by the CCP, and propagated downstream to clearing members, original counterparties, and beneficiaries as necessary.
8. The CCP reports valuations and collateral to the CME ETR.

Figure 7: Cleared Trade submission to an EU CCP: 1 EU and 1 US counterparty



2.14 Cleared Trade submission to an EU CCP: 1 EU and 1 US counterparty: Clearing occurring after T+0

Trade Scenario

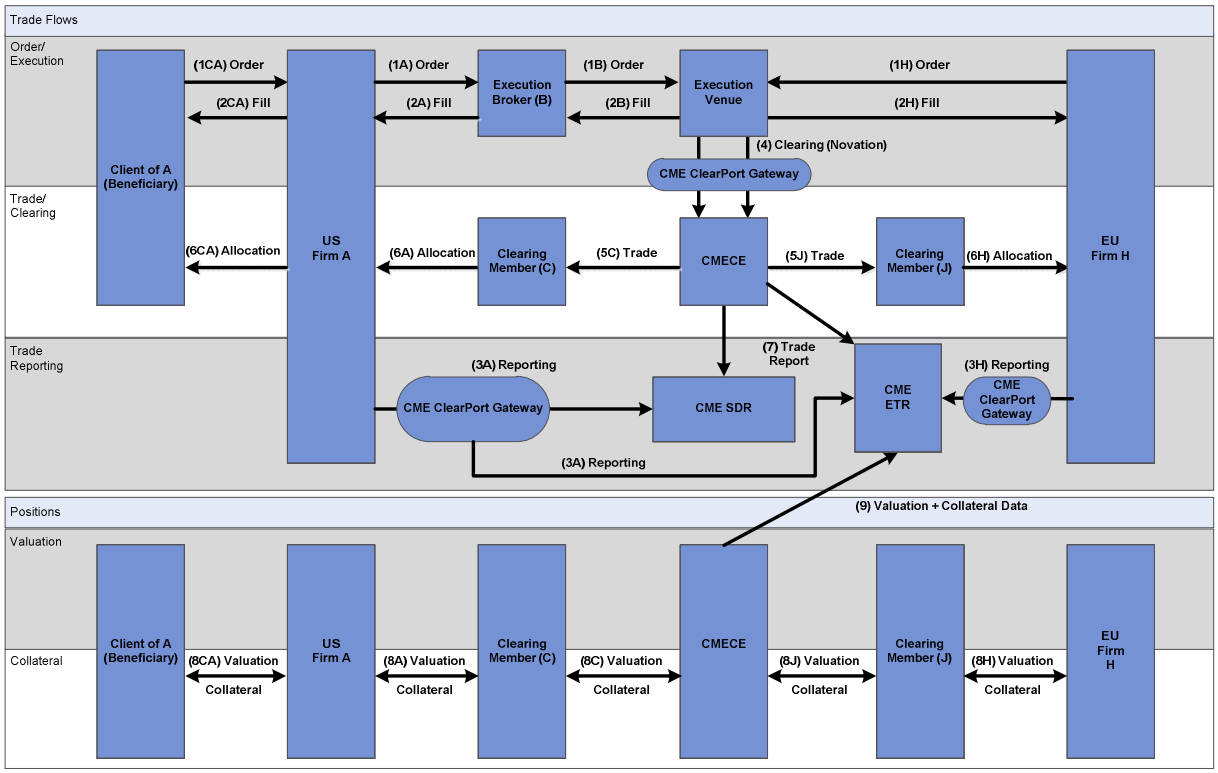
In this scenario, the cleared trade is submitted to a European CCP, such as CMECE, with one counterparty domiciled in the US, while the other counterparty is domiciled in the EU. The EU counterparty is required to make a report to the CME ETR. Clearing occurs after T+0 in this scenario.

Trade Flow Summary

1. Orders are placed by each party in the order chain until they are placed at the **Execution Venue**.
2. Once placed at the trade venue, orders are filled back along the order chain.
3. Since clearing takes place after T+0, Firm A and Firm H make their initial reports directly to the CME ETR via the CME ClearPort Gateway.
4. The contract is novated to a European clearing house (depicted in figure 6 as **CMECE**).

5. The CCP terminates the original trade and executes two new equal and opposite contracts with itself as a counterparty to each, facing its clearing members **Clearing Member (C)** and **Clearing Member (J)**.
6. Clearing members allocate their contracts to the underlying firms (**Firm A** and **Firm H**). Firm A allocates the contract to its Client (**Beneficiary**) by executing trades with Firm A and Firm H respectively.
7. The CCP (CMECE) submits the cleared trade to the CME ETR.
8. Positional valuations and collateral values are determined by the CMECE, and propagated downstream to clearing members, original counterparties, and beneficiaries as necessary.
9. CMECE reports valuations and collateral to the CME ETR.

Figure 8: Cleared Trade submission to an EU CCP: 1 EU and 1 US counterparty: Clearing occurring after T+0



In the above trade flow, as the initial bilateral report to the CME ETR is made prior to clearing, an associated cleared report will be subsequently reported to the CME ETR once clearing occurs. Per EMIR regulations, this subsequent cleared trade report must be associated to the original bilateral report as a modification.

In order to accurately and efficiently provide such linkages between cleared reports and preceding bilateral reports within the CME ETR, CME utilizes an approach whereby the Unique Trade Identifier (UTI) of the bilateral trade is referenced as a data attribute of the new cleared trades which have new UTIs.

3 Systems Integration

3.1 Report Submission Methods

Trade data may be submitted to CME ETR via the following methods:

Submission Method	Transport
FIX API	MQ
FIX API	Web services
CSV File	Website Upload
CSV File	Web services
CSV File	FTP

3.2 MQ

FIX API

API submission via MQ is a full service option for submitting, cancelling, or amending derivative data to CME ETR.

MQ is an IBM product that facilitates software messaging between two computer systems. In order to use MQ based messaging system, firms would require the installation of IBM MQ client software. Please note that IBM is an independent company from CME and therefore firms will need to appropriately license the software.

A prerequisite to facilitating MQ connectivity is to establish connectivity into the CME network. This can be accomplished via either a Virtual Private Network (VPN) or a leased line connection into CME. Existing direct connectivity into the CME network maintained by the User/Service Provider for access to other CME systems may be leveraged for use of CME ETR services.

For more information on submission methods, connectivity or technical requirements, please contact repositorysupport@cmegroup.com.

3.3 Web Services

FIXML API

CME ETR allows for programmatic submissions, cancellations, and amendments to our API via secure http web services. This web service submission facilitates connection to the CME ETR via the internet, removing the need for any other type of connectivity infrastructure (such as MQ).

Full technical details are linked below:

GENERATE AUTHENTICATION TOKEN	Refer to Appedix A
DATA CAPTURE	 DataCaptureWSClient.java
IMPORTING CERTIFICATE IN LOCAL JAVA KEYSTORE	Refer to Appedix B
SUBMITTING FIXML MESSAGE FILE	Refer to Appendix C

3.4 CSV

Comma-Separated Values (CSV) submission, cancellation and modification methodology can also be accomplished programmatically, using web services. This web service based submission facilitates connectivity and submission to the CME ETR via the Internet, removing the need for any other type of connectivity infrastructure

Technical documentation on the CSV upload is below:

AUTHENTICATION TOKEN	Refer to Appedix A
DATA CAPTURE GENERATE	 DataCaptureWSClient.java
IMPORTING CERTIFICATE IN LOCAL JAVA KEYSTORE	Refer to Appedix B
SUBMITTING CSV MESSAGE FILE	The instructions and example submissions are available on the following webpage: http://www.cmegroup.com/trading/global-repository-services/cme-european-trade-repository.html. Select: Resources > Guides and Instructions > CME ETR Technical Specification

NR:
https://etrwsnr.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/CMDT
https://etrwsnr.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/FX
https://etrwsnr.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/EQUITY
https://etrwsnr.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/IRS
https://etrwsnr.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/CDS

PROD
https://etrws.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/CMDT
https://etrws.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/FX
https://etrws.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/EQUITY
https://etrws.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/IRS
https://etrws.cmegroup.com/cgrs-ws/dataCaptureService/submitCSV/CDS

Website Upload

User Interface

The Comma-Separated Values (CSV) submission methodology allows a User to submit, modify and cancel trades in the CME ETR via the secure User Interface (UI).

This UI also serves as the front end to the CME ETR, whereby registered Users can also accomplish the following:

- View trade submissions made to CME ETR on behalf of Users. Please see Section 5 Accessing CME ETR Viewing Data for further information.
- Run comprehensive trade reports based on submitted trades. Please see Section 5 Accessing CME ETR and Viewing Data for further information.

CME approaches its CSV file submission support through the use of asset class specific templates.

Full documentation on this option, including the asset class specific CSV templates and samples are available online, http://www.cmegroup.com/trading/global-repository-services/cme-european-trade-repository.html

3.5 FTP

Submissions, cancellations and amendments will be facilitated via secure FTP. Status of such FTP based submissions will be viewable via the CME ETR web User Interface.

To obtain an FTP account, customers will need to provide the global LEI number and the name of the entity. Once that information is provided, customers will be provided with folder name and password information to access their FTP folder. The folder will have two sections: Incoming and Outgoing. Files have to be dropped for upload into CME ETR under the incoming section, and reports can be pulled from the outgoing section. There will be a response file in the outgoing file which is prefixed with 'res_' to the data file. There is an acknowledgment for each file; if the data is successful the response file will contain 'success.' If there are errors the response file will contain 'error' and give a detailed message explaining the failure. Duplicate records submitted will be rejected with an appropriate error message.

Files dropped in the incoming folder to upload in the TR should be asset class specific and the name of the file which can have any additional information should be prefixed with the asset class name (CMDT, FX, CDS, IRS or Equity). CME ETR clients need to submit collateral data using a separate file submission from the trade and valuation report. This new file should have the prefix COLL.

The file extension will differentiate between our test environment (New Release) and Production environment. Production files should have a regular CSV extension. NR (New Release) files should have .nr extension. For example, FX_20140107_100801000.csv in Production compared to FX_20140107_100801000.csv.nr in NR.
The files and the records in the folders will be processed in First in First out (FIFO) order. The time of submission will determine file order written to CME server. Existing FTP accounts with CME cannot be used for TR purposes, a new FTP account needs to be opened for trade reporting.

There are no special headers required other than usual headers for CSV submissions. Similarly, there are no footers required.

FTP Connectivity and Public Key Installation details are below:

FTP Connectivity

There are two file transfer methods available to CME ETR customers, FTP and SFTP. These methods are available over our Wide Area Network connection as well as via the Internet.

Network details

The Next Generation environment is at the following addresses for FTP and SFTP.

- Production: XXXXXXXXXXX (tcp ports 20/21/22)
- Disaster Recovery: XXXXXXXXXXX(tcp port 20/21/22)

For Internet connectivity, no network permissions are needed on the CME side, but firm User IDs are only available upon request from TR support.

PROD/DR

- FTP – Not available via the Internet
- SFTP – sftpng.cmegroup.com

XXXXXXXXXXX and XXXXXXXXXX (tcp port 22)

When using SFTP, ssh encrypted software is required for connections. CME allows the use of ssh public/private key authentication. If this is something that is needed, the firm can provide their public key to the CME. This approach does not require a password when logging on and can aid in automation on the firm's side.

Public Key Installation Documentation

Please be advised the CME uses Open SSH format. If you already have an authorised_key file installed at CME the following steps should be used to update the authorised_keys file at CME:

- Sftp to the site
- Run the command, sftp> get .ssh/authorised_keys
- Modify the file by appending a new key(s) and then overwrite the key installed at CME
- Run the command, sftp> cd .ssh
- Put the key file up, sftp> put authorised_keys

If you don't have an authorised_key file yet installed at CME the following steps should be used to update the authorised_keys file with the keys in the local directory on your source host in order for these steps to work:

- Sftp to the site
- Run the command, sftp> mkdir .ssh
- Run the command, sftp> chmod 700 .ssh
- Run the command, sftp> cd .ssh
- Put the key file up, sftp> put authorised_keys
- Run the command, sftp> chmod 600 authorised_keys
- Asset class specific CSV template will be available shortly.

4 Data Submission to CME ETR

4.1 What data is required to be submitted to CME ETR?

Please see the CME technical specification http://www.cmegroup.com/trading/global-repository-services/cme-european-trade-repository.html. The ESMA data field validation demonstrates all the applicable data fields to be submitted and the appropriate format. This table additionally states any validations applied to the data submitted in order to verify the accuracy of data submitted.

4.2 Unique Transaction Identifier (UTI)

A unique trade id also referred to as the UTI (Unique transaction identifier), is an identifier agreed by the counterparties to the trade, and provided by the reporting counterparty while reporting to a European Trade Repository. ESMA has stipulated the length of the field can be up to 52 characters. All reportable transactions will be assigned a transaction identifier and will conform to the UTI structure defined below.

The UTI is comprised of two fields.

1. The namespace of the assigner or the Prefix
2. The transaction identifier

For all (OTC and ETD) trades cleared by CME, the DCO will use the CFTC assigned namespace for the DCO. Trades cleared by CME Clearing Europe (**CCE**) will use the CCE MIC code with a prefix and suffix. The namespace will have a maximum length of 10 characters. The maximum length of the transaction identifier assigned by CCE or CME will be 32 characters.

- Namespace/Prefix for Trades cleared at CME – 1010000023
- Namespace/Prefix for Trades cleared at CCE – 000CMEC000

CCE and CME will assign a cleared UTI for all trades cleared by the respective clearing org. The cleared UTI will be used to meet any CCP reporting obligation under EMIR.

Differing clearing models between the US and European jurisdictions alter the number of UTI's required to be generated. Trades cleared by CCE will use the principal structure and the trades cleared by CME will assume an agency structure.

For principal model the clearing member acts as principal, the end-user will face the clearing member, and the clearing member will face the clearing house (here, there are two identical 'back-to-back' transactions among the three parties). All trades cleared by CCE will be reported under the principal clearing model. Under the principal model, the cleared UTI will correspond to the trade between the clearing member and CCE. In addition, a second UTI will be generated by CCE. This UTI corresponds to the trade between the clearing member and the client.

For agency the clearing member acts as an agent, the end user will face the clearing house directly. All trades cleared by CME will be reported under the agency clearing model. Under the agency model, the cleared UTI will correspond to the trade between the client and the CME. So no additional UTI will be assigned under the agency model.

For detailed trade scenario diagrams and assigning UTI for various clearing models please reference CME ETR website http://www.cmegroup.com/market-data/files/cce-and-cme-uti-assignment.pdf.

4.3 Unique Product Identifier (UPI)

In order to aid European clients in their EMIR Trade reporting requirements, CME ETR has published the attached table matrix.

This table and subsequent schematic are in reference to the reporting of fields 1 to 4 and 21, 55 and 57 of the EMIR Regulator Technical Standards (RTS) Common Data Tables, pursuant to the reporting of product identification.

In order to find the relevant Classification of Financial Instruments (CFI) code, please find these on the CME Group Product reference files located on the CME group Public FTP site: ftp.cmegroup.com/fprf. This is organised by clearing org, then by product exchange, then by date.

Another source for product codes and slate, CME website: http://www.cmegroup.com/trading/products/

Any questions related to this document and table should be directed to CME Trade Repository at repository@cmegroup.com.

Field	Description	Format	EACH Recommendation	Trade		Position	
				IRS/CDS	OTC FX/ Commodities/ETD	OTC FX/Commodities/ETD	CDS
Taxonomy used ESMA Field 1	The contract shall be identified by using a product identifier.	Identify the taxonomy used: • U = Product Identifier [endorsed in Europe] • I = ISIN/AII + CFI • E = Interim taxonomy	No global product or interim identifier in place so use • I - (i.e. using combination of ISIN / Aii and CFI) - standardized contract • E - non-standardized	E	I	I	E
Product ID 1 ESMA Field 2	The contract shall be identified by using a product identifier.	For taxonomy: • U: Product Identifier (UPI), to be defined For taxonomy: • I: ISIN or AII, 12 digits alphanumerical code For taxonomy: • E: Derivative class: • CO = Commodity • CR = Credit • CU = Currency • EQ = Equity • IR = Interest Rate • OT = Other	Aii or ISIN - where standardized contract. Derivative class as defined by ITS - where non-standardized contract.	IR/CR	Clearing Product Code	Clearing Product Code	CR
Product ID 2 ESMA Field 3	The contract shall be identified by using a product identifier.	For taxonomy: • U = Blank For taxonomy: • I CFI, 6 characters alphabetical code For taxonomy: • E: Derivative type: • CD = Contracts for difference • FR = Forward rate agreements FU = Futures • FW = Forwards • OP = Option • SW = Swap • OT = Other	CFI (Classification of Financial Instruments) code - where standardized contract. Derivative type as defined in the ITS - where non-standardized contract.	• SW – Rates • OT – CDS	CFI Code	CFI Code	OT – CDS
Underlying ESMA Field 4	The underlying shall be identified by using a unique identifier for this underlying. In case of baskets or indices, an indication for this basket or index shall be used where a unique identifier does not exist.	ISIN (12 alphanumerical digits) • LEI (20 alphanumerical digits); Interim entity identifier (20 alphanumerical digits); UPI (to be defined); • B = Basket • I = Index	Blank where not applicable to specific asset class. Otherwise populated as per ITS.	CDS Single Name LEI of the Single Name Index I - Index	Options on Index • I - Index Options on Combo • B - Basket	N/A	CDS Single Name LEI of the Single Name Index I - Index
Maturity ESMA Field 21	Expiry date of contract	ISO 8601 date format.	ISO 8601 date format.	N/A	YYYY-MM-DD	YYYY-MM-DD	N/A
Put/Call ESMA Field 55	Indicates whether the contract is a call or a put.	• P=Put • C=Call	• P=Put • C=Call	N/A	• P=Put • C=Call	• P=Put • C=Call	N/A
Strike Price ESMA Field 57	The strike price of the option.	Up to 10 Numerical digits in the format xxxx,yyyyy.	Up to 10 Numerical digits in the format xxxx,yyyyy.	N/A	xxxx,yyyyy	xxxx,yyyyy	N/A

4.4 Delegated Reporting Service

CME Group's new Delegated Reporting Service provides a simple and effective way to help fulfil reporting obligations under EMIR.

This service automatically reports trades on client behalf by leveraging existing data collected in the clearing process for products cleared by our US-and London-based clearing houses. This also includes the reporting of positions, valuations and collateral data to comply with forthcoming additional EMIR reporting requirements coming later this year.

For end clients, this service is easy to set up and no additional work or testing is required. There are no fees associated with this service.

All trades will be reported to our London-based CME European Trade Repository (CME ETR), an ESMA registered trade repository. CME ETR is a multi-asset class reporting solution for ETD, OTC cleared, and OTC-bilateral derivatives transactions in interest rates, foreign exchange, credit, commodities, and equities. Two versions of our delegated reporting service are available to you:

- For US markets, this service covers all trades completed on any of our US-based exchanges, CME,CBOT, NYMEX, COMEX and cleared through our US-based clearing house.
- For our European markets, this service covers all OTC trades submitted for clearing to CME Clearing Europe (CMECE), our London-based Recognised Clearing House (RCH); in time this service will also be available for all trades on our London-based derivatives exchange, CME Europe, once launched and cleared **through CMECE.**

REGISTER TODAY for CME Delegated Reporting Service

How to get started:

1. Acquire an LEI (Legal Entity Identifier)
2. Complete a Delegated Reporting registration form at cmegroup.com/delegatedreporting
3. Contact your FCM or Clearing Member to let them know you in tend to use this service

4.5 Life Cycle Events

High Level description of reporting the various Life Cycle events of a trade are below. Conceptually this process applies to all forms of submission.

(a) **New**: To enter a new trade use the Action tag populated with value as "New" and Event tag as "New Trade" with other economics of the trade populated.

(b) **Modify**: To modify or change any economics of the trade the Action tag needs to be populated with value "Amend" and Event tag as "Amendment" with all the details of the trade and the changed economic values.

(c) **Error**: In case of error in entering the trade, it can be moved to a remove/invalid status by populating the Action tag as "Remove/Invalid" and the Event tag as "Cancellation" with the other details of the trade entered as is.

(d) **Cancel**: In order to cancel an entered trade, the Action tag needs to be populated as "Terminate" and Event tag to be populated as "Cancellation" with other details of the trade entered as is.

(e) **Compression**: To show compression of trades, enter the Action tag as "Terminate" and Event tag as "Full Netting/Partial Netting" for the UTIs that need to be compressed. All the other details of the trades have to be specified as in the "New trade" entry. In case of partial netting an additional trade entry is required to reflect the remnant trade. This will be entered with the Action tag as "New" and the Event tag as "Partial Netting" and the economics of the remnant trade.

(f) **Valuation update**: To enter valuation on a trade, the Action tag needs to be populated as "Valuation" and Event tag as "Valuation" too.

A	B	C	D	E	F	G	H	I
Example Type	Action Type	UTI	UTINamespace	EffectiveDate	MaturityDate	Event	CounterPartyLEI	ExecutionDateTime
To Enter a New Trade	NEW	99_IRS_EX001	CSVSAMPLE	20130601	20181231	New Trade	LEI00000PARTYA	20121012 16:34:56
To Modify an already existing trade	AMEND	99_IRS_EX001	CSVSAMPLE	20130601	20181231	Amendment	LEI00000PARTYA	20121012 16:34:56
To Terminate an errorneous trade submi	REMOVE/INVALID	99_IRS_EX001	CSVSAMPLE	20130601	20181231	Cancellation	LEI00000PARTYA	20121012 16:34:56
To Cancel an entered trade	TERMINATE	99_IRS_EX001	CSVSAMPLE	20130601	20181231	Cancellation	LEI00000PARTYA	20121012 16:34:56
To report compression with Full Netting	NEW	98_IRS_EX001	CSVSAMPLE	20130601	20181231	New Trade	LEI00000PARTYA	20121012 16:34:56
	NEW	97_IRS_EX001	CSVSAMPLE	20130601	20181231	New Trade	LEI00000PARTYA	2012101116:34:56
	TERMINATE	98_IRS_EX001	CSVSAMPLE	20130601	20181231	Full Netting	LEI00000PARTYA	20121012 16:34:56
	TERMINATE	97_IRS_EX001	CSVSAMPLE	20130601	20181231	Full Netting	LEI00000PARTYA	2012101116:34:56
To report compression with partial Netti	NEW	98_IRS_EX001	CSVSAMPLE	20130601	20181231	New Trade	LEI00000PARTYA	20121012 16:34:56
	NEW	97_IRS_EX001	CSVSAMPLE	20130601	20181231	New Trade	LEI00000PARTYA	2012101116:34:56
	TERMINATE	98_IRS_EX001	CSVSAMPLE	20130601	20181231	Partial Netting	LEI00000PARTYA	20121012 16:34:56
	TERMINATE	97_IRS_EX001	CSVSAMPLE	20130601	20181231	Partial Netting	LEI00000PARTYA	2012101116:34:56
	NEW	95_IRS_EX002	CSVSAMPLE	20130601	20181231	New Trade	LEI00000PARTYA	2012101136:34:57
To report Valuation	VALUATION	99_IRS_EX001	CSVSAMPLE	20130601	20181231	Valuation	LEI00000PARTYA	2012101136:34:58

5 Data Access and Reports (Generic and Customisation)

5.1 Data Access

Step 1: To access the EMIR reported data go to the CME ETR website at the following address and Log into the User Interface (UI) by typing in your CME Username and Password. A screen shot of the log in page is displayed below.

CME ETR website address: http://cmegroup.com/etr

CME ETR New Release (Test) website address: https://etruinr.cmegroup.com/etrui/

Please note that if you do not have a username or password or are experiencing issues with your log in details please contact CME ETR Support (repositorysupport@cmegroup.com)

Step 2. Under the drop-down box labeled 'Reports', you can view Trade and Valuation Reports for five different asset classes (Commodities, Credit, FX, Equities and Interest Rate).

5.2 Types of Data Reports

The reports function is used to view comprehensive reports by all Users, Registered Entities or Service Providers who are registered with CME ETR for the appropriate authorised accounts.

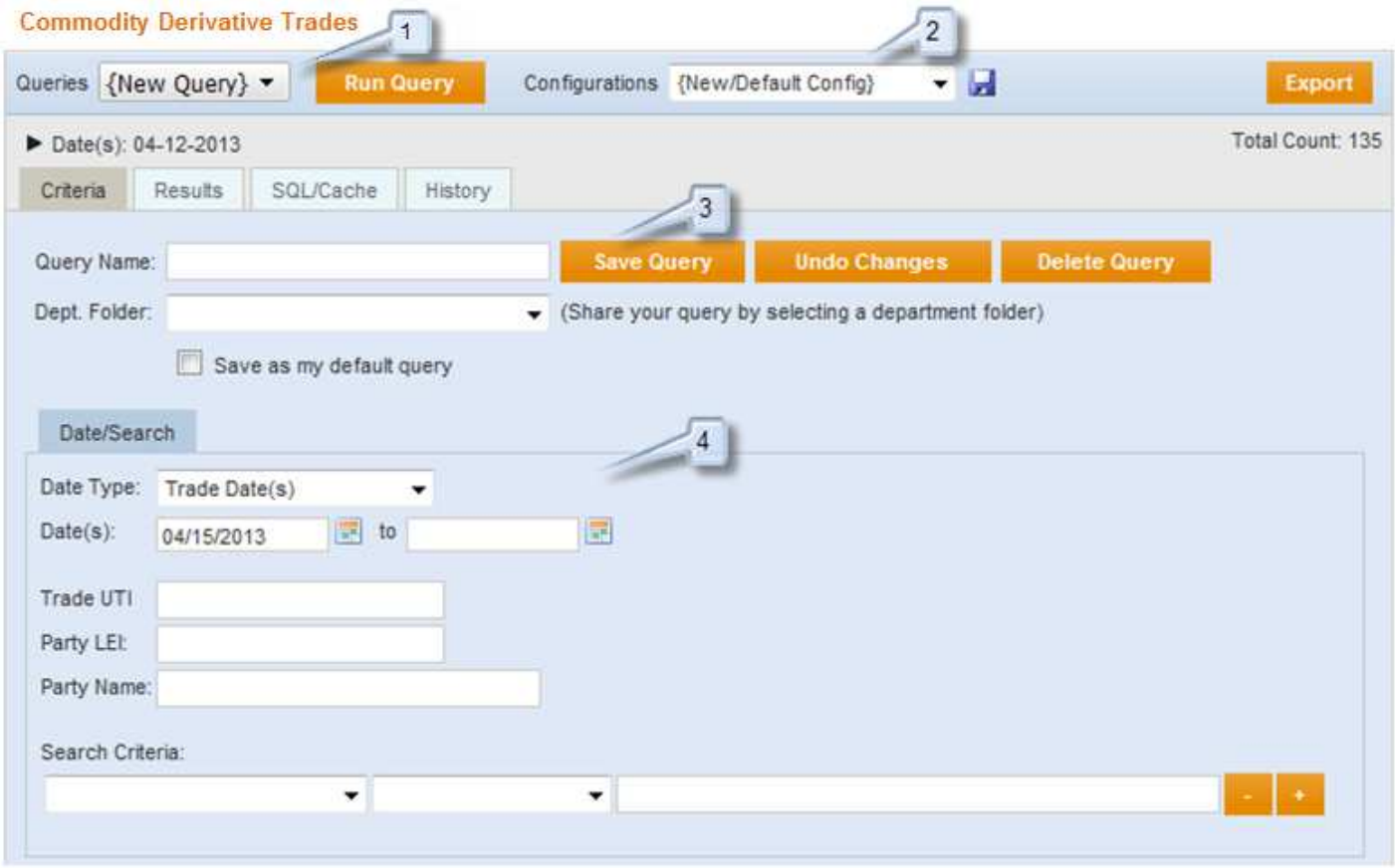
There are two types of reports available:

- Trade Report - Search for Commodity, Credit, FX, Equities or Interest Rates derivative trades submitted to CME ETR.
- Valuation Report - Search daily Commodity, Credit, FX, Equities or Interest Rates positions submitted to CME ETR with valuations.
- Collateral Report - Search daily collateral values submitted to the CME ETR.

Please note report data represents the most recent amended version of trade. Amendment history is available from the audit history which is attached to each trade.

Querying for Reports

The below screenshots provide a high level overview of the CME ETR reporting functionality.



1. **Queries** - A query is a saved search which can be used to populate saved search criteria. You can populate the search criteria under the date and search tab, and name the query under query name and click on save query. Choose from list of queries, which have been previously saved as a template.

2. **Configurations -** The user can customise the report layout and save it as a desired configuration. You can name your configuration for future access to a saved report.

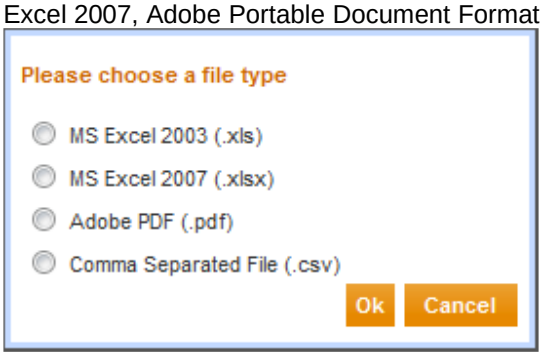
3. **Manage queries -** Save or delete queries.

4. **Date and Search criteria -** The primary search fields include Trade Dates, First Submission Date, Last Submission Date, Trade Unique Product Identifier (UPI), Party LEI and Party Name. Add additional search criteria by selecting from the available trade results columns. The additional selections appear in report. Add - Click + to add the trade attribute, operator, and value to the search. Remove (-) - Remove the search criteria from the search.

5. **Run Query** – After populating the search criteria or by pulling your previously saved query, hit the 'Run Query' button. This will take you to the 'Results' tab displaying reports.

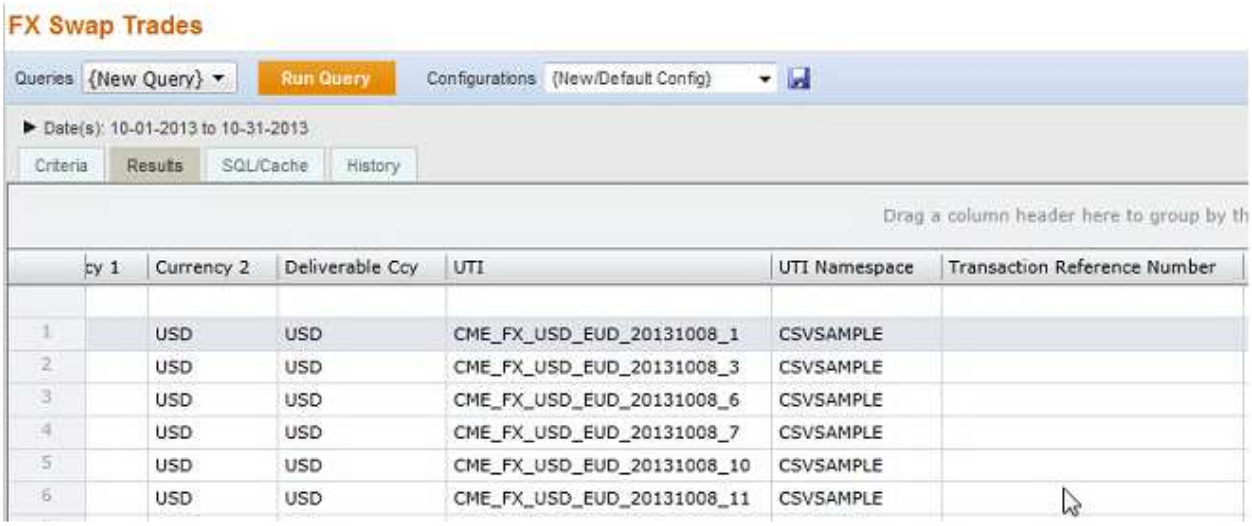
5.3 Export Functionality

Reports can be downloaded by clicking on the export button. Available formats are Microsoft Excel 2003, Microsoft Excel 2007, Adobe Portable Document Format (PDF), or Comma Separated Value (CSV) file.



5.4 Viewing and Downloading Data Reports

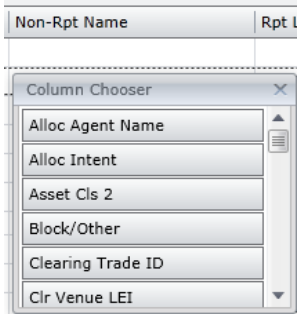
Results Tab:



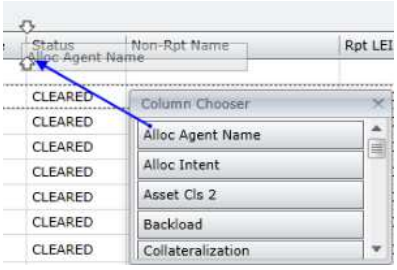
Users can customise the results layout by adding and deleting columns that are being displayed as default.

5.5 To add the columns:

1. Right-click a column heading.
2. Select Show Column Chooser.
3. The Column Chooser appears which lists all fields not already displayed on the report.



4. Select and Drag selections to the heading until opposing arrows appear which indicate the placement of the column.

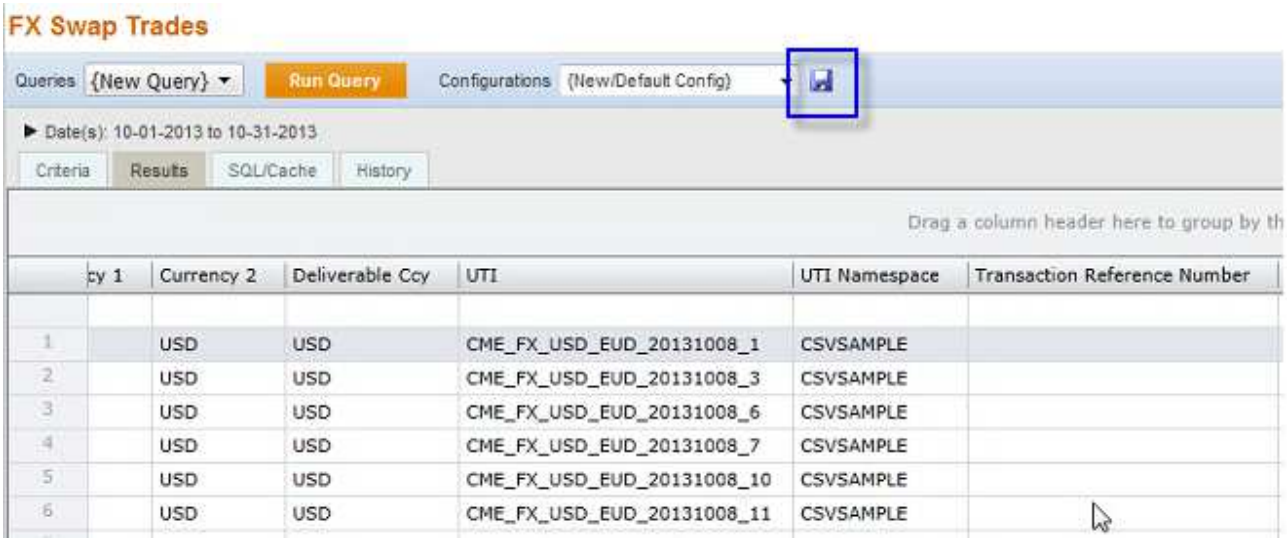


5. To close the column chooser, right-click the column heading and select Hide Column Chooser or click the x button in the upper right corner.

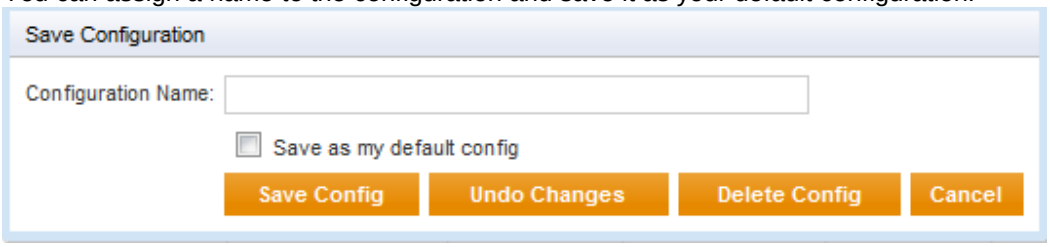
5.6 To remove columns:

1. Click on the column header.
2. Drag it down till a red cross appears on the side of the column header.
3. Leave the cursor, column header should go away.

Once you have customised the header layout you can save the layout as a configuration by clicking on the ‘Save’ button.

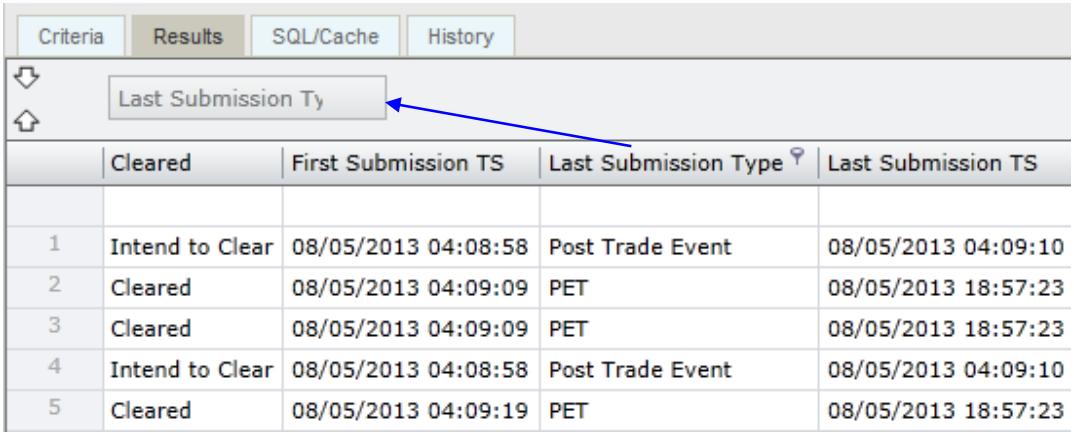


You can assign a name to the configuration and save it as your default configuration.



5.7 To group and sort results:

1. On the Results page, drag a column heading to the group panel.



2. Results are grouped and sorted by the selected column heading.

3. Right-click the report header for additional options

- Full Expand - Expands the grouped headings.
- Full Collapse - Collapses all expanded headings.
- Clear Grouping - Clears the grouping and sorting and returns to the default view.

5.8 To use filtering:

1. Click on the empty row above Row 1 in the column that you want to filter information for.
2. Type in '%' and then the string of letters/numbers that you want to search for.

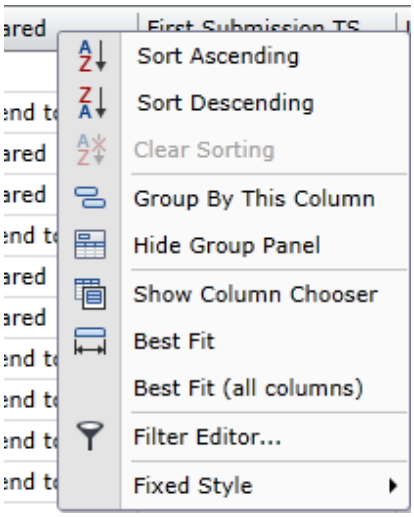
	Cleared	First Submission TS	Last Submission TS	Last Submission Type
	%Cleared			
1	Cleared	08/05/2013 04:09:09	08/05/2013 18:57:23	PET
2	Cleared	08/05/2013 04:09:09	08/05/2013 18:57:23	PET
3	Cleared	08/05/2013 04:09:19	08/05/2013 18:57:23	PET
4	Cleared	08/05/2013 04:09:19	08/05/2013 18:57:23	PET
5	Cleared	08/05/2013 04:40:45	08/05/2013 18:57:24	PET
6	Cleared	08/05/2013 04:40:45	08/05/2013 18:57:23	PET
7	Cleared	08/05/2013 10:39:29	08/05/2013 10:39:29	PET
8	Cleared	08/05/2013 10:39:28	08/05/2013 18:57:24	PET

3. Only trades with the % identifier will show (as seen with '%Cleared' shown above in the Cleared column).

5.9 To modify displayed results:

1. Generate a report.
2. Right-click the results table.

Report layout options appear in a menu.



3. Following are descriptions of the available options:

Menu	Description
Sort Ascending	Sort the selected column in ascending order.
Sort Descending	Sort the selected column in descending order.

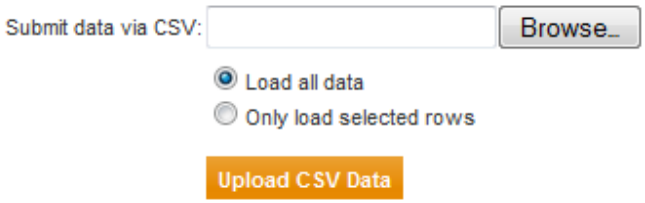
Menu	Description
Clear Sorting	Reset the results to the default layout. Does not reset search data.
Group By This Column	Group the results by the selected column. To group multiple columns right click each column and select Group by Column.
Hide Group Panel	Minimises the group panel.
Show Column Chooser	Refer to the following section to modify the default column layout.
Best Fit	Resize the currently selected column for the optimal size based on the content within the column.
Best Fit (All Columns)	Resize all columns to the optimal size based on the content within the column.
Filter Editor	Create an auto filter within the currently selected column. This function works similar to the column filter icon.
Fixed Style	It freezes the selection section either to the left or to the right.

5.10 Submit Data

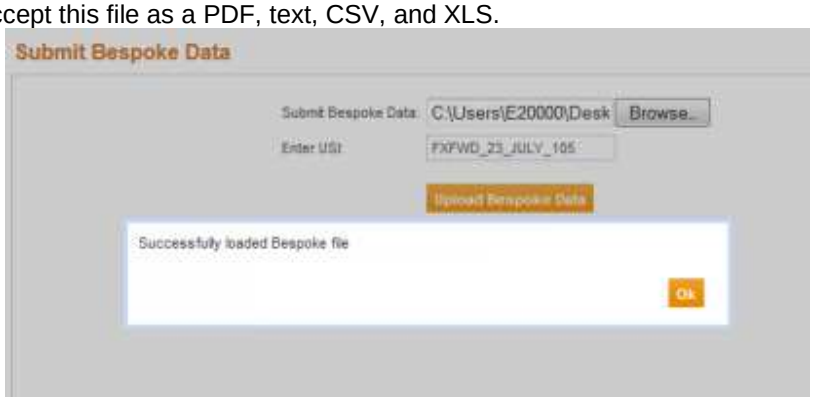
1. Submit data by selecting the drop-down box labeled ‘Submit’ and selecting the asset class for which you wish to upload data. Also available is the collateral data selection for submission.

2. The five classes available for data submission are Commodities, Credit, FX, Interest Rate and Equities. Also available is the collateral data selection for submission.

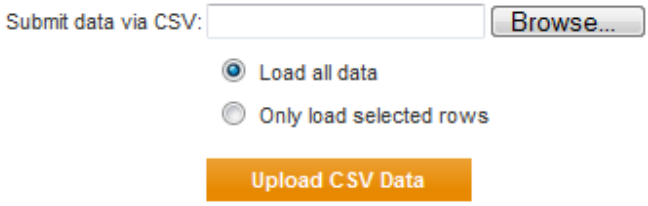
3. For the desired asset class tab, click **Browse** then click **Submit**.
   The submit screen is shown below. Data can be loaded as an entire file and also by section of rows.



Bespoke Data refers to adding an additional file to complement the loaded data in reference to the loaded UTI. We can accept this file as a PDF, text, CSV, and XLS.



The submit screen is shown below. Data can be loaded as an entire file and also by section of rows.

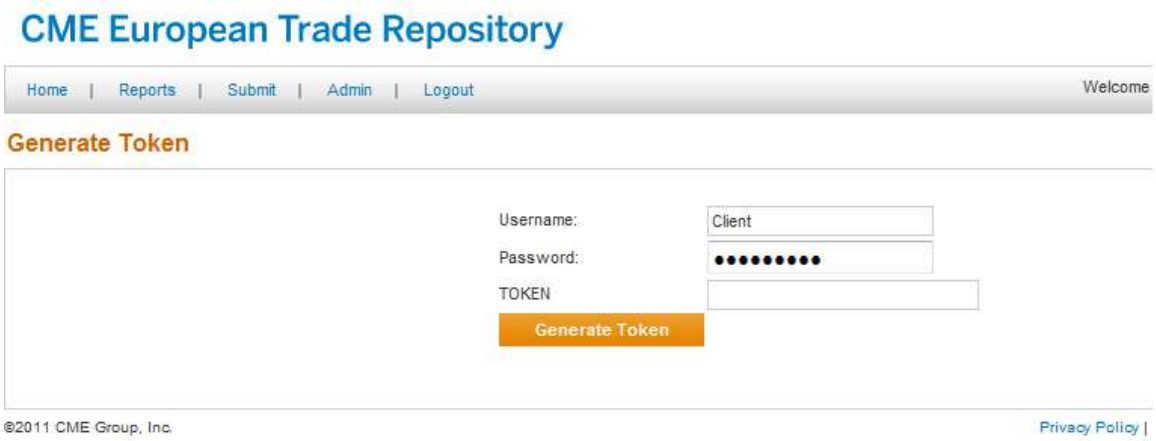


Appendix A - FIXML - GENERATE AUTHENTICATION TOKEN

1. Login to https://etruinr.cmegroup.com/etrui/ with your username and password

2. Go to Generate Token page under Submit menu as shown in screen shot below

3. Enter your username and password and click “Generate Token”. It should give you your authentication code for using web service in Token text field. You will have to use valid username and password which is authorized by CME Repository Support Group during Registration. (Make sure you have already changed the temporary password provided during registration. You can use https://etruinr.cmegroup.com/etrui/ to change your temporary password. It will prompt you to change the password when you login first time)

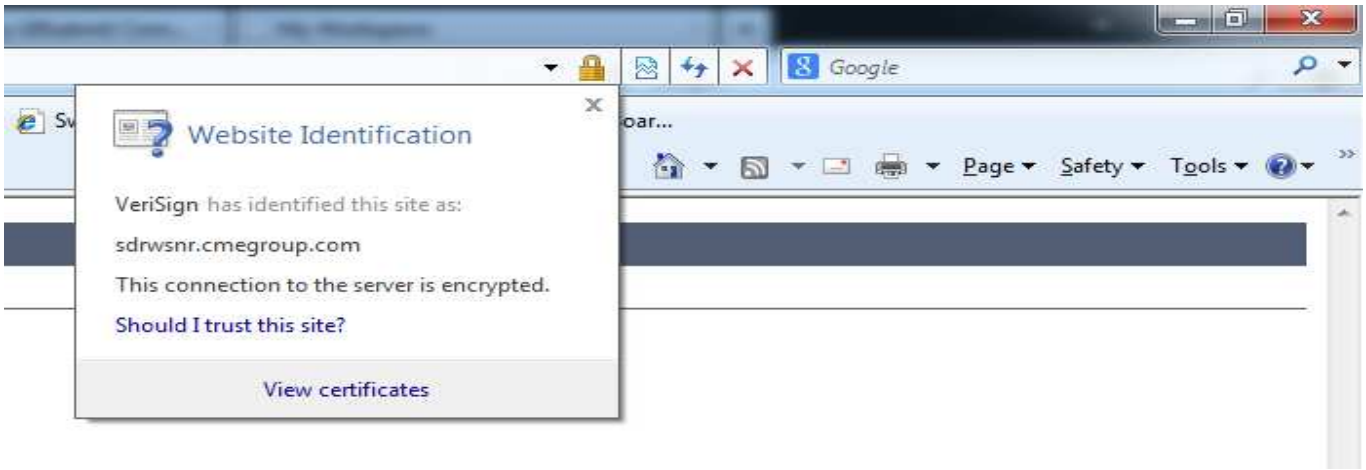


4. You are ready to use this token for your web service client code to submit FIXML or CSV messages to CME TR. This token will be used as a value for http header name “Authorization” (Please refer to DataCaptureWSClient.java code).

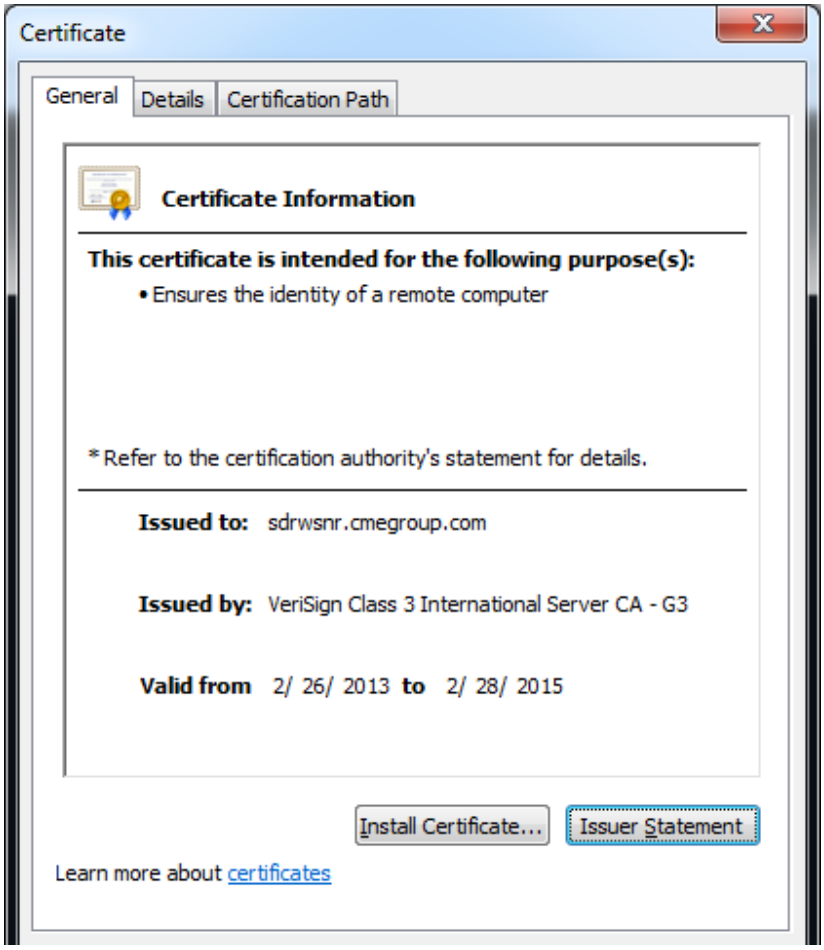
Appendix B - FIXML - IMPORTING CERTIFICATE IN LOCAL JAVA KEYSTORE

1. Open https://etrwsnr.cmegroup.com/etrui-datacapture-ws/dataCaptureService/submitXML URL in IE.

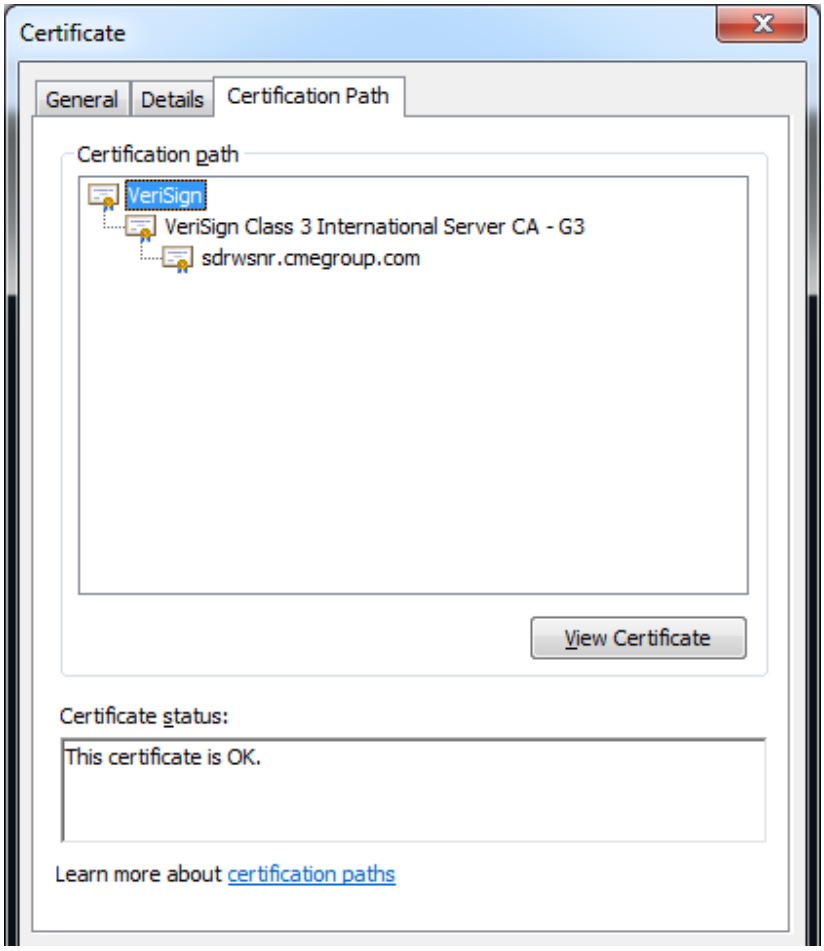
2. Click on Lock image and click on View Certificate. You will see following dialog box



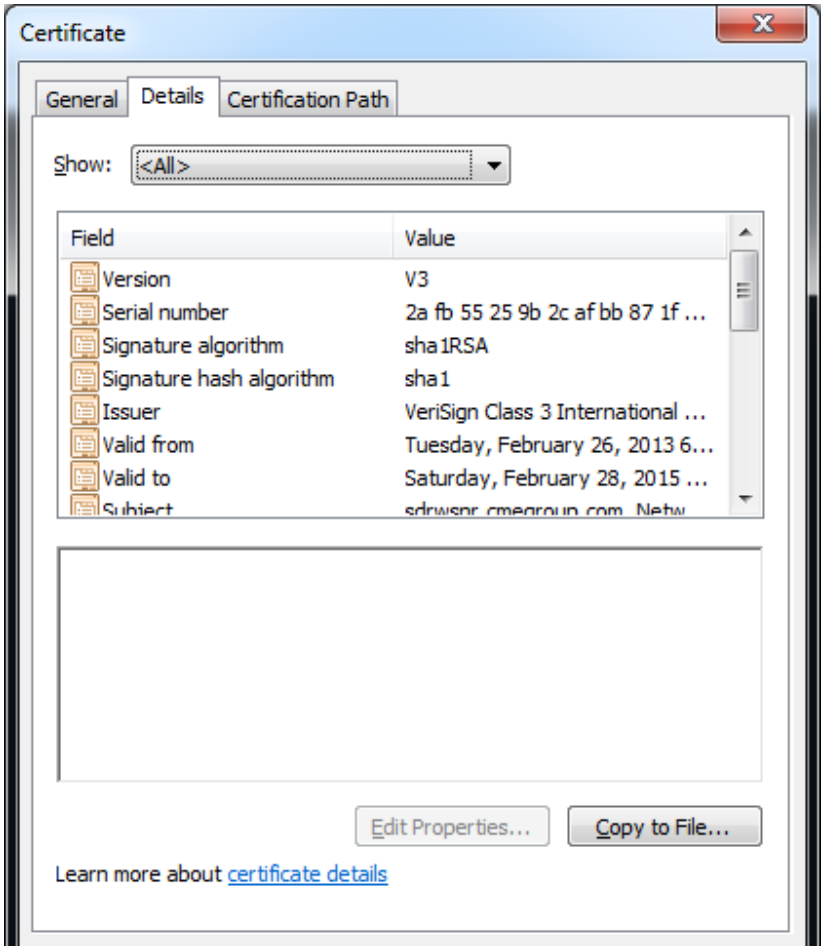
3. Open Certificate Path Tab and select VeriSign as shown in image below.



4. Select Details tab and click “Copy to File” and Click Next

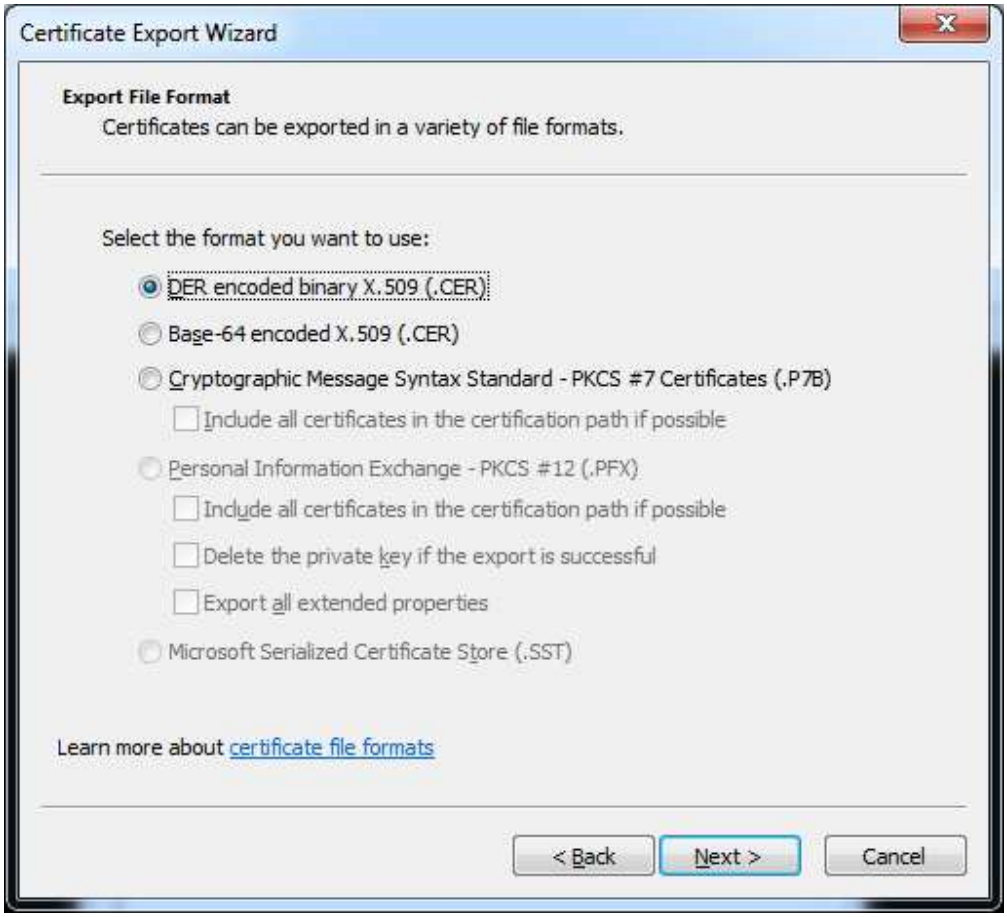


5. Select first format option of “DER encoded binary X.509 (.CER) on “Certificate Export Wizard” dialog and click Next as shown in below scren shot



6. Specify file name and local path to store the certificate on your local machine (e.g C:/etrwsnr.cer)

7. Click Next and Finish. It will save the certificate locally on your machine in C:/etrwsnr.cer file which we will import to your local java keystore.



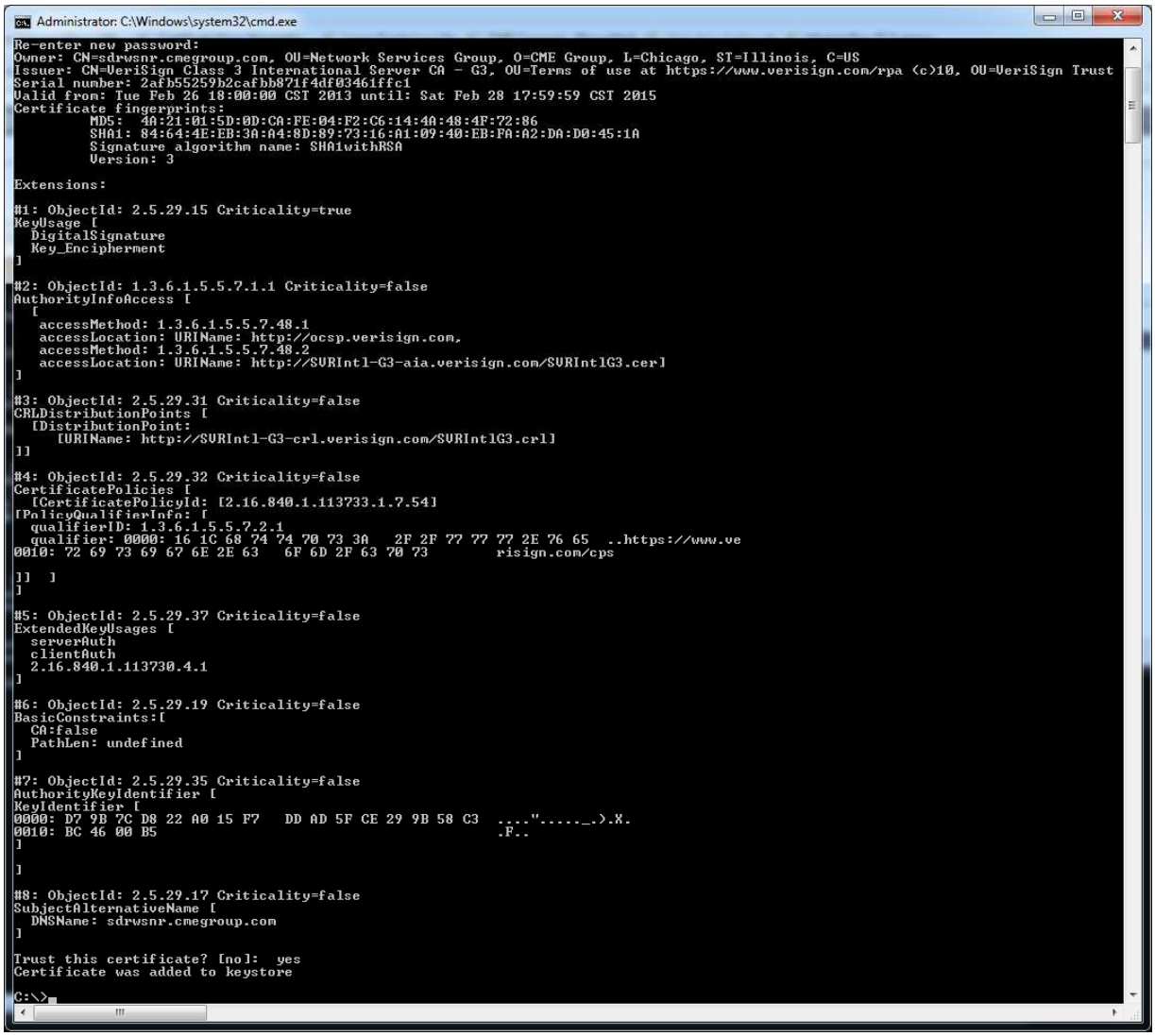
8. Open DOS command window

9. Type following command at DOS prompt to create and import the certificate in local keystore.

   keytool -import -trustcacerts -alias root -file c:/etrwsnr.cer -keystore c:/etrwsnr.jks
   Hit Enter Key

10. It will prompt you for password for your keystore. Enter any password which you will be passing later to your Web Service client along with path to the keystore you will be creating (e.g password “trwsnrclient”). Hit enter key. Retype same password and hit enter key again. You should see following screen

11. Type “yes” for Trust this certificate? [no]. Hit enter key. You should see last line as “Certificate was added to keystore” as shown in following screen shot.


Administrator: C:\Windows\system32\cmd.exe
Re-enter new password:
Owner: CN=sdrwsnr.cmegroup.com, OU=Network Services Group, O=CME Group, L=Chicago, ST=Illinois, C=US
Issuer: CN=VeriSign Class 3 International Server CA - G3, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=VeriSign Trust
Serial number: 2afb55259b2cafbb871f4df03461ffc1
Valid from: Tue Feb 26 18:00:00 CST 2013 until: Sat Feb 28 17:59:59 CST 2015
Certificate fingerprints:
MD5: 4A:21:01:5D:0D:CA:FE:04:F2:C6:14:4A:48:4F:72:86
SHA1: 84:64:4E:EB:3A:A4:8D:89:73:16:A1:09:40:EB:FA:A2:DA:D0:45:1A
Signature algorithm name: SHA1withRSA
Version: 3
Extensions:
#1: ObjectId: 2.5.29.15 Criticality=true
KeyUsage [
DigitalSignature
Key_Encipherment
]
#2: ObjectId: 1.3.6.1.5.5.7.1.1 Criticality=false
AuthorityInfoAccess [
[
accessMethod: 1.3.6.1.5.5.7.48.1
accessLocation: URIName: http://ocsp.verisign.com,
accessMethod: 1.3.6.1.5.5.7.48.2
accessLocation: URIName: http://SVRIntl-G3-aia.verisign.com/SVRIntlG3.cer]
]
#3: ObjectId: 2.5.29.31 Criticality=false
CRLDistributionPoints [
[DistributionPoint:
[URIName: http://SVRIntl-G3-crl.verisign.com/SVRIntlG3.crl]
]]
#4: ObjectId: 2.5.29.32 Criticality=false
CertificatePolicies [
[CertificatePolicyId: [2.16.840.1.113733.1.7.54]
[PolicyQualifierInfo: [
qualifierID: 1.3.6.1.5.5.7.2.1
qualifier: 0000: 16 1C 68 74 74 70 73 3A 2F 2F 77 77 77 2E 76 65 ..https://www.ve
0010: 72 69 73 69 67 6E 2E 63 6F 6D 2F 63 70 73 risign.com/cps
]]]
]
#5: ObjectId: 2.5.29.37 Criticality=false
ExtendedKeyUsages [
serverAuth
clientAuth
2.16.840.1.113730.4.1
]
#6: ObjectId: 2.5.29.19 Criticality=false
BasicConstraints:[
CA:false
PathLen: undefined
]
#7: ObjectId: 2.5.29.35 Criticality=false
AuthorityKeyIdentifier [
KeyIdentifier [
0000: D7 9B 7C D8 22 A0 15 F7 DD AD 5F CE 29 9B 58 C3 ....".....).X.
0010: BC 46 00 B5 .F..
]
]
#8: ObjectId: 2.5.29.17 Criticality=false
SubjectAlternativeName [
DNSName: sdrwsnr.cmegroup.com
]
Trust this certificate? [no]: yes
Certificate was added to keystore
C:\>

Appendix C - FIXML - SUBMITTING FIXML MESSAGE FILE

1. IRS, CDS, FX, Equities and Commodity FIXML uploads are supported via web service
2. Please see given Java Example file (DataCaptureWSClient.java) for writing web service client for submitting a FIXML message to CME TR.
3. Maven dependency needed to successfully build this client is (JDK 1.6)

```
<dependency>
	<groupId>commons-httpclient</groupId>
	<artifactId>commons-httpclient</artifactId>
	<version>3.1</version>
</dependency>
```

4. Given Example assumes that you have already imported the certificate in your local keystore successfully. (Please refer to "Import SSL Certificate" Document to import SSL certificate in your local keystore) and obtained the Authentication Token for your username and password successfully (Please refer to "Generate Authentication Token" document to generate your Authorization Token)
5. Please pass following JVM arguments to your Web Service client
   - -Djavax.net.ssl.trustStore=C:/etrwsnr.jks **(Path to your local java keystore)**
   - -Djavax.net.ssl.trustStorePassword=12345678 **(password you have entered while creating your keystore)**
   - -Djavax.net.ssl.trustStoreType=jks
   - -DurlString=https://etrwsnr.cmegroup.com/etrui-datacapture-ws/dataCaptureService/submitXML
   - -DfilePath= C:/example_fixml_message_to_report_to_cmeetr.xml
   - -DcontentType=application/xml
6. Execute the Web Service Client.

FIXML SUBMISSION RESPONSE DETAILS

1. All ACKs and Negative ACKs responses for submitted messages are returned in plain/text
2. All errors related to Authentication/Authorization and FIXML schema validations are returned in plain text. (Refer to examples below for types of error messages)
3. In case of errors after Step 5, the response contains the submitted message with following additional attributes -
   a. Reasons for rejection - TrdCaptRptAck/@RejTxt
   b. Status code - TrdCaptRptAck /@TrdAckStat="1"
4. In case of successful submission the response contains the submitted message along with an additional status attribute - TrdCaptRpt/@ TrdRptStat="105"

Following are the few examples of Error/Failure messages you could receive after submitting FIXML message.

1. Failures during Authentication/Authorization and FIXML schema validations before message processing -

    a. (Authentication/Authorization)

        i. User doesn't have valid TR Role

            "User has invalid Role to upload TR data, please contact Security Admin Support"
        ii. User Clear port account expired

            "Your Account Expired: Please contact Security Admin"
        iii. User's credentials expired (password expired)

            "Your Credential Expired: Please contact Security Admin"
        iv. User's account is locked.

            "Your Account is locked: Please contact Security Admin"
        v. User entered invalid credentials

            "Incorrect username or password : Please contact Security Admin "
        vi. Unauthorized Reporting party LEI provided in RptSide

            “You are not registered to Upload message number: 1 for Reporting Party: LEI00000PARTYA”

    b. FIXML Validation

        i. Malformed XML

            "Malformed XML document, please correct the message"
        ii. More than two <RptSide/> elements in single TrdCaptRpt parent element

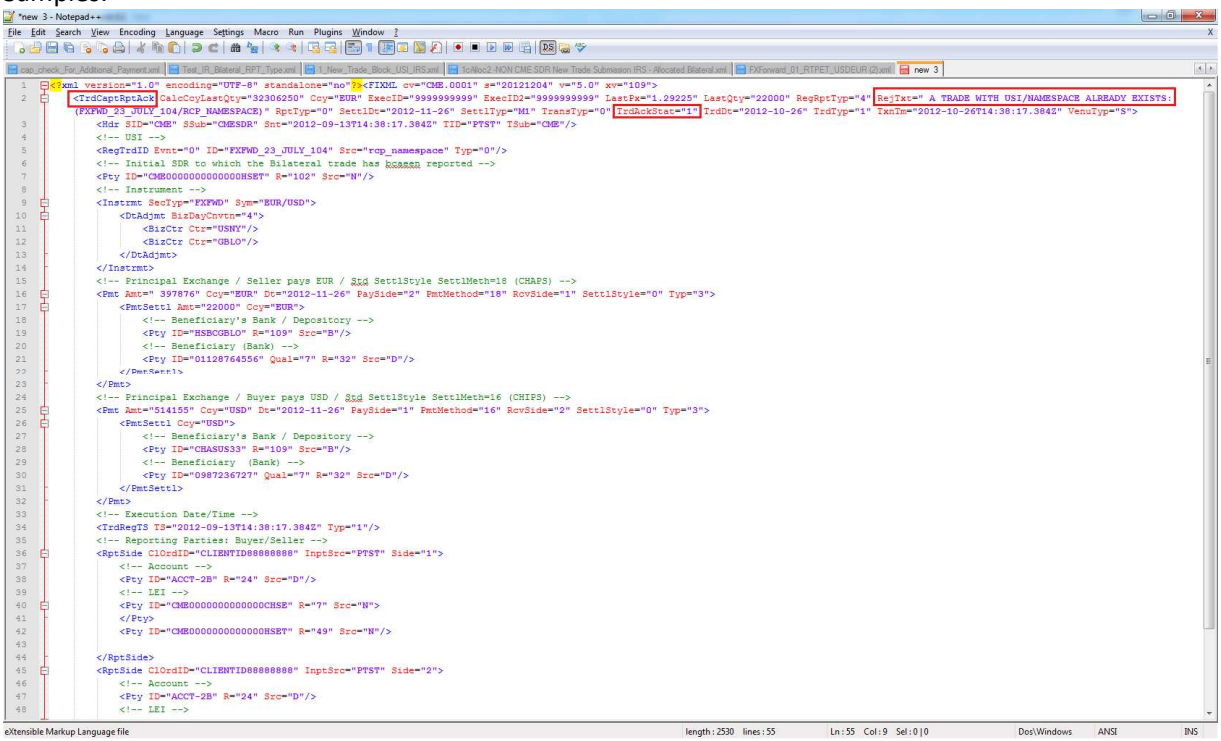
            “Please provide 2 RptSide elements in message number:1”
        iii. More than one <RptSide Side=1 elements in single TrdCaptRpt Parent.

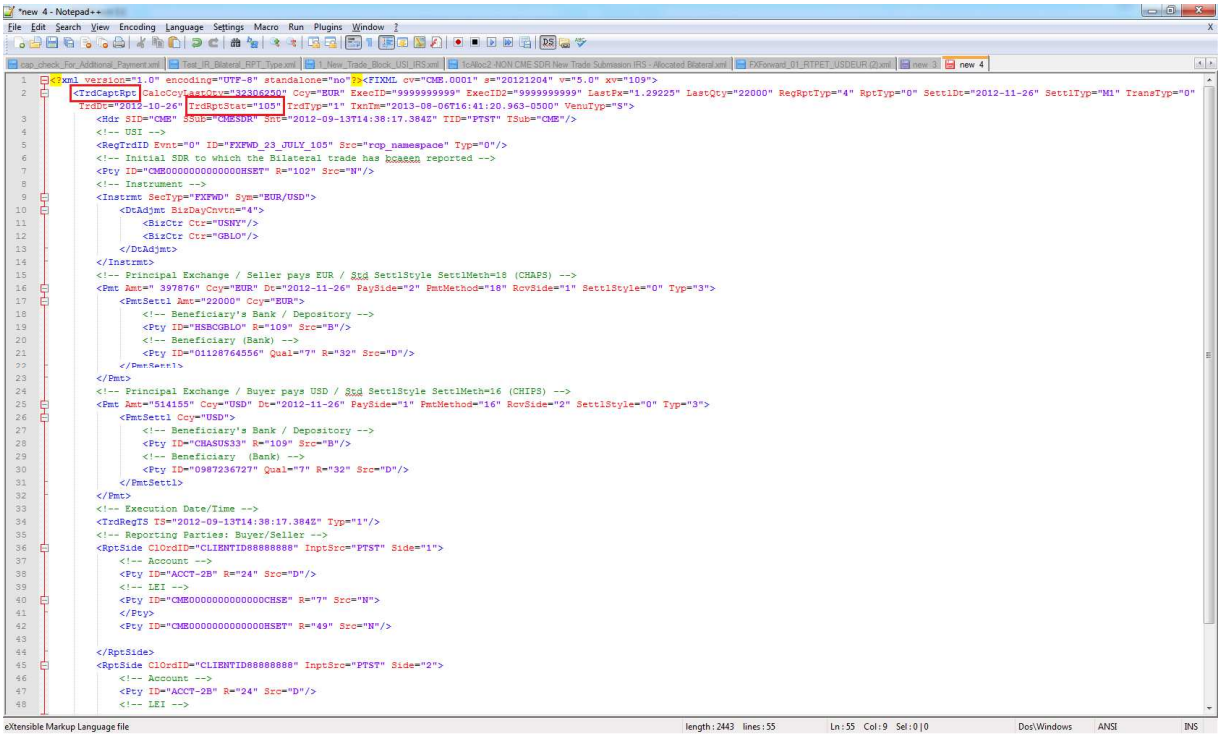
            “Please provide only one <RptSide Side=1 element in message number: 1”
        iv. More than one <RptSide Side=2 elements in single TrdCaptRpt Parent.

            “Please provide only one <RptSide Side=2 element in message number: 1”
        v. Missing <Pty R="7" ID="LEI00000PARTYA" Src="N"/> tag in RptSide

            “Please provide Reporting Party LEI in message number: 1”

Samples:


*new 3 - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
<?xml version="1.0" encoding="UTF-8" standalone="no"?><FIXML v="CME.0001" s="20121204" v="5.0" xv="109">
<TrdCaptRptAck CalcCcyLastQty="32306250" Ccy="EUR" ExecID="9999999999" ExecID2="9999999999" LastPx="1.29225" LastQty="22000" RegRptTyp="4" RejTxt=" A TRADE WITH USI/NAMESPACE ALRREADY EXISTS:
(FXFWD_23_JULY_104/RCP_NAMESPACE)" RptTyp="0" SettlDt="2012-11-26" SettlTyp="M1" TransTyp="0" TrdAckStat="1" TrdDt="2012-10-26" TrdTyp="1" TxnTm="2012-10-26T14:38:17.384Z" VenuTyp="S">
<Hdr SID="CME" SSub="CMESDR" Snt="2012-09-13T14:38:17.384Z" TID="PTST" TSub="CME"/>
<!-- USI -->
<RegTrdID Evnt="0" ID="FXFWD_23_JULY_104" Src="rcp_namespace" Typ="0"/>
<!-- Initial SDR to which the Bilateral trade has bceeen reported -->
<Pty ID="CME0000000000000HSET" R="102" Src="N"/>
<!-- Instrument -->
<Instrmt SecTyp="FXFWD" Sym="EUR/USD">
<DtAdjmt BizDayCnvtn="4">
<BizCtr Ctr="USNY"/>
<BizCtr Ctr="GBLO"/>
</DtAdjmt>
</Instrmt>
<!-- Principal Exchange / Seller pays EUR / Std SettlStyle SettlMeth=18 (CHAPS) -->
<Pmt Amt=" 397876" Ccy="EUR" Dt="2012-11-26" PaySide="2" PmtMethod="18" RcvSide="1" SettlStyle="0" Typ="3">
<PmtSettl Amt="22000" Ccy="EUR">
<!-- Beneficiary's Bank / Depository -->
<Pty ID="HSBCGBLO" R="109" Src="B"/>
<!-- Beneficiary (Bank) -->
<Pty ID="01128764556" Qual="7" R="32" Src="D"/>
</PmtSettl>
</Pmt>
<!-- Principal Exchange / Buyer pays USD / Std SettlStyle SettlMeth=16 (CHIPS) -->
<Pmt Amt="514155" Ccy="USD" Dt="2012-11-26" PaySide="1" PmtMethod="16" RcvSide="2" SettlStyle="0" Typ="3">
<PmtSettl Ccy="USD">
<!-- Beneficiary's Bank / Depository -->
<Pty ID="CHASUS33" R="109" Src="B"/>
<!-- Beneficiary (Bank) -->
<Pty ID="0987236727" Qual="7" R="32" Src="D"/>
</PmtSettl>
</Pmt>
<!-- Execution Date/Time -->
<TrdRegTS TS="2012-09-13T14:38:17.384Z" Typ="1"/>
<!-- Reporting Parties: Buyer/Seller -->
<RptSide ClOrdID="CLIENTID88888888" InptSrc="PTST" Side="1">
<!-- Account -->
<Pty ID="ACCT-2B" R="24" Src="D"/>
<!-- LEI -->
<Pty ID="CME0000000000000CHSE" R="7" Src="N">
</Pty>
<Pty ID="CME0000000000000HSET" R="49" Src="N"/>
</RptSide>
<RptSide ClOrdID="CLIENTID88888888" InptSrc="PTST" Side="2">
<!-- Account -->
<Pty ID="ACCT-2B" R="24" Src="D"/>
<!-- LEI -->
eXtensible Markup Language file
length : 2530 lines : 55
Ln : 55 Col : 9 Sel : 0 | 0
Dos\Windows
ANSI
INS


*new 4 - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
<?xml version="1.0" encoding="UTF-8" standalone="no"?><FIXML v="CME.0001" s="20121204" v="5.0" xv="109">
<TrdCaptRpt CalcCcyLastQty="32306250" Ccy="EUR" ExecID="9999999999" ExecID2="9999999999" LastPx="1.29225" LastQty="22000" RegRptTyp="4" RptTyp="0" SettlDt="2012-11-26" SettlTyp="M1" TransTyp="0"
TrdDt="2012-10-26" TrdRptStat="105" TrdTyp="1" TxnTm="2013-08-06T16:41:20.963-0500" VenuTyp="S">
<Hdr SID="CME" SSub="CMESDR" Snt="2012-09-13T14:38:17.384Z" TID="PTST" TSub="CME"/>
<!-- USI -->
<RegTrdID Evnt="0" ID="FXFWD_23_JULY_105" Src="rcp_namespace" Typ="0"/>
<!-- Initial SDR to which the Bilateral trade has bceeen reported -->
<Pty ID="CME0000000000000HSET" R="102" Src="N"/>
<!-- Instrument -->
<Instrmt SecTyp="FXFWD" Sym="EUR/USD">
<DtAdjmt BizDayCnvtn="4">
<BizCtr Ctr="USNY"/>
<BizCtr Ctr="GBLO"/>
</DtAdjmt>
</Instrmt>
<!-- Principal Exchange / Seller pays EUR / Std SettlStyle SettlMeth=18 (CHAPS) -->
<Pmt Amt=" 397876" Ccy="EUR" Dt="2012-11-26" PaySide="2" PmtMethod="18" RcvSide="1" SettlStyle="0" Typ="3">
<PmtSettl Amt="22000" Ccy="EUR">
<!-- Beneficiary's Bank / Depository -->
<Pty ID="HSBCGBLO" R="109" Src="B"/>
<!-- Beneficiary (Bank) -->
<Pty ID="01128764556" Qual="7" R="32" Src="D"/>
</PmtSettl>
</Pmt>
<!-- Principal Exchange / Buyer pays USD / Std SettlStyle SettlMeth=16 (CHIPS) -->
<Pmt Amt="514155" Ccy="USD" Dt="2012-11-26" PaySide="1" PmtMethod="16" RcvSide="2" SettlStyle="0" Typ="3">
<PmtSettl Ccy="USD">
<!-- Beneficiary's Bank / Depository -->
<Pty ID="CHASUS33" R="109" Src="B"/>
<!-- Beneficiary (Bank) -->
<Pty ID="0987236727" Qual="7" R="32" Src="D"/>
</PmtSettl>
</Pmt>
<!-- Execution Date/Time -->
<TrdRegTS TS="2012-09-13T14:38:17.384Z" Typ="1"/>
<!-- Reporting Parties: Buyer/Seller -->
<RptSide ClOrdID="CLIENTID88888888" InptSrc="PTST" Side="1">
<!-- Account -->
<Pty ID="ACCT-2B" R="24" Src="D"/>
<!-- LEI -->
<Pty ID="CME0000000000000CHSE" R="7" Src="N">
</Pty>
<Pty ID="CME0000000000000HSET" R="49" Src="N"/>
</RptSide>
<RptSide ClOrdID="CLIENTID88888888" InptSrc="PTST" Side="2">
<!-- Account -->
<Pty ID="ACCT-2B" R="24" Src="D"/>
<!-- LEI -->
eXtensible Markup Language file
length : 2443 lines : 55
Ln : 55 Col : 9 Sel : 0 | 0
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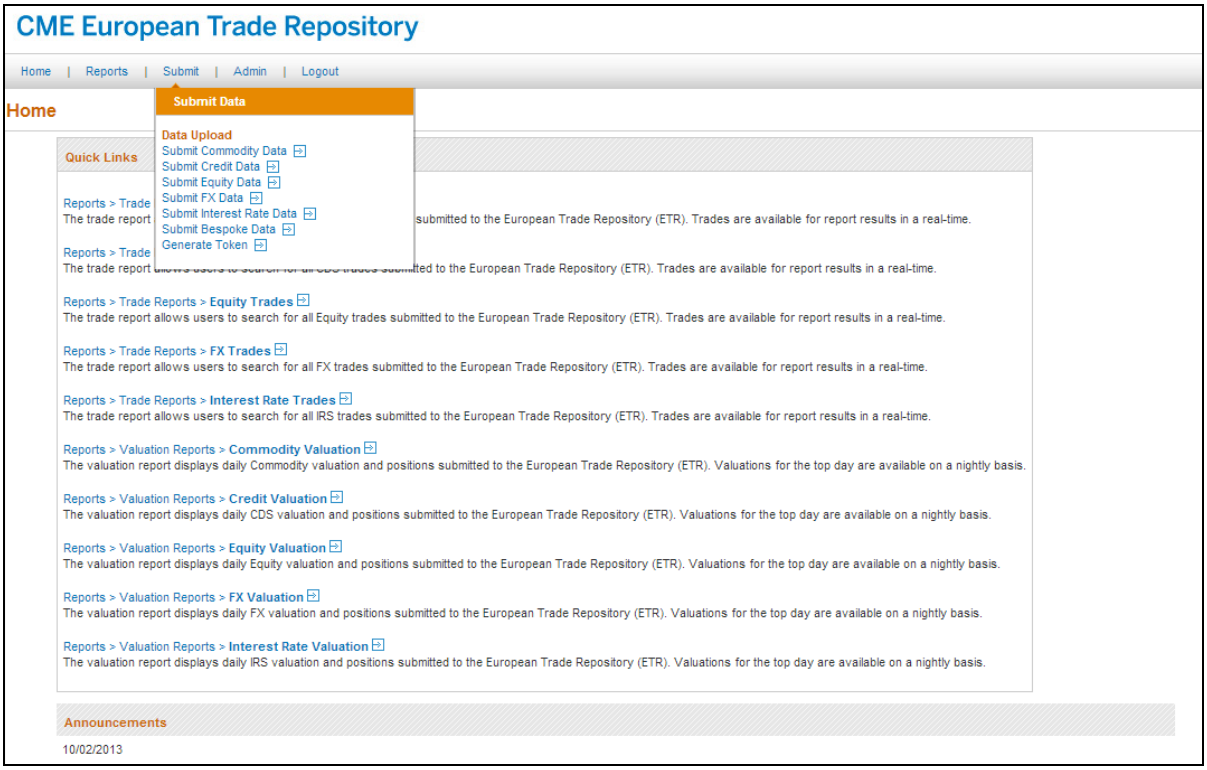
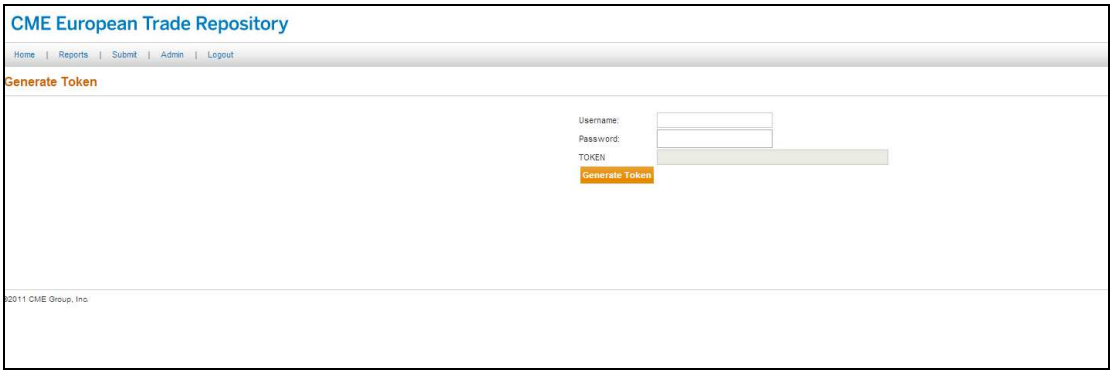
Appendix D - CSV - GENERATE AUTHENTICATION TOKEN

1. Login to https://etruinr.cmegroup.com with your username and password

2. Go to Generate Token page under Submit menu as shown in screen shot below



3. Enter your username and password and click “Generate Token”. It should give you your authentication code for using web service in Token text field. You will have to use valid username and password which is authorized by CME Repository Support Group during Registration. (Make sure you have already changed the temporary password provided during registration. You can use https://etruinr.cmegroup.com to change your temporary password. It will prompt you to change the password when you login first time)

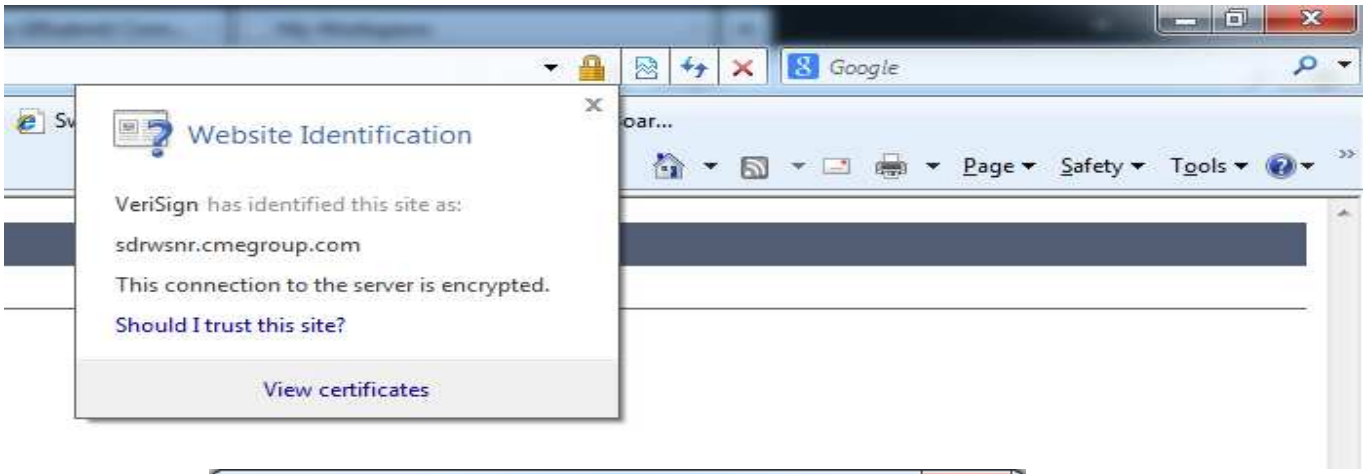


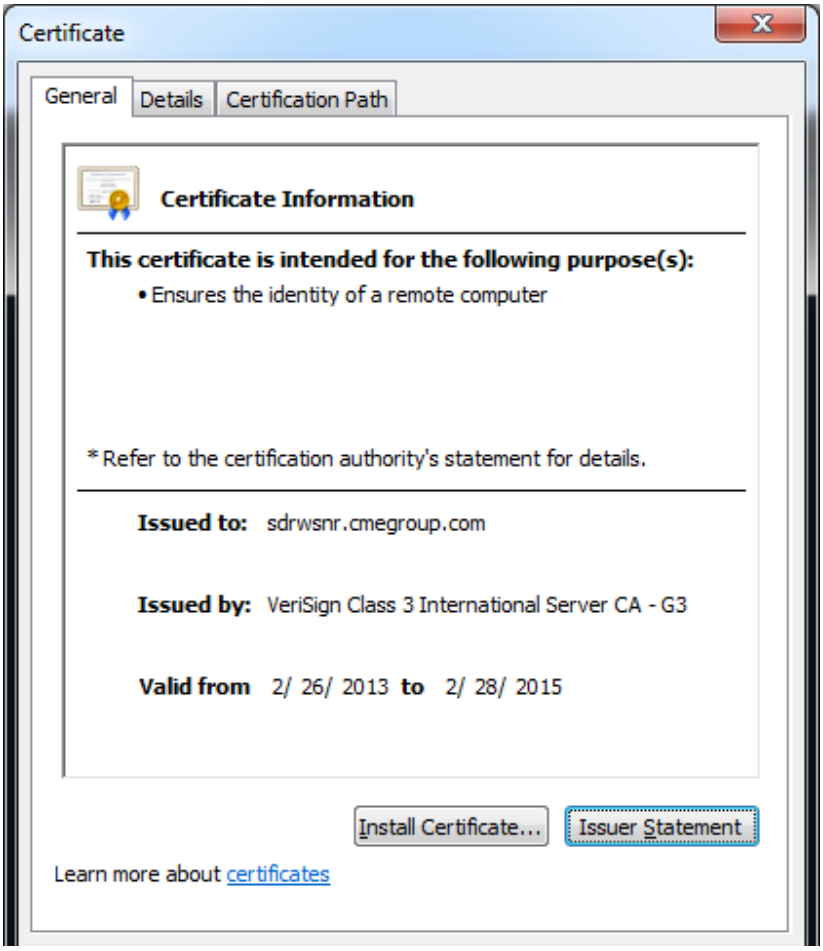
4. You are ready to use this token for your web service client code to submit FIXML or CSV messages to CME TR. This token will be used as a value for http header name “Authorization” (Please refer to DataCaptureWSClient.java code)

Appendix E - CSV - IMPORTING CERTIFICATE IN LOCAL JAVA KEYSTORE

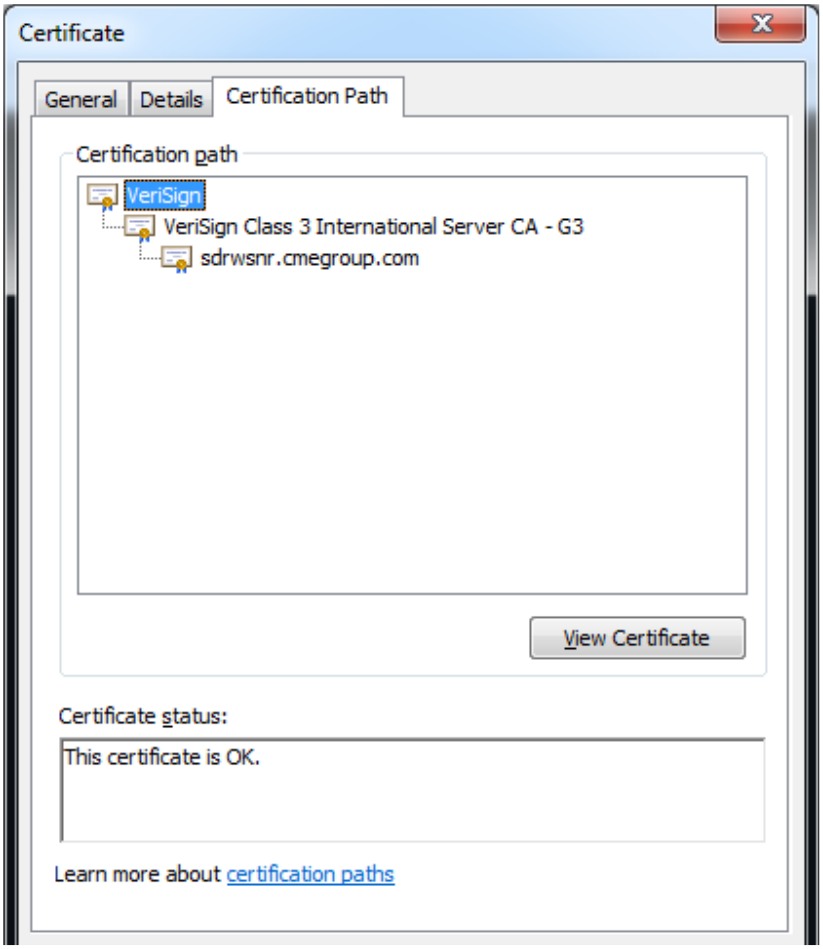
1. Open https://etrwsnr.cmegroup.com/etrui-datacapture-ws/dataCaptureService/submitXML URL in IE.

2. Click on Lock image and click on View Certificate. You will see following dialog box

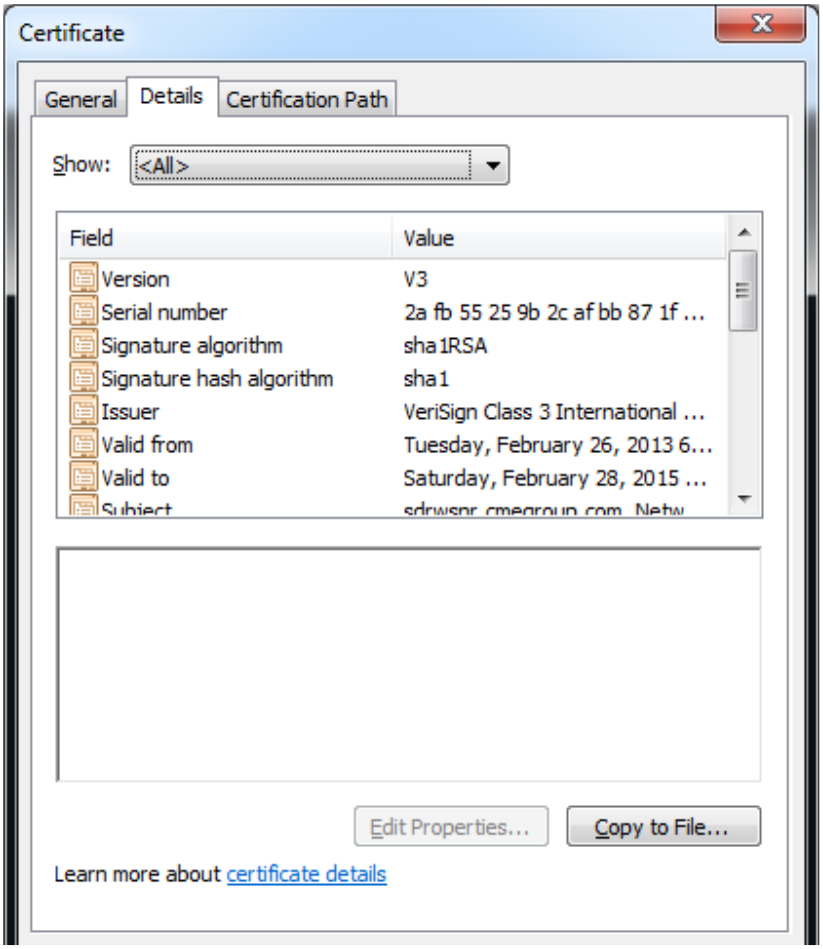




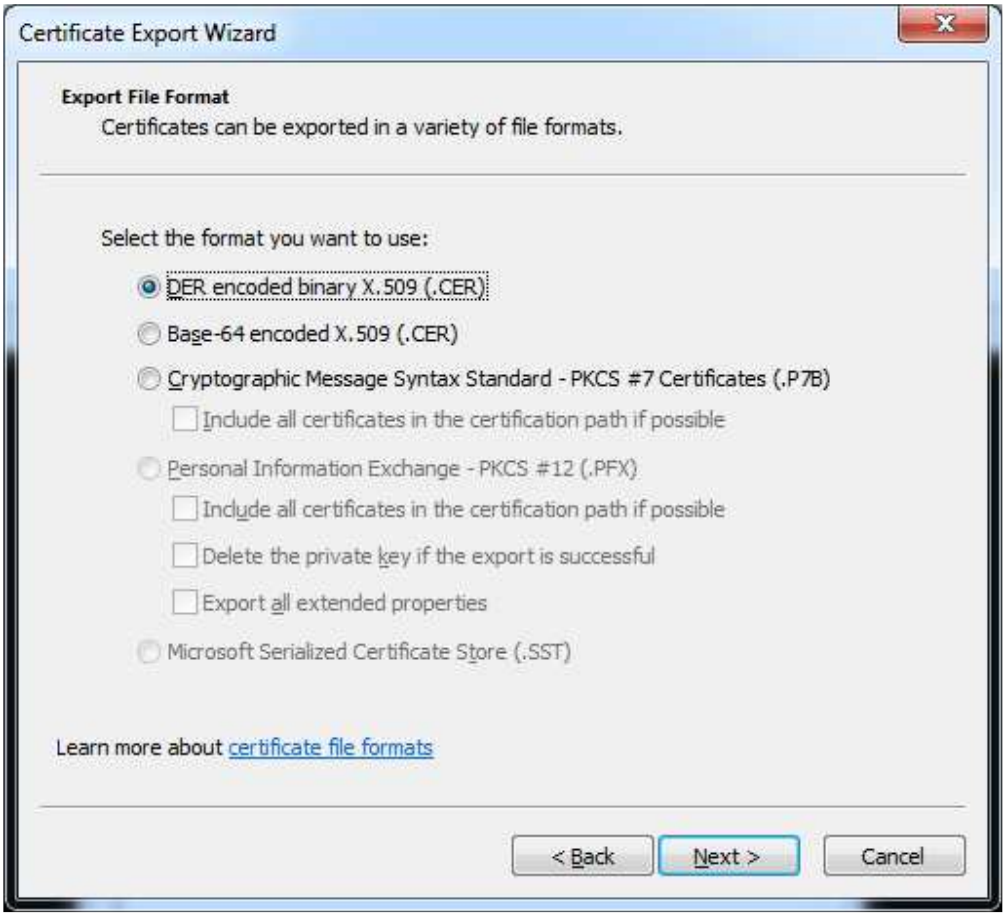
3. Open Certificate Path Tab and select VeriSign as shown in image below



4. Select Details tab and click “Copy to File” and Click Next



5. Select first format option of “DER encoded binary X.509 (.CER) on “Certificate Export Wizard” dialog and click Next as shown in below scren shot



6. Specify file name and local path to store the certificate on your local machine (e.g C:/etrwsnr.cer)

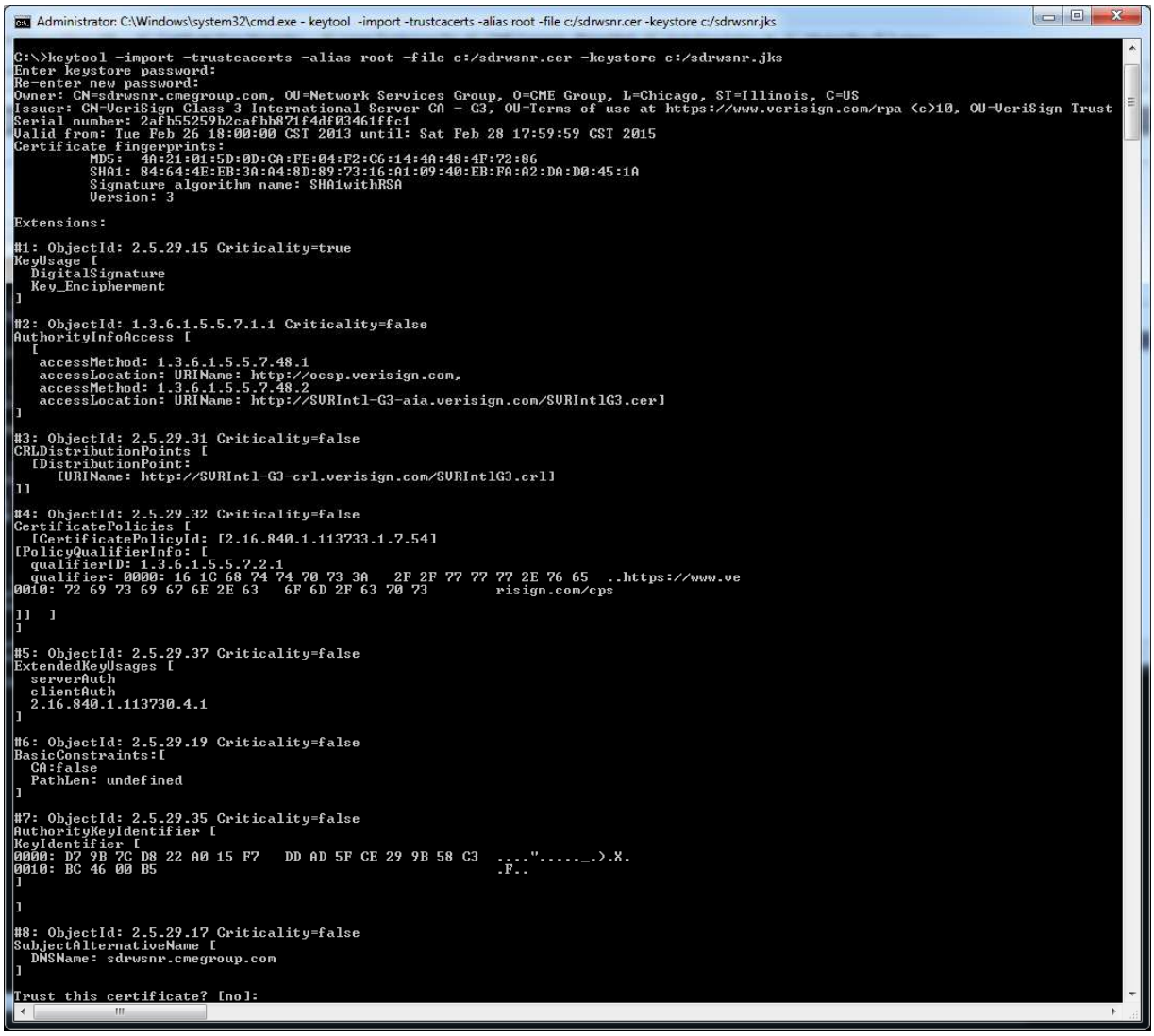
7. Click Next and Finish. It will save the certificate locally on your machine in C:/etrwsnr.cer file which we will import to your local java keystore.

8. Open DOS command window

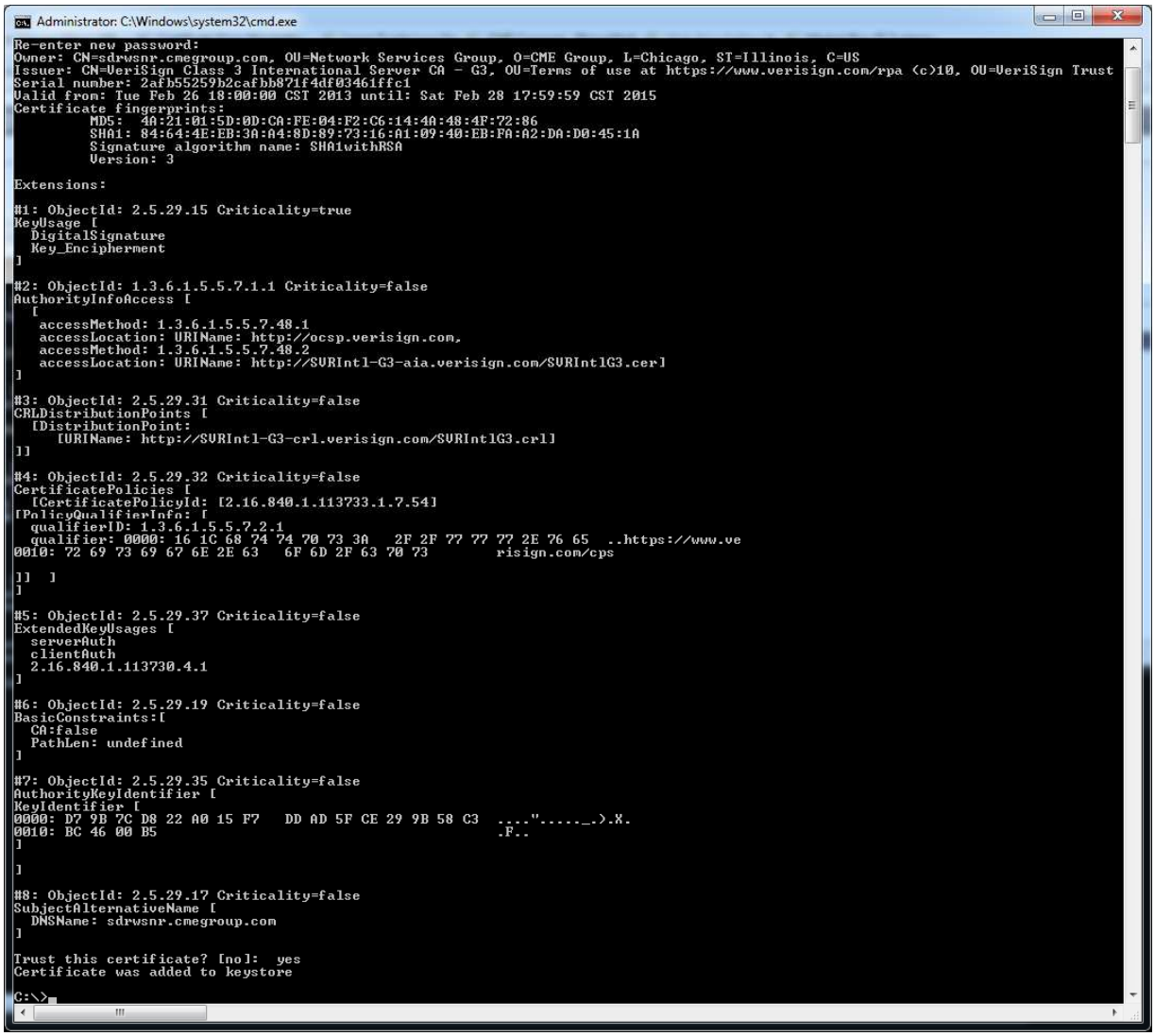
9. Type following command at DOS prompt to create and import the certificate in local keystore.

   keytool -import -trustcacerts -alias root -file c:/etrwsnr.cer -keystore c:/etrwsnr.jks
   Hit Enter Key

10. It will prompt you for password for your keystore. Enter any password which you will be passing later to your Web Service client along with path to the keystore you will be creating (e.g password “trwsnrclient”). Hit enter key. Retype same password and hit enter key again. You should see following screen



11. Type “yes” for Trust this certificate? [no]. Hit enter key. You should see last line as “Certificate was added to keystore” as shown in following screen shot.


Administrator: C:\Windows\system32\cmd.exe
Re-enter new password:
Owner: CN=sdrwsnr.cmegroup.com, OU=Network Services Group, O=CME Group, L=Chicago, ST=Illinois, C=US
Issuer: CN=VeriSign Class 3 International Server CA - G3, OU=Terms of use at https://www.verisign.com/rpa (c)10, OU=VeriSign Trust
Serial number: 2afb55259b2cafbb871f4df03461ffc1
Valid from: Tue Feb 26 18:00:00 CST 2013 until: Sat Feb 28 17:59:59 CST 2015
Certificate fingerprints:
MD5: 4A:21:01:5D:0D:CA:FE:04:F2:C6:14:4A:48:4F:72:86
SHA1: 84:64:4E:EB:3A:A4:8D:89:73:16:A1:09:40:EB:FA:A2:DA:D0:45:1A
Signature algorithm name: SHA1withRSA
Version: 3
Extensions:
#1: ObjectId: 2.5.29.15 Criticality=true
KeyUsage [
DigitalSignature
Key_Encipherment
]
#2: ObjectId: 1.3.6.1.5.5.7.1.1 Criticality=false
AuthorityInfoAccess [
[
accessMethod: 1.3.6.1.5.5.7.48.1
accessLocation: URIName: http://ocsp.verisign.com,
accessMethod: 1.3.6.1.5.5.7.48.2
accessLocation: URIName: http://SVRIntl-G3-aia.verisign.com/SVRIntlG3.cer]
]
#3: ObjectId: 2.5.29.31 Criticality=false
CRLDistributionPoints [
[DistributionPoint:
[URIName: http://SVRIntl-G3-crl.verisign.com/SVRIntlG3.crl]
]]
#4: ObjectId: 2.5.29.32 Criticality=false
CertificatePolicies [
[CertificatePolicyId: [2.16.840.1.113733.1.7.54]
[PolicyQualifierInfo: [
qualifierID: 1.3.6.1.5.5.7.2.1
qualifier: 0000: 16 1C 68 74 74 70 73 3A 2F 2F 77 77 77 2E 76 65 ..https://www.ve
0010: 72 69 73 69 67 6E 2E 63 6F 6D 2F 63 70 73 risign.com/cps
]]]
]
#5: ObjectId: 2.5.29.37 Criticality=false
ExtendedKeyUsages [
serverAuth
clientAuth
2.16.840.1.113730.4.1
]
#6: ObjectId: 2.5.29.19 Criticality=false
BasicConstraints:[
CA:false
PathLen: undefined
]
#7: ObjectId: 2.5.29.35 Criticality=false
AuthorityKeyIdentifier [
KeyIdentifier [
0000: D7 9B 7C D8 22 A0 15 F7 DD AD 5F CE 29 9B 58 C3 ....".....).X.
0010: BC 46 00 B5 .F..
]
]
#8: ObjectId: 2.5.29.17 Criticality=false
SubjectAlternativeName [
DNSName: sdrwsnr.cmegroup.com
]
Trust this certificate? [no]: yes
Certificate was added to keystore
C:\>

Appendix F - CSV - SUBMITTING CSV MESSAGE FILE

1. All five asset classes (FX, IR, Credit, Equities and Commodities) is supported via CSV upload

2. Please see given Java Example file (DataCaptureWSClient.java) for writing web service client for submitting a CSV message to CME TR.

3. Maven dependency needed to successfully build this client is (JDK 1.6)

```
<dependency>
        <groupId>commons-httpclient</groupId>
        <artifactId>commons-httpclient</artifactId>
        <version>3.1</version>
</dependency>
```

4. Given Example assumes that you have already imported the certificate in your local keystore successfully. (Please refer to "Import SSL Certificate" Document to import SSL certificate in your local keystore) and obtained the Authentication Token for your username and password successfully (Please refer to "Generate Authentication Token" document to generate your Authorization Token)

5. Please pass following JVM arguments to your Web Service client. Valid values for –DassetClass argument are [cds (For CDS), cmdty (For Commodity), irs (for IRS), eq (for equities) and fx(for FX)]

    - -Djavax.net.ssl.trustStore=C:/etrwsnr.jks **(Path to your local java keystore)**
    - -Djavax.net.ssl.trustStorePassword=12345678 **(password you have entered while creating your keystore)**
    - -Djavax.net.ssl.trustStoreType=jks
    - -DurlString=https://etrwsnr.cmegroup.com/etrui-datacapture-ws/dataCaptureService/submitCSV
    - -DfilePath= C:/example_csv_message_to_report_to_cmeetr.csv
    - -DcontentType=text/csv
    - -DassetClass=cds

6. Execute the Web Service Client.

CSV SUBMISSION RESPONSE DETAILS

1. All ACKs and Negative ACKS for submitted messages are in plain/text

2. All errors related to Authentication/Authorization are returned in plain text. (Refer to examples below for types of error messages)

3. In case of successful CSV submission you should see text "Success"

Following are the few examples of Error/Failure messages you could receive in relation to Authentication/Authorization after submitting CSV message.

Failures during Authentication/Authorization before message processing -

- User doesn't have valid TR Role
  "User has invalid Role to upload TR data, please contact Security Admin Support"
- User Clear port account expired
  "Your Account Expired: Please contact Security Admin"
- User's credentials expired (password expired)
  "Your Credential Expired: Please contact Security Admin"
- User's account is locked.
  "Your Account is locked: Please contact Security Admin"
- User entered invalid credentials
  "Incorrect username or password : Please contact Security Admin "
- Unauthorized Reporting party LEI provided in RptSide
  “You are not registered to Upload message number: 1 for Reporting Party: LEI00000PARTYA”