

# Schedule 4 Testing Requirements

## Testing Requirements with Liability Implications

This Schedule aims to reduce the risk of incidents leading to erroneous operation of the Equias Software and potential claims for liability by the Licensed User against Equias. The method of risk reduction is through an obligation on behalf of the Licensed User to conduct appropriate testing of the Equias Software once it is installed and prior to live operation in the production environment.

### 1. Definitions

False Non-Match means the erroneous indication to the involved User(s) that two of their respective trade confirmations do not match while the actual trade data items do match. Should an error in the Equias Software lead to a non-match, where a match should be found according to the relevant rules of the applicable version of the EFET eCM standard, the relevant Back Office staff of the involved organisations will have to contact each other to find the mistake in the process and or in the data fields, and reconcile it. Apart from the reconciliation, the Helpdesk should be informed of such erroneous software behaviour by the involved Users according to the Defect reporting procedures in clause 8 of the GTCs.

False Positive Match means the erroneous indication to the involved User(s) that two of their respective trade confirmations do match while the actual trade data items do not match found according to the relevant rules of the applicable version of the EFET eCM standard. A False Positive Match can thus be detected if the respective XML documents are directly compared to each other and if these differ according to the matching rules defined in the EFET standard version they refer to.

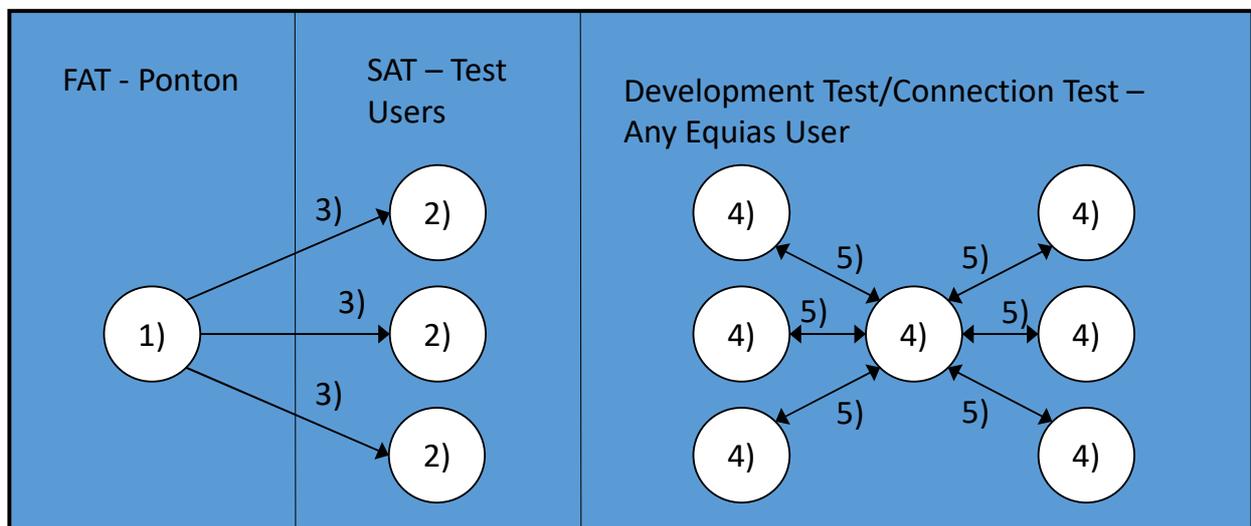
### 2. Overview of Test Procedures

First the overall test categories and procedures are described for the Equias Software. Next, the lifecycle of an Licensed User is described following the different steps of Testing. Finally, a detailed test plan is given in connection with a template project plan.

#### 2.1 Required Testing Procedures for the EFET Box+

For each upgrade / update of the Equias Software, diligent testing is required. This is done in 5 steps:

- 1) Factory Acceptance Test
- 2) Site Acceptance Test at selected Test Users (Pilot Users)
- 3) Parallel Test at selected Test Users (Pilot Users)
- 4) Deployment Test at each user
- 5) Connection Test at each user



## **2.2 Required SAT Testing procedure for the Matching Engine**

This test is performed if the FAT was accomplished successfully. Equias determines a group of Test Users who will perform a Site Acceptance Test (SAT) on behalf of all Equias Users. The Test Users take care to represent all communication role (traders, brokers) that will also be involved in the operational use of the software.

The procedure as described for the FAT will be performed by the Test Users of a new software release with test data created by the Test Users.

Should the SAT show any issues, software functions will be corrected and the testing process starts over again with the FAT. A SAT completion report has to be sent to Ponton after the test has been successfully concluded.

## **2.3 Parallel Test at Test Users**

This test is performed if the SAT was accomplished successfully.

The Test Users will run a new version that has an updated Matching Engine for 8 weeks in parallel mode (to a classical fax process or to the existing productive Equias Software)

Should the Parallel Test show any issues with production data, software functions will be corrected and the testing process starts over again with the FAT.

Only if the parallel test of the Test Users is successfully concluded and a completion report was sent to the Helpdesk will Equias assume any liability in case of matching errors during later phase of use.

Having performed a successful parallel test ensures that the Equias Software is free of matching errors at the algorithmic level. However, the local deployment of the software may still cause unexpected behaviour if not performed in the required way. For this reason, the deployment test and the connection test have to be performed.

## **2.4 Deployment Test**

This test is performed by each Licensed User as soon as an Licensed User has fully installed and configured a new release of the Equias Software. The purpose of the test is to

- Run a number of test documents with and without matches
- Test the interfaces between the EFET Box and other components (Database, ETRM system, file system etc.)
- Perform a stress test between the new installation and a test site (e.g. at Equias User Acceptance Testing (UAT) environment).

As a result of the Deployment Test, a production environment is available at the site of the Licensed User.

It is expected that after the Deployment test was successfully performed, the Equias Software environment will be backed-up in a regular way such that the production system can be restored with minimal delays.

## **2.5 Connection Test**

For each Equias User, several connections exist to the respective counterparties. For each connection, both sides have to ensure

- That the communication link works properly
- That their Equias Software support the same standard release

To test this, the two sides should

1. Run a set of test documents, preferably based on historic trades between these two
2. Run the connection in parallel to the previous system for at least one month.

In case that an existing Equias Software will be replaced by a newer one, the productive trade confirmations have to be fed into both systems – the currently productive one and the to-be-used new release.

### **3. Liability Conditions**

#### **3.1 Liability limited to False Positive Matches only**

Only damages incurred through False Positive Matches are covered by the liability. For the avoidance of doubt, in the case of a False Non-Match no liability applies, only regular error-removal processes.

#### **3.2 Liability limited to Traders and Brokers**

The liability is limited to damages incurred by two Counterparty roles, namely Traders and/or Broker as defined in the business process specification of the EFET eCM Standard as published at [www.efet.org](http://www.efet.org).

#### **3.3 Matching with Software Implementations of 3<sup>rd</sup> Party Vendors**

In the case of a Licensed User of the Equias Software performing eCM matching processes with a Counterparty using a 3<sup>rd</sup> Party Software, liability only applies if

- a)
- b) the damages have been incurred by the Licensed User of the Equias Software. For the avoidance of doubt, no liability whatsoever shall apply for damages incurred by the Counterparty using a 3<sup>rd</sup> Party Software.

#### **3.6 Secure Installation Environment**

Damage coverage applies only if access to the Equias Software installation directories is restricted to authorised persons. Specifically the installation of program files (Java .jar files) must be allowed only for trained and authorised IT administrators.

#### **3.7 Notification of Critical Errors**

Liability coverage applies only if access due notice is taken of critical error warnings by the Helpdesk and appropriate actions are taken, as specified in the GTCs.

#### **3.8 Faithful Adherence to EFET Standard**

Liability coverage applies only if damages are resulting from a wrong implementation of the EFET eCM Standard as published at [www.efet.org](http://www.efet.org). For the avoidance of doubt, should the EFET eCM standard contain contradictions, open issues, or ambiguous statements, which after faithful implementation lead to errors or damages, such damages are excluded from liability.

#### **3.10 Equias Software only after SAT and FAT**

Liability coverage applies only if damages are resulting from using a version / release / build of the Equias Software which has undergone a successful FAT and SAT tests as defined herein.

### **3.11 Parallel Testing at User**

Liability coverage applies only if the Licensed User has performed parallel testing at the User Site in case of a new installation, Update or Upgrade of the Equias Software for a prudent period of time.

### **3.12 Status of User Site**

Liability coverage applies only if the User Site is in production, i.e. has production flags set in their messages, and has accordingly informed their counter parties and is running a Licensed User Site in good standing with Equias.