

JOINT EUROCLEAR-SWIFT TROUBLE SHOOTING GUIDE

Date of Issue

25 Mar. 09



TABLE OF CONTENTS

1.	INTRODUCTION.....	3
1.1	SCOPE.....	3
1.2	BACKGROUND.....	3
1.3	SUPPORT.....	3
1.4	INTENDED AUDIENCE.....	4
1.5	REFERENCES.....	4
1.6	CHANGE HISTORY.....	4
1.7	ABBREVIATIONS.....	4
2.	TROUBLE SHOOTING GUIDE.....	5
2.1	INTRODUCTION.....	5
2.2	SCREENFLOW INSTALLATION.....	5
2.3	HTTP/HTTPS.....	5
2.4	HOSTNAME AND PORT SETTINGS.....	6
2.5	CCI MESSAGE ENCRYPTION (KEYSTORE).....	7
2.6	SWIFT SSL.....	7
2.7	SWIFT LAU.....	8
2.8	SWIFT DATA SETUP.....	9
2.9	JAVA VERSION.....	13
2.10	JAVA CRYPTOLOGY.....	13
2.11	CONNECTIVITY TESTING.....	14

1. INTRODUCTION

1.1 Scope

This document lists the key causes of error that may occur during each stage of the installation and testing of the ScreenFlow application over SWIFT Secure Messaging Services. Each error listed will include its cause and a guide to its identification in the error logs.

This guide is a useful tool for trouble shooting when Euroclear clients are installing the ScreenFlow application using SWIFT Secure Messaging Services.

1.2 Background

To install and test the ScreenFlow application and connect to Euroclear via SWIFT Secure Messaging Services there are a set number of steps that must be followed, as documented in the ScreenFlow installation guide and CCI over SWIFTnet Implementation guide. At each step there is a potential for errors to occur, which need to be identified, and then corrected.

Testing conducted by Euroclear and SWIFT has isolated key potential error for each step in the installation and connectivity process. These errors are listed in this document along with the necessary diagnostic evidence. Clients should use this guide as a reference to aid in the identification of problems that might occur during the installation of ScreenFlow and the subsequent connectivity testing.

The illustration below highlights the areas of responsibility in the installation process, and the trouble shooting guide reflects this as a further aid to problem resolution. For example if a problem occurs in the 'Client/Euroclear' section then this is highlighted in the guide. The error log will be from the ScreenFlow system, documentation will be Euroclear's and if support is required then it will be provided by Euroclear. In the 'Client/SWIFT' section, the error logs are from SWIFT systems, documentation will be SWIFT's and further support will be provided by SWIFT.

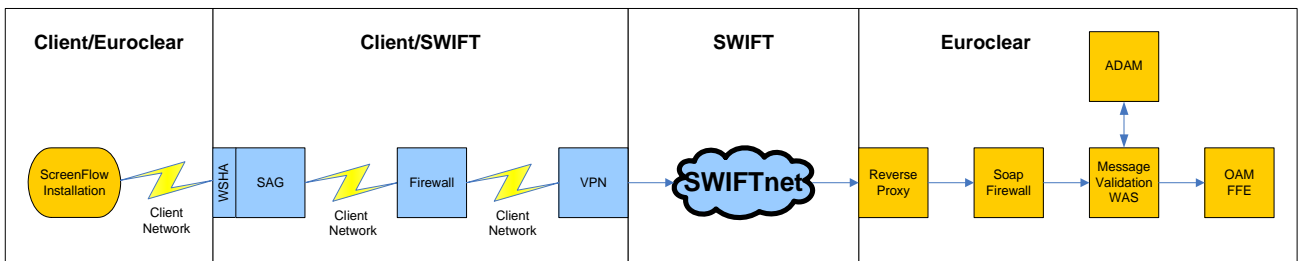


Figure 1: ScreenFlow connectivity via SWIFTnet

1.3 Support

For implementation support and technical assistance, contact the SP Connectivity Help Desk by sending an e-mail to sp.connectivity@euroclear.com or by contacting one of the numbers listed below.

Location	Support number
Americas	+1 646 835 5404
Asia-Pacific	+852 3966 5555
France	+33 1 49 31 87 99
Japan	+813 3506 3711
UK and Ireland	+44 20 7849 0232
All other countries	+32 2 326 4387

For SWIFT support, clients should refer to the SWIFT numbers below.

Location	Support number
European Customer Support	Tel: +31 71 582 2822 Fax: +31 71 581 2645 SWIFT BIC: SWHQ NL NL
American Customer Support	Tel: +1 540 825 6056 Fax: +1 540 825 7819 SWIFT BIC: SWHQ US US
Asia Pacific Customer Support	Tel: +852 2 852 8777 Fax: +852 2 852 8778 SWIFT BIC: SWHQ HK HK
Japan Customer Support	Tel: +81 3 5223 7456 Fax: +81 3 52237460 SWIFT BIC: SWHQ JP JT

1.4 Intended audience

Technical teams who intend to install the ScreenFlow application.

1.5 References

Ref.	Reference	Title
[1]	Euroclear Website www.euroclear.com	CCI Migration Guide, July 2008
[2]	Euroclear Website www.euroclear.com	ScreenFlow installation Guide
[3]	SWIFT Website www.swift.com/cci	CCI over SWIFTNet Implementation Guide

1.6 Change history

Version	Nature of change	Date
00.01	Initial version	

1.7 Abbreviations

Abbreviation	Full text
HTTP	Hyper Text Transfer Protocol
HTTPS	Hyper Text Transfer Protocol Secure
JCE	Java Cryptography Extension
JRE	Java Runtime Environment
LAU	Local Authentication
IP	Internet Protocol
SAG	SWIFT Alliance Gateway
SMS	Secure Messaging Service
SOAP	Simple Object Access Protocol
SSL	Secure Socket layer
VPN	Virtual Private Network
WSHA	Web Service Host Adaptor

2. TROUBLE SHOOTING GUIDE

2.1 Introduction

The information provided below steps the client through the installation and testing process, highlighting the associated step, the possible error and how it should be identified.

The guide provides:

- An explanation of the possible cause of the error;
- Where the error occurs in the installation and testing process;
- How to identify the error; and
- Whether it is the ScreenFlow, or SWIFT logs that need to be used to diagnose the error.

For ease of comprehension the majority of the log is not included in each error; instead only the relevant part is shown. When diagnosing a problem the client should look for the highlighted information in the suggested log.

ScreenFlow logs can typically be found in the Users' home directory under the profile name of 'Screenflow'. By typing 'echo %USERPROFILE%' into the command line prompt the users home directory location will be displayed.

2.2 ScreenFlow Installation

The ScreenFlow application will not successfully install if the correct version of Java is not available.

Configuration Action	Installing the ScreenFlow application
Error	ScreenFlow installation is using a version of Java that is later than the recommended version
The ScreenFlow installer will not run, instead it 'hangs'. The action must be terminated and the recommended version of Java made available (see Section 2, Pre-requisites and Security in the ScreenFlow Installation Guide).	
There are no error logs because the application has not yet been successfully installed.	

2.3 HTTP/HTTPS

The security level between ScreenFlow and the SWIFT gateway can be set as either HTTP or HTTPS. If this configuration setting does not match the actual environment between ScreenFlow and the SWIFT gateway then an error will occur during ScreenFlow logon.

Configuration Action	Section 3.3.2 ScreenFlow Installation Guide 'Choose the protocol'
Error	Logon where HTTPS protocol is defined for an HTTP connection
ScreenFlow Log WARN NOAPPUSER org.apache.commons.httpclient.ProtocolException: The server 149.134.0.10 failed to respond with a valid HTTP response	

Configuration Action	Section 3.3.2 ScreenFlow Installation Guide 'Choose the protocol'
Error	Logon where HTTP protocol is defined for an HTTPS connection
ScreenFlow Log WARN NOAPPUSER javax.net.ssl.SSLException: Connection has been shutdown: javax.net.ssl.SSLException: Unrecognized SSL message , plaintext connection?	
Configuration Action	Section 3.3.2 ScreenFlow Installation Guide 'Choose the protocol'
Error	Logon to ScreenFlow where the http protocol is defined in the ScreenFlow profile and the connection to SAG uses http, while the WSHA message partner in SAG mandates SSL (checkbox 'requires SSL' is ticked).
ScreenFlow Log NOAPPUSER com.euroclear.framework.axis.handler.FaultHandler.handleResponse: 49 Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-WSHA.001.003 - Unable to process the message because SSL was not used to send it	

2.4 Hostname and Port settings

The hostname or IP address and port number of your gateway is required during configuration. The following errors will occur if this is incorrectly input.

Configuration Action	Section 3.3.2 ScreenFlow Installation Guide 'Enter the hostname of your gateway'
Error	Logon where incorrect Hostname IP address defined for profile
ScreenFlow Log INFO NOAPPUSER Web service error accessing http://10.125.18.99:3447/ad4/AuthServiceExt/services/EOCExternalAuthServicePortTypeSOAP. underlying cause is 'java.net.ConnectException: Connection refused :'	
Configuration Action	Section 3.3.2 ScreenFlow Installation Guide 'Enter the hostname of your gateway'
Error	Logon where incorrect Hostname Domain Name defined for profile
ScreenFlow Log INFO NOAPPUSER com.euroclear.framework.axis.AxisExceptionFactory.createWebServiceException:92 Web service error accessing http://nickdomain.com:3447/ad4/AuthServiceExt/services/EOCExternalAuthServicePortTypeSOAP	
Configuration Action	Section 3.3.2 ScreenFlow Installation Guide 'Enter the Port number'
Error	Logon where incorrect Hostname port number defined for profile
ScreenFlow Log WARN nested exception is: java.net.ConnectException: Connection refused :	

2.5 CCI message encryption (Keystore)

Pre-requisite to the installation of ScreenFlow is the creation of a keystore to hold the Euroclear provided certificates. An explanation of this is explained in section 2.4 of the ScreenFlow installation guide. Errors in the setup of the keystore or the data input during configuration will cause the log on attempt to fail.

Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide 'Configure message encryption'
Error	Logon will fail where CCI keystore is missing a certificate
ScreenFlow Log INFO NOAPPUSER com.euroclear.framework.crypto.util.KeyStoreLoader.getCertificate:232 Failed to load keystore certificate server_v5b not found in keystore	
Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide 'Configure message encryption'
Error	Logon will fail where incorrect CCI keystore path is specified
ScreenFlow Log WARN Failed to find value for parameter: eventId; available params are {cause.message=C:\CCI_Keystores\client_dist_v5.jks (The system cannot find the path specified	
Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide 'Configure message encryption'
Error	Logon will fail where CCI keystore is corrupt
ScreenFlow Log WARN NOAPPUSER com.euroclear.framework.crypto.util.KeyStoreLoader.getKeyStore:198 Failed to load keystore C:\CCI_Keystore\Corrupt_client_dist_v5.jks Caused by: com.euroclear.framework.exception.SystemException: Failed to load keystore C:\CCI_Keystore\Corrupt_client_dist_v5.jks	
Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide 'Configure message encryption'
Error	Logon will fail where incorrect CCI keystore Alias is specified
ScreenFlow Log INFO NOAPPUSER com.euroclear.framework.crypto.util.KeyStoreLoader.getCertificate:232 Failed to load keystore certificate server_v1 not found in keystore Caused by: com.euroclear.framework.exception.SystemException: Failed to load keystore certificate server_v1 not found in keystore	

2.6 SWIFT SSL

If you intend to encrypt the traffic between the ScreenFlow application and the SWIFT gateway then a keystore is required to house the SWIFT provided public key. Errors in the creation to this keystore will result in a failed log on attempt.

Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide
-----------------------------	---

Error	Incorrect SSL keystore path is specified
ScreenFlow Log ERROR NOAPPUSER com.euroclear.framework.sender.AuthSSLProtocolSocketFactory.createSSLContext:229 C:\NJH_SWIFT_SSL_Keystores\SwiftClientTrustStore_ad1.jks (The system cannot find the path specified)	
Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide
Error	Incorrect SSL keystore password is specified
ScreenFlow Log ERROR NOAPPUSER com.euroclear.framework.sender.AuthSSLProtocolSocketFactory.createSSLContext:229 Keystore was tampered with, or password was incorrect	
Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide
Error	Incorrect SSL keystore is specified
ScreenFlow Log WARN NOAPPUSER javax.net.ssl.SSLException: Connection has been shutdown: javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target	
Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide
Error	SSL keystore is corrupted
ScreenFlow Log ERROR NOAPPUSER com.euroclear.framework.sender.AuthSSLProtocolSocketFactory.createSSLContext:226 Certificate format error: java.lang.ClassCastException: iaik.asn1.UNKNOWN Caused by: java.security.cert.CertificateException: Certificate format error: java.lang.ClassCastException: iaik.asn1.UNKNOWN	

2.7 SWIFT LAU

If you require SWIFT LAU encryption then this must be set up according to SWIFT guidelines and then configured correctly in ScreenFlow.

Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide
Error	LAU keystore is corrupted
ScreenFlow Log ERROR NOAPPUSER An Application Error has Occurred [com.euroclear.framework.exception.SystemException: Failed to load keystore	
Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide
Error	Incorrect LAU Left/Right Balance key specified
ScreenFlow Log ERROR NOAPPUSER An Application Error has Occurred [com.euroclear.framework.exception.SystemException: Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-I.004.004 - Invalid	

local authentication signature.

Configuration Action	Section 3.3.2.2 ScreenFlow Installation Guide
-----------------------------	---

Error	Incorrect LAU Left/Right Balance key specified
--------------	--

SAG event Journal entry:

Sequence: 146807
 Date/Time: 09/03/2009 14:02:45.9060
 Application ID: wsha-cci
 Correlation ID: Sag:WS-HA--7a4ccfa9_11fa348ddac_-7fdf
 Component: Sag:APL-I
 Number: 30
 Name: Message partner authentication failed
 Severity: Severe
 Class: Security
 Unit: None
 Description: The message authentication code that SAG computed does not match the value provided with the message. Check the message partner definition and/or the application configuration.
 Reason: FAILURE - Signature mismatch.

2.8 SWIFT data setup

To communicate to Euroclear via SWIFT, specific data defined in the SWIFT infrastructure is required by Screenflow (Message partner, Distinguished Name 'DN') and this data needs to be created according to SWIFT documentation.

The ScreenFlow configuration setup requires an Application ID. For Euroclear clients that are using the SWIFT network, this is the 'Message Partner' that you intend to use for ScreenFlow communications. If the Message Partner specified is incorrect then ScreenFlow logon will fail.

Configuration Action	Section 3.3.2.3 ScreenFlow Installation Guide
-----------------------------	---

Error	Message Partner ID incorrect
--------------	------------------------------

ScreenFlow Log

ERROR
 NOAPPUSER com.euroclear.framework.axis.handler.ExceptionFactory.createCustomException:128
 Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-WSHA.002.007 -
Record does not exist.

Configuration Action	Section 3.3.2.3 ScreenFlow Installation Guide
-----------------------------	---

Error	Message Partner ID incorrect
--------------	------------------------------

SAG event Journal entry:

Sequence: 146871
 Date/Time: 09/03/2009 15:24:22.0150
 Application ID: wshacci
 Correlation ID: Sag:WS-HA--7a4ccfa9_11fa348ddac_-7fde
 Component: Sag:APL-WSHA
 Number: 10
 Name: Invalid SOAP client request
 Severity: Severe
 Class: Software
 Unit: None
 Description: WSHA received an invalid SOAP client request message.
 Message partner: wshacci
 Host address: 172.25.86.135
 Reason: Sag:APL-WSHA.002.007: Record does not exist.
 Action:
 Data:

A profile with this name does not exist	
Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
Error	Signing Certificate used for ScreenFlow of which the DN is not provisioned with Euroclear through the appropriate forms
ScreenFlow Log NOAPPUSER com.euroclear.framework.axis.handler.FaultHandler.handleResponse: 49 Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-WSHA.003.001 - Failure at SNL level Caused by: com.euroclear.framework.exception.SystemException: Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-WSHA.003.001 - Failure at SNL level	
Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
Error	Signing Certificate used for ScreenFlow of which the DN is not provisioned with Euroclear through the appropriate forms
SAG event Journal entry: Sequence: 146895 Date/Time: 09/03/2009 15:44:11.8590 Application ID: wsha-cci Correlation ID: Sag:WS-HA--7a4ccfa9_11fa348ddac_-7fdc Component: Sag:APL-WSHA Number: 14 Name: SOAP message not processed Severity: Warning Class: Message Unit: None Description: An error in WSHA stopped the message being correctly processed by WSHA. Reason: Sag:APL-WSHA.003.001: Failure at SNL level Action: See details for cause and corrective action Data: Status StatusAttributes Severity = Transient Code = Sw.Gbl.InconsistParameterValueSet Parameter = XPATH=SwSec:SignatureList[1]/SwSec:Signature[1]/SwSec:KeyInfo Parameter = Invalid DN: does not have a security context Text = Inconsistent Parameter Value Set Action Details Code = Sw.Sec.InvalidSignDN Text = Attempted to sign a message with a DN that has no open context or is not authorized to sign., Invalid DN: does not have a security context Action = Verify the Sign DN in the request Sequence: 146894 Date/Time: 09/03/2009 15:44:11.8120 Application ID: wsha-cci Correlation ID: Sag:WS-HA--7a4ccfa9_11fa348ddac_-7fdc Component: Sag:SN-I Number: 3016 Name: Attempt to use unauthorised DN Severity: Warning Class: Security Unit: None Description: An unauthorised DN was used by the application. Details : Relaxed certificate is not selected in message partner configuration. Received from Application : wsha-cci (Interface : Sag:APL-I) DN : cn=cci,ou=cscaccord,o=swhqbebb,o=swift.	
Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
Error	Signing certificate used for ScreenFlow is not stored on HSM

ScreenFlow Log NOAPPUSER com.euroclear.framework.axis.handler.FaultHandler.handleResponse:49 Server responded with a SOAP Fault, remote exception was Invalid Message Format Caused by: com.euroclear.framework.exception.SystemException: Server responded with a SOAP Fault, remote exception was Invalid Message Format	
Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
Error	Requestor DN used in the message partner details is of level 2 (o=bic8,o=swift)
ScreenFlow Log NOAPPUSER com.euroclear.framework.axis.handler.FaultHandler.handleResponse: 49 Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-WSHA.003.001 - Failure at SNL level	
Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
Error	Requestor DN used in the message partner details is of level 2 (o=bic8,o=swift)
SAG event Journal entry: Date/Time: 10/03/2009 09:22:52.8590 Application ID: wsha-cci Correlation ID: Sag:WS-HA--7a4ccfa9_11fa348ddac_-7fd5 Component: Sag:APL-WSHA Number: 14 Name: SOAP message not processed Severity: Warning Class: Message Unit: None Description: An error in WSHA stopped the message being correctly processed by WSHA. Reason: Sag:APL-WSHA.003.001: Failure at SNL level Action: See details for cause and corrective action Data: Status StatusAttributes Severity = Transient Code = Sw.Gbl.NetworkTransmissionError Parameter = 216 Parameter = CUG001 Parameter = Cug: Invalid Request Text = Network Transmission Error Details Code = Sw.WFE.eCugError Text = Cug component indicated that an error occurred., CUG001, Cug: Invalid Request Details Code = Sw.WFE.ExecuteRequestFail Text = Execute Request failed in WFE , CUG Details Code = Sw.WFE.ExecuteRequestFail Text = Execute Request failed in WFE	
Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
Error	Authoriser DN or Sign DN filled in the WSHA message partner details contains an asterisk *
ScreenFlow Log NOAPPUSER com.euroclear.framework.axis.handler.FaultHandler.handleResponse:49 Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-WSHA.102.001 - Internal message processing error	
Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
Error	Authoriser DN or Sign DN filled in the WSHA message partner details contains an asterisk *
SAG event Journal entry:	

Sequence: 147048
 Date/Time: 10/03/2009 09:35:02.8120
 Application ID: wsha-cci
 Correlation ID: Sag:WS-HA--7a4ccfa9_11fa348ddac_-7fcf
 Component: Sag:APL-WSHA
 Number: 14
 Name: SOAP message not processed
 Severity: Warning
 Class: Message
 Unit: None
 Description: An error in WSHA stopped the message being correctly processed by WSHA.
 Reason: Sag:APL-WSHA.102.001: Internal message processing error
 Action: Resend the message
 Data:
 improperly specified input name: *,ou=cscaccord,o=swhqbebb,o=swift

Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
-----------------------------	--

Error	Authoriser DN or Sign DN filled in the WSHA message partner details is not the same as the DN of the PKI certificate used for signing
--------------	---

ScreenFlow Log

NOAPPUSER com.euroclear.framework.axis.handler.FaultHandler.handleResponse: 49 **Server responded with a SOAP Fault, remote exception was Transient - Sag:APL-WSHA.003.001 - Failure at SNL level**

Configuration Action	Euroclear CCI forms Single Platform Connectivity Testing
-----------------------------	--

Error	Authoriser DN or Sign DN filled in the WSHA message partner details is not the same as the DN of the PKI certificate used for signing
--------------	---

SAG event Journal entry:

Sequence: 147075
 Date/Time: 10/03/2009 09:39:21.9370
 Application ID: wsha-cci
 Correlation ID: Sag:WS-HA--7a4ccfa9_11fa348ddac_-7fce
 Component: Sag:APL-WSHA
 Number: 14
 Name: SOAP message not processed
 Severity: Warning
 Class: Message
 Unit: None
 Description: An error in WSHA stopped the message being correctly processed by WSHA.
 Reason: Sag:APL-WSHA.003.001: Failure at SNL level
 Action: See details for cause and corrective action
 Data:
 Status
 StatusAttributes
 Severity = Transient
 Code = Sw.Gbl.InconsistParameterValueSet
 Parameter = SwBss::validateAuth
 Parameter = Input DN:ou=cscaccord,o=swhqbebb,o=swift
 Text = Inconsistent Parameter Value Set
 Action
 Details
 Code = Sw.Sec.InvalidAuthDN
 Text = The authorization DN in the request has no open and valid security context., SwBss::validateAuth, Input DN:ou=cscaccord,o=swhqbebb,o=swift
 Action = Verify the user DN in the request
 Details
 Code = Sw.Gbl.InvalidInputParameters
 Text = The input request contains invalid parameters., Authorisation Context is not authorised to use SNL services.
 Action = Correct input XML.

2.9 Java version

The ScreenFlow application requires access to Java, and as seen in section 2.2 of this guide, an incompatible version will stop the application from installing. Once the application has been installed it is necessary to assign a JRE profile. ScreenFlow will pick up a default profile but this can be changed. If this version of Java does not meet with ScreenFlow requirements, the follow errors can occur.

Configuration Action	3.3.2.3 Choose a JRE for this profile
Error	Logon where specified JRE is not approved – earlier version of Java compared to the recommended pre-requisite
Logon dialog will not launch – no log produced	
Configuration Action	3.3.2.3 Choose a JRE for this profile
Error	Logon where specified JRE is not approved – later version of Java compared to the recommended pre-requisite
ScreenFlow Log WARN NOAPPUSER com.euroclear.framework.exception.EuroclearException.logConstructed:352 A fault has occurred, set trace level to info and above for details, if you would like to investigate further. Remember to quote the exception instance id <code>{eventId}</code> java.security.InvalidKeyException: Illegal key size MESSAGE FORMAT ERRORS OCCURED FOR TEMPLATE: "A fault has occurred, set trace level to info and above for details, if you would like to investigate further. Remember to quote the exception instance id <code>{eventId}</code> <code>{cause.message}</code> " Failed to find value for parameter: eventId; available params are <code>{cause.message=java.security.InvalidKeyException: Illegal key size, thread=pool-1-thread-1}</code> 2009-02-18 12:03:16.015 wtdbe00039 INFO com.euroclear.framework.crypto.util.userTokenEncryptionException dev cci-screenflow a4c3e2c4-30b6-4cb6-a0e8-a1c163e3d636 pool-1-thread-1 tbenhar NOAPPUSER com.euroclear.framework.xml.crypto.enc.EncryptionUtil.encryptElement:262 Failed during encryption of the username token Caused by: com.euroclear.framework.exception.SystemException: Failed during encryption of the username token	

2.10 Java Cryptology

To meet the security standards required for ScreenFlow a small update to the standard java installation is required.

The files are two jar files: `US_export_policy.jar` and `local_policy.jar`. The files must be located relative to your JRE used for each profile directory.

Configuration Action	3.3.2.3 Choose a JRE for this profile
Error	Logon where specified JRE is not approved – earlier version of Java compared to the recommended pre-requisite
ScreenFlow Log [WARN][com.euroclear.framework.axis.AxisExceptionFactory.unwrapEuroclearException:83]Web service error accessing http://10.233.1.19:48115/AuthServiceE xt/services/EOCExternalAuthServicePortTypeSOAP. underlying cause is 'Handler UsernameTokenHandler failed to process message. Error was com.euroclear. framework.exception.SystemException: Failed during encryption of user token'	

2.11 Connectivity Testing

To connect to the ScreenFlow application the user will require a user name, password and Access Provider ID. These are provided to the client through the CCI connectivity subscription process. If the details provided in the subscription process are incorrect, logon will fail. Logon will also fail if the details provided by Euroclear are input into the logon incorrectly.

Configuration Action	Logon
Error	Incorrect Root operator password used
ScreenFlow Log INFO NOAPPUSER sun.reflect.NativeConstructorAccessorImpl.newInstance() Authentication failed	
Configuration Action	Logon
Error	Incorrect Root operator ID used
ScreenFlow Log INFO NOAPPUSER sun.reflect.NativeConstructorAccessorImpl.newInstance() Authentication failed	
Configuration Action	Logon
Error	Incorrect Access Provider ID used
ScreenFlow Log INFO NOAPPUSER sun.reflect.NativeConstructorAccessorImpl.newInstance() Authentication failed	
Configuration Action	Logon
Error	Incorrect DN used
ScreenFlow Log INFO NOAPPUSER sun.reflect.NativeConstructorAccessorImpl.newInstance() Authentication failed	
Configuration Action	Logon
Error	The connectivity between the WSHA and SWIFT is failing
SAG event Journal entry: "Sequence: 5329 Date/Time: 27/02/2009 23:12:52.6870 Application ID: wsha_client_live Correlation ID: Sag:WS-HA-16a94e0d_11fb84a7128_-8000 Component: Sag:APL-WSHA Number: 14 Name: SOAP message not processed Severity: Warning Class: Message Unit: None Description: An error in WSHA stopped the message being correctly processed by WSHA. Reason: Sag:APL-WSHA.102.001: Internal message processing error Action: Resend the message Data: Failed to connect to server-side WSHA at https://euroclear-screen-ad1.swiftnet.sipn.swift.com:443 : java.net.ConnectException: Connection timed out: connect	
Corrective measures Make sure the IP addresses 149.134.0.70 and 149.134.0.80 are reachable on port 443 for https	

from your SAG. To test this you can issue the following commands from the SAG host machine:

```
checkip 149.134.0.70 443 TCP
checkip 149.134.0.80 443 TCP
```

-A useful tool which will test the WSHA to SWIFT connection is the `wsha_test_connect` tool, which is present in the `<SAG installation path>/bin` directory.

This tool will send a test message over WSHA to SWIFTNet.

Please note that it will not test the connectivity up to Euroclear.

Its usage is as follows:

```
wsha_test_connect [-SnUser <SWIFTNet user DN=DN of your PKI certificate used
for signing>]
                    [-mp <Message Partner name in SAG for WSHA
connection>]
                    [-url <WSHA_URL>, by default https://SAG
hostname:port numer]
                    [-sign]
                    [-v]
```

If you do not enter any options you will be prompted for them.

Please see below example:

```
C:\SWIFTAlliance\Gateway\bin>wsha_test_connect -sign
Enter the message partner to use: wsha-cci
Enter the SWIFTNet user DN: cn=cci,ou=cscaccord,o=swhqbebb,o=swift
Enter the URL of WSHA [default, https://becsw13:48005]:
```

A successful output will then be:

```
Sending ConnectivityRequest (signed).
ConnectivityRequest succeeded.
```

An example of the verbose mode (-v) output can be seen in the screenshot below:

```

SWIFTNet Link
C:\SWIFTAlliance\Gateway\bin>wsha_test_connect -v
Enter the SWIFTNet user DN: cn=swhqa02u,ou=cs-be,o=swhqbebb,o=swift
Enter the message partner to use: wsha_client
Enter the URL of WSHA: http://172.25.87.141:48006

Sending ConnectivityRequest.

<?xml version = '1.0' encoding = 'UTF-8'?>
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header>
    <wsha:SAGHeader xmlns:wsha="urn:swift:sag:xsd:wsha.header.1.0" env:actor="urn:swift:sag">
      <wsha:ApplicationId>wsha_client</wsha:ApplicationId>
      <wsha:AuthorisationContext>
        <wsha:UserDN>cn=swhqa02u,ou=cs-be,o=swhqbebb,o=swift</wsha:UserDN>
      </wsha:AuthorisationContext>
      <wsha:RequestHeader>
        <wsha:Requestor>cn=swhqa02u,ou=cs-be,o=swhqbebb,o=swift</wsha:Requestor>
        <wsha:Responder>cn=management,o=swift,o=swift</wsha:Responder>
        <wsha:Service>swift.cte</wsha:Service>
        <wsha:RequestType>SWIFTNetConnect</wsha:RequestType>
      </wsha:RequestHeader>
      <wsha:PayloadType>Sw.tst.SLPRequest</wsha:PayloadType>
    </wsha:SAGHeader>
  </env:Header>
  <env:Body Id="SNLPayload">
    <Request/>
  </env:Body>
</env:Envelope>

ConnectivityRequest succeeded.

<?xml version = '1.0' encoding = 'UTF-8'?>
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header>
    <wsha:SAGHeader xmlns:wsha="urn:swift:sag:xsd:wsha.header.1.0" env:actor="urn:swift:sag:ws.handler.sag" xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" wsu:Id="WSHA119728076503111">
      <wsha:ApplicationId>wsha_client</wsha:ApplicationId>
    </wsha:SAGHeader>
  </env:Header>
  <env:Body xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" wsu:Id="WSHA119728076503110">
    <Response>
      <ComRes>
        <Result> SLP v14.h - TCP - PXML - snlId snp00000 host USSNSU02 PID 9749 187665</Result>
        <OutXmitTime>2007-12-10T09:52:43.144</OutXmitTime>
        <OutInt>0</OutInt>
      </ComRes>
    </Response>
  </env:Body>
</env:Envelope>

```