SEZ Online Manual-

DSC Signing with Java Applet

Version 1.0

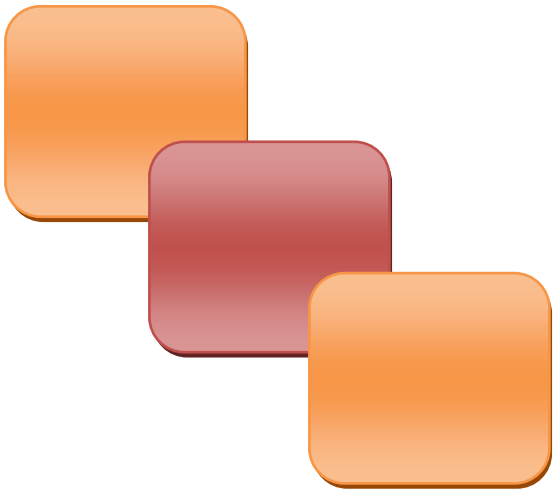


Table of Contents

1 Introduction 2

2 DSC signing functionality with java applet 2

3 Troubleshooting 5

4 Annexure I: JAVA Console Setting 17

5 Annexure II: Installation of JRE 20

SEZ Online

1 INTRODUCTION

SEZ Online system [SOS] enables entity users (SEZ units/ Developers/ Co developers) to submit their various applications, customs transactions & compliance reports to DC's office in electronic form. As these applications and transactions consists of critical and confidential information, the SOS requires all the entity users to submit / DC users to process these applications/transactions after signing them with Digital Signature Certificate [DSC] for security reasons. These electronic requests are processed and approved by the DC's office online.

This functionality uses the windows component i.e Capicom.dll. Since this is not compatible with 64 bit Operating system, this functionality fails for those users who use 64 bit Operating system. Also Microsoft stopped shipping CAPICOM in its new OS version's by default. Hence to provide support to the users who are having 64 bit operating system, a new functionality has been introduced for digitally signing with Java Applet.

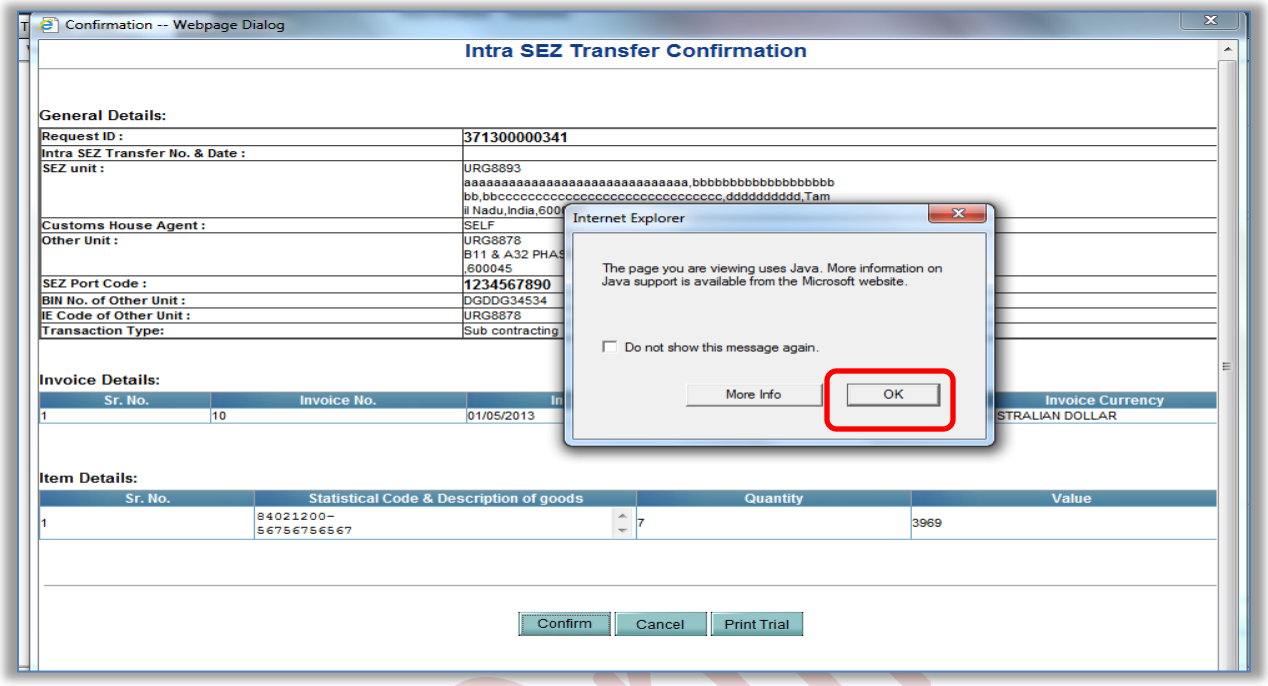
2 DSC SIGNING FUNCTIONALITY WITH JAVA APPLET

The pre requisite for signing with Java applet, Java runtime Environment [JRE] should be installed on Client's machine.

The following Security Warnings [pop ups] occur while signing using Java Applet DSC Signer:

Warning 1: If JRE is not installed on client's machine, the below mentioned warning is displayed on confirmation screen.

SEZOnline

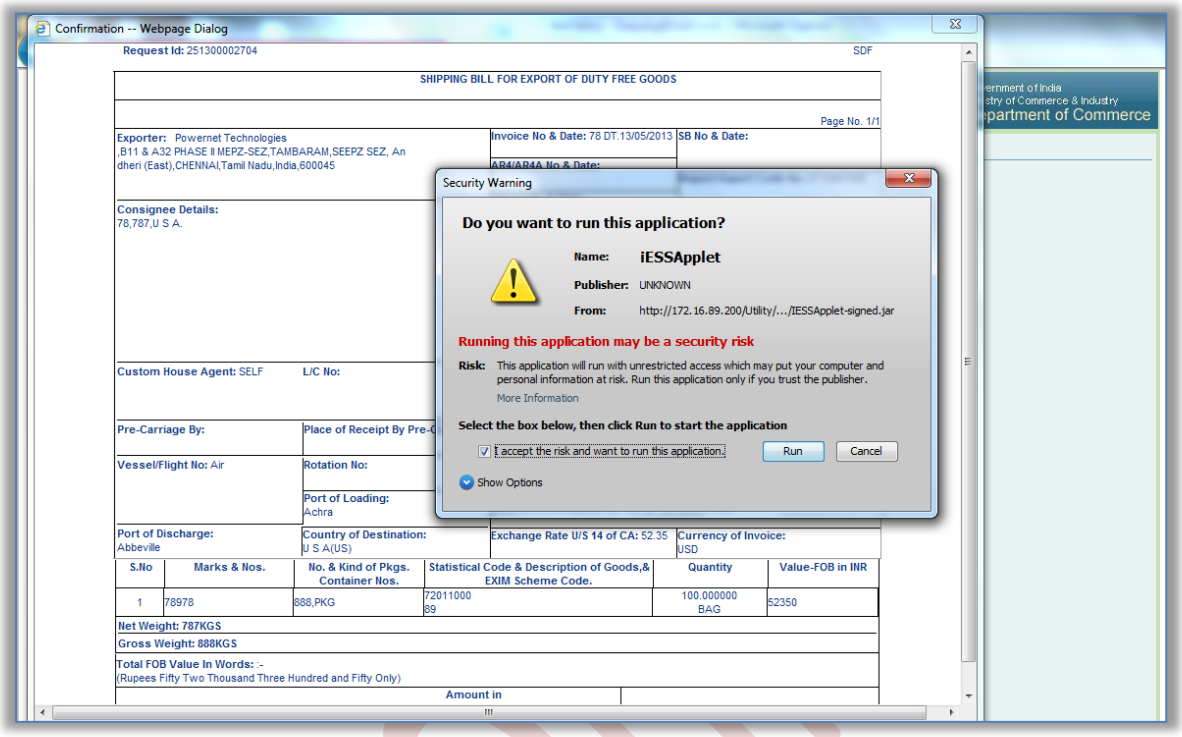


On click of "OK" button, it will redirect to official Java web site to install JRE.

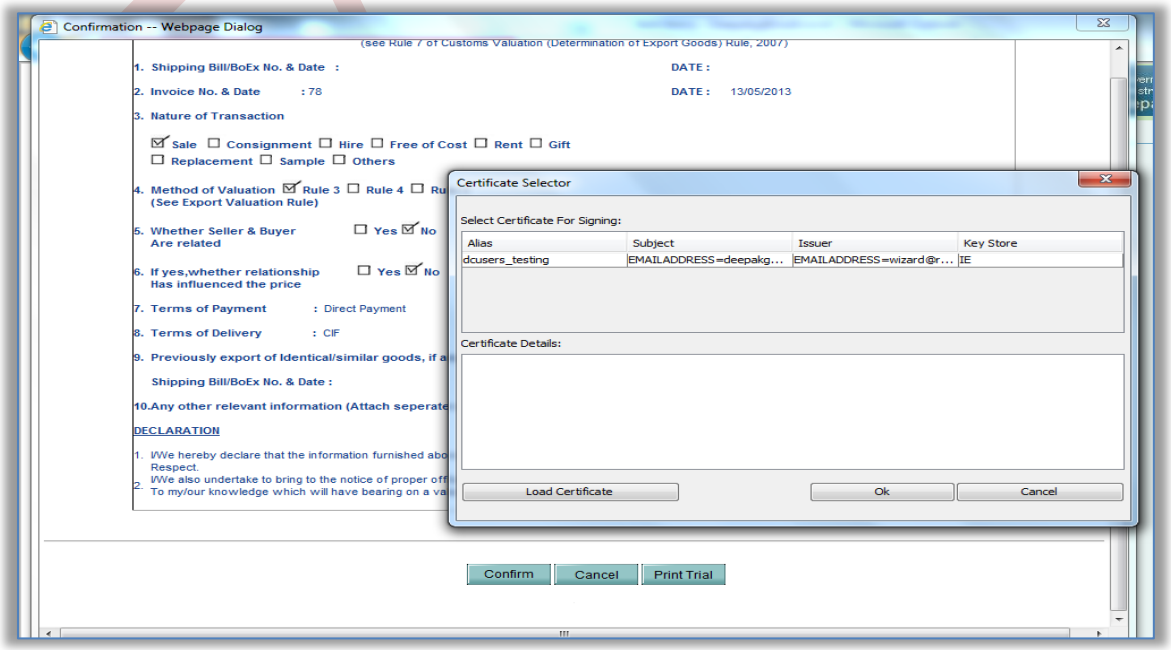
- The complete Installation Process is explained in the section **"Annexure II".**
- After successful installation, Java Console Settings need to be performed.

  The Java Console settings are explained in the section **"Annexure I".**

Warning 2: After successful installation and Java Console settings, when user opens the confirmation screen for signing and submitting request, the following warning is displayed:

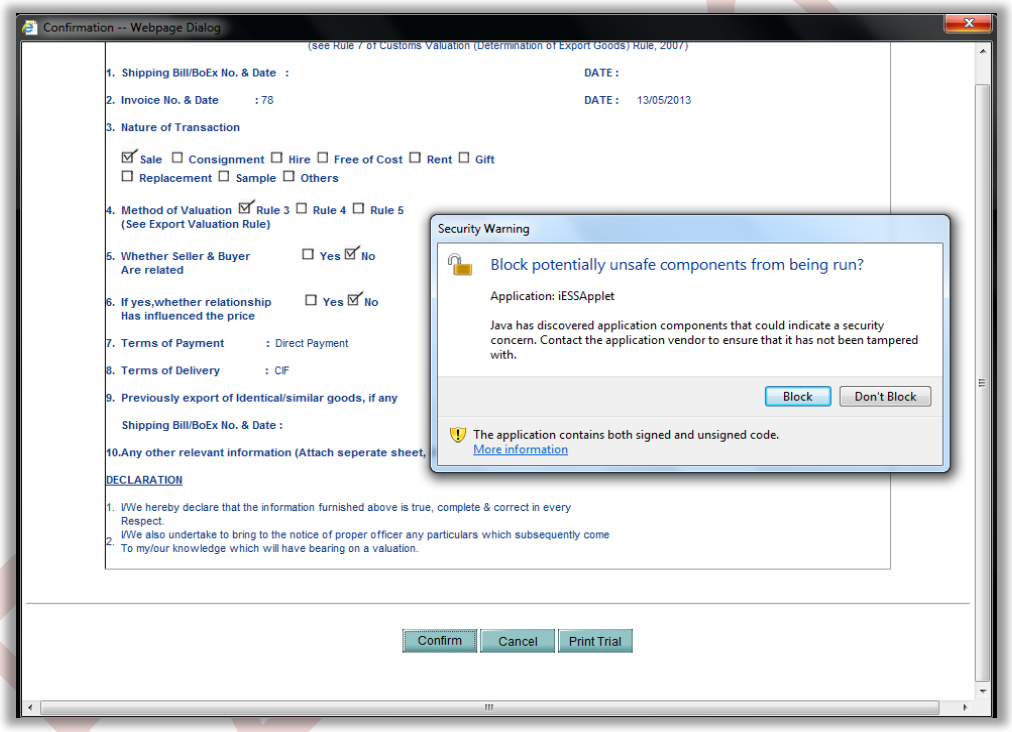


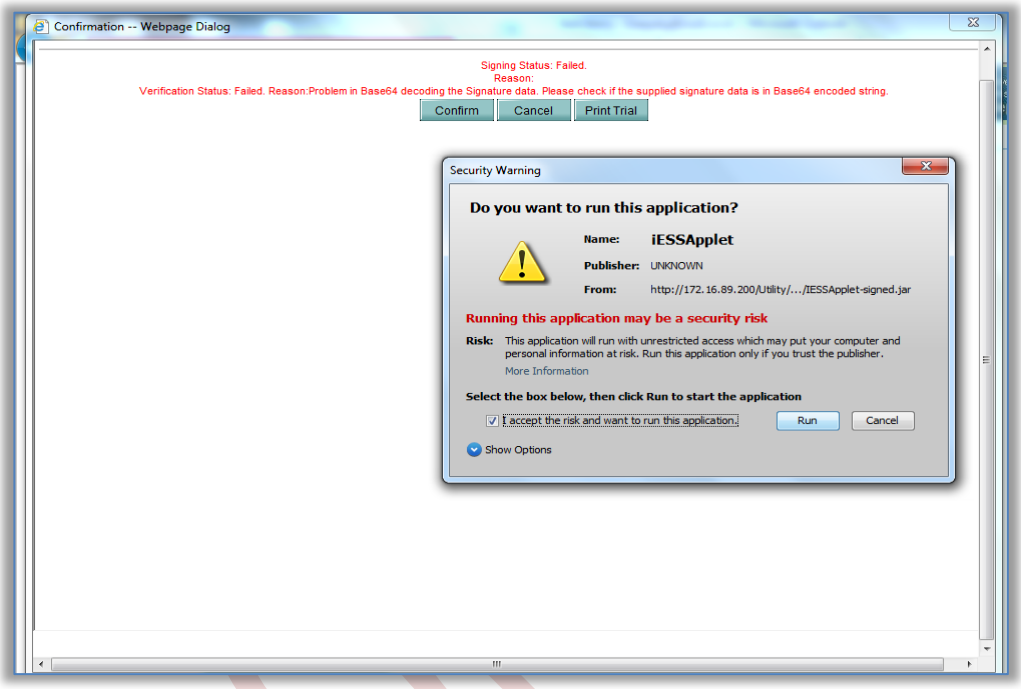
Click on the checkbox “I accept the risk and want to run the application”, the “certificate selector” window will be displayed. Select the valid digital certificate and click on “OK”. The request will be signed and submitted successfully.



3 TROUBLESHOOTING

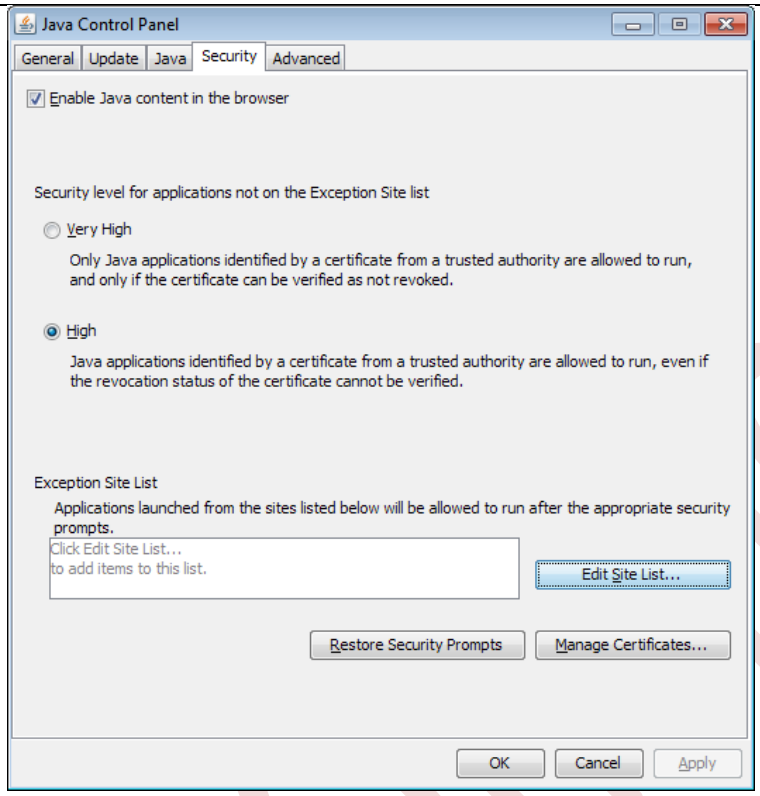
While submitting the applications with digital signature using Java applet, you may encounter certain errors related to Digital signature. The list of probable errors with the standard solutions is enlisted below:

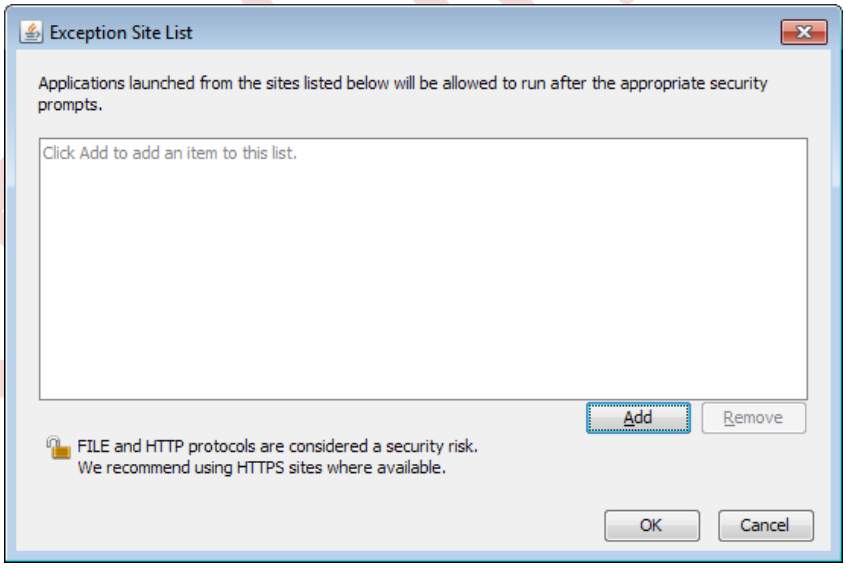
(i) Error Message:	**"Block potentially unsafe components from being run"**
Error Screen:	
Solution 1:	Click on "Don't Block", it will process the application.
Solution 2:	In Java console settings, in ***Mixed code (sandboxed vs. trusted) security verification*** sections, enable the property "Enable – hide warning and run with protections"

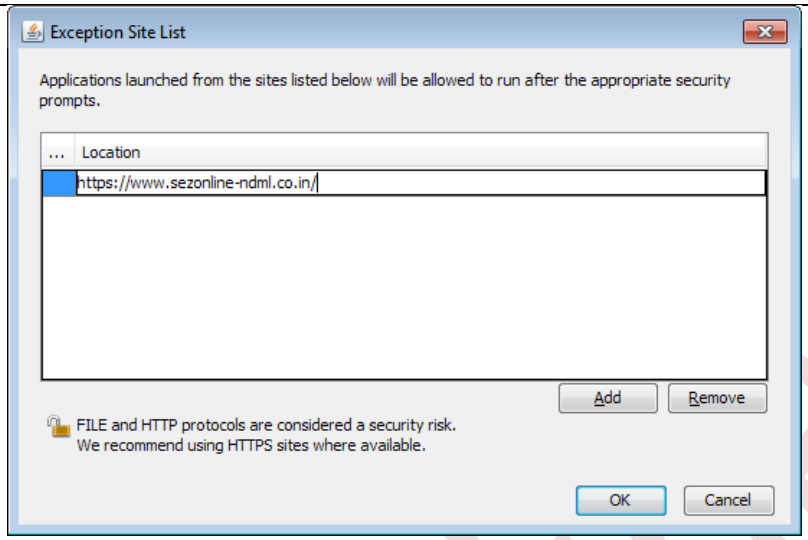
(ii) Error Message:	**"Verification Status Failed Reason: Problem in Base64 decoding the Signature data. Please check if the supplied signature data is in Base64 encoded string"**
Error Screen:	
Solution:	✓ Check if the CRL is imported in the proper CRL folder in Cert Manager ✓ Check if the CRL chain is maintained properly. ✓ Check for the expiry dates User need to email to sezinfo@nsdl.co.in with the following details: - Name of Certifying Authority [CA] - Screen shot of Trusted Root Certificate Information from content→Certificate, - Screen shots of General Tab, Details Tab and Certification Path from View Certificate When user clicks on "Cancel" button of confirmation screen, the above security warning is displayed. Click on "Run" button of the "Security Warning" screen.

(iii) Error Message:	**"signing failed due to no data to sign"**
Error Screen:	
Solution:	1. Please ensure that you are browsing from 64 bit IE browser if your machine is 64 bit. Refer section 5 to check IE browser bit 2. Please ensure that your java version is greater than JRE1.6. Below is the way to check that: *Control Panel -> Java -> Java tab -> Platform or Product*. Refer section 5 to install JRE. 3. Add the URL – 'https://www.sezonline-ndml.co.in/' in the Exception list under Java Control Panel. Below is the way to add the site URL in the exception list: Go to *Control Panel -> Java -> Security tab -> Click on Edit Site List… -> Click on Add -> Enter the site URL -> Click on Ok -> Click on Ok under Java Control Panel to exit.*

SEZ Online

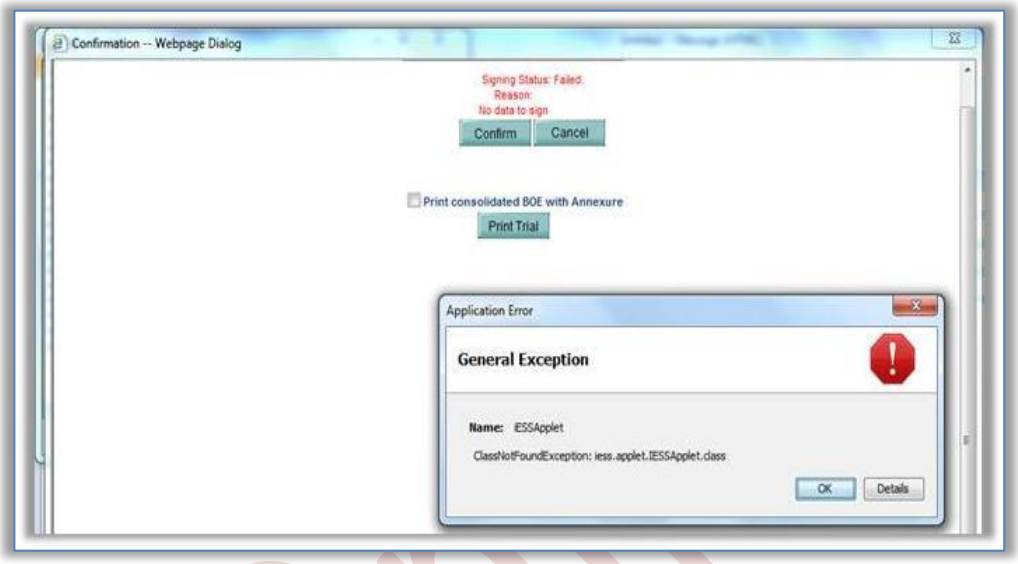

Java Control Panel
General
Update
Java
Security
Advanced
Enable Java content in the browser
Security level for applications not on the Exception Site list
Very High
Only Java applications identified by a certificate from a trusted authority are allowed to run, and only if the certificate can be verified as not revoked.
High
Java applications identified by a certificate from a trusted authority are allowed to run, even if the revocation status of the certificate cannot be verified.
Exception Site List
Applications launched from the sites listed below will be allowed to run after the appropriate security prompts.
Click Edit Site List...
to add items to this list.
Edit Site List...
Restore Security Prompts
Manage Certificates...
OK
Cancel
Apply

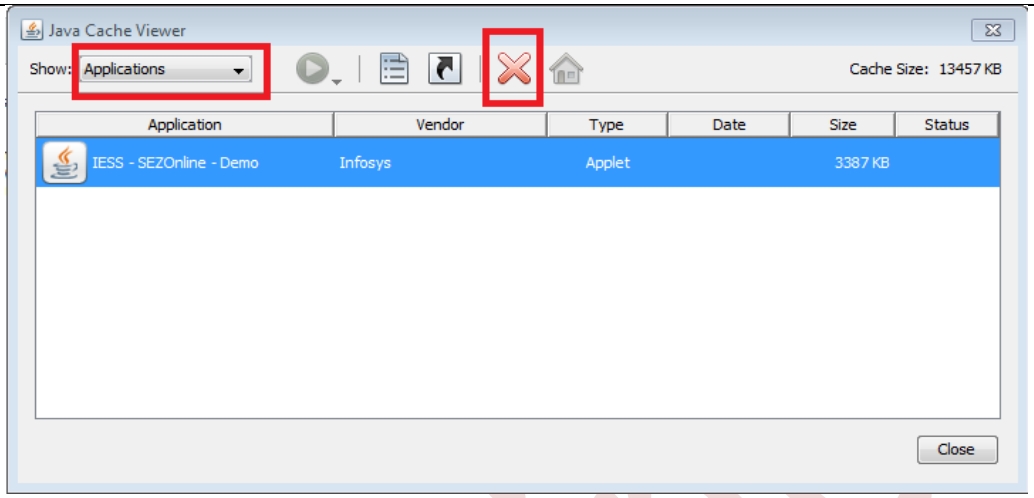

Exception Site List
Applications launched from the sites listed below will be allowed to run after the appropriate security prompts.
Click Add to add an item to this list.
Add
Remove
FILE and HTTP protocols are considered a security risk.
We recommend using HTTPS sites where available.
OK
Cancel



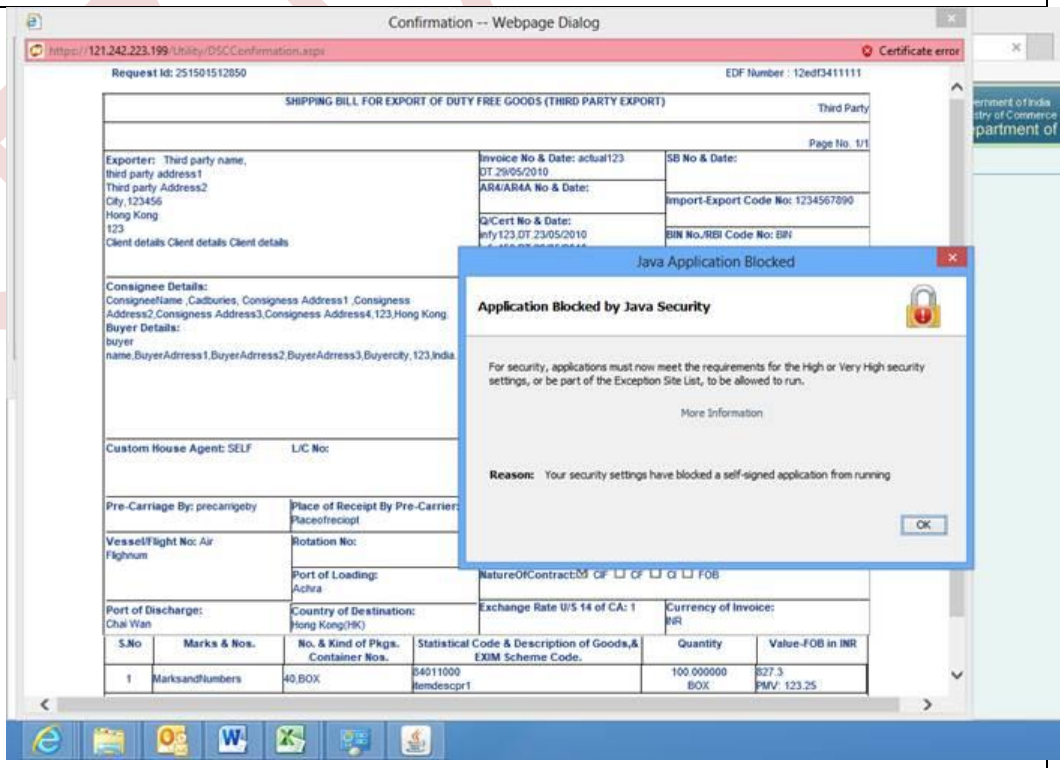
4. If still the issue persists, please contact administrator with IE browser bit and JRE version you collected from above steps.

SEZ Online

(iv) Error Message:	**"IESSApplet Class not found" exception**
Error Screen:	
Solution:	1. Please ensure that you are browsing from 64bit IE browser if your machine is 64bit. 2. Please ensure that you java version is greater than JRE1.6. Below is the way to check that: *Control Panel -> Java -> Java tab -> Platform or Product* 3. Try to remove cached entries i. Go to Control Panel -> ii. Click on Java iii. Go to General Tab in Java Control Panel window. iv. Click on View button. v. Select "Applications" in show dropdown and select all items displayed in grid and delete using remove button.

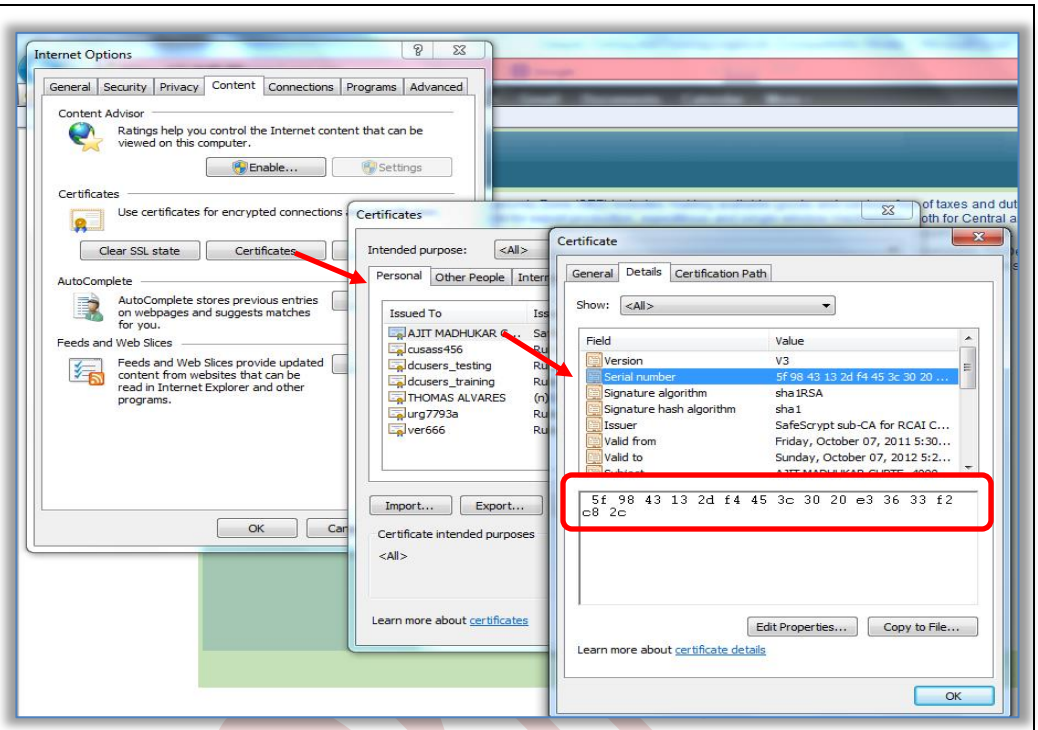


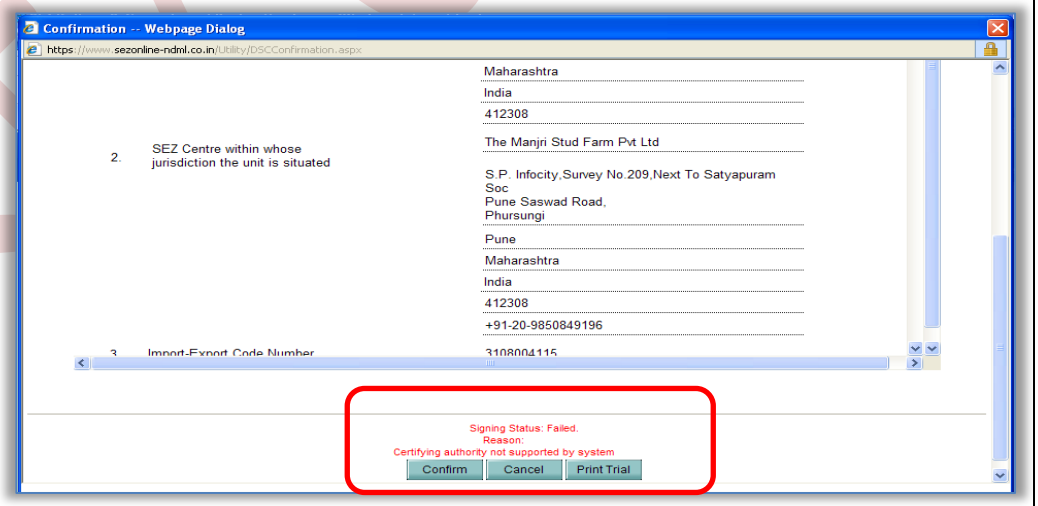
4. Visit SEZOnline and try again, if problem still persists, contact administrator with IE browser bit and JRE version you collected from above steps.

(v) Error Message:	**"Application blocked by Java Security"**
Error Screen:	

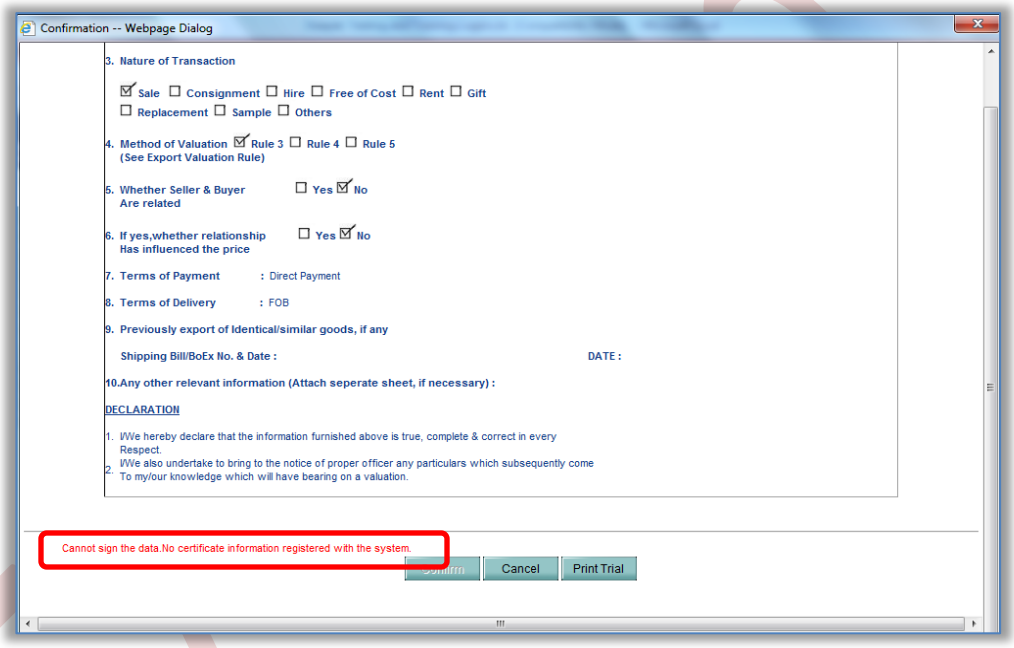
Solution:	✓ Go to Control panel ✓ Click on Java (32-bit) >> Java Control panel >> Security tab >> Exception site list ✓ Click on "Edit site list" button >> click on "Add" button >> enter the URL >> Save the details by clicking on "Add"

(vi) Error Message:	**"Certificate Serial number invalid"**
Error Screen:	
Solution:	✓ Login as Admin user ✓ Go to Administration -> Maintain Unit Users ✓ Search for the User to whom DSC supposed to map ✓ Click on Edit ✓ Check whether the serial number entered is same as the DSC serial number
	To check Serial Number, Go to *Tools—>Internet Options—>Content—>Certificates—>Personal* Select the certificate and click on the **View** button and go to **Details** Tab.

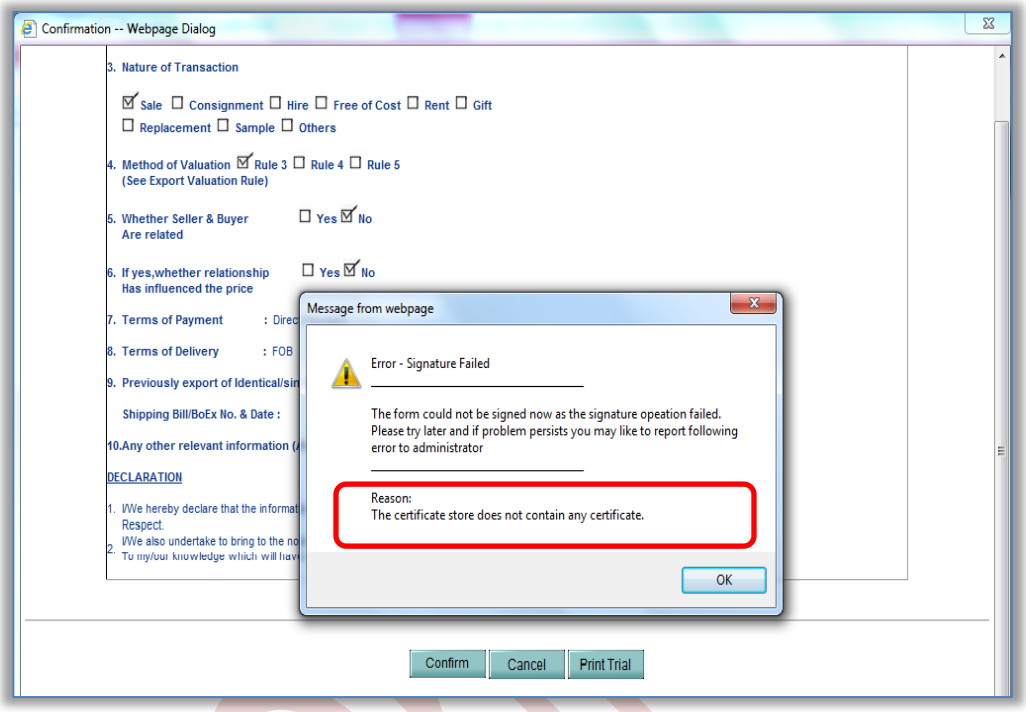


(vii) Error Message:	**"Certifying Authority not supported by system"**
Error Screen:	
Solution:	✓ Check whether the **Certifying Authority name** is matching with the users DSC **Issued by** name selected by user.

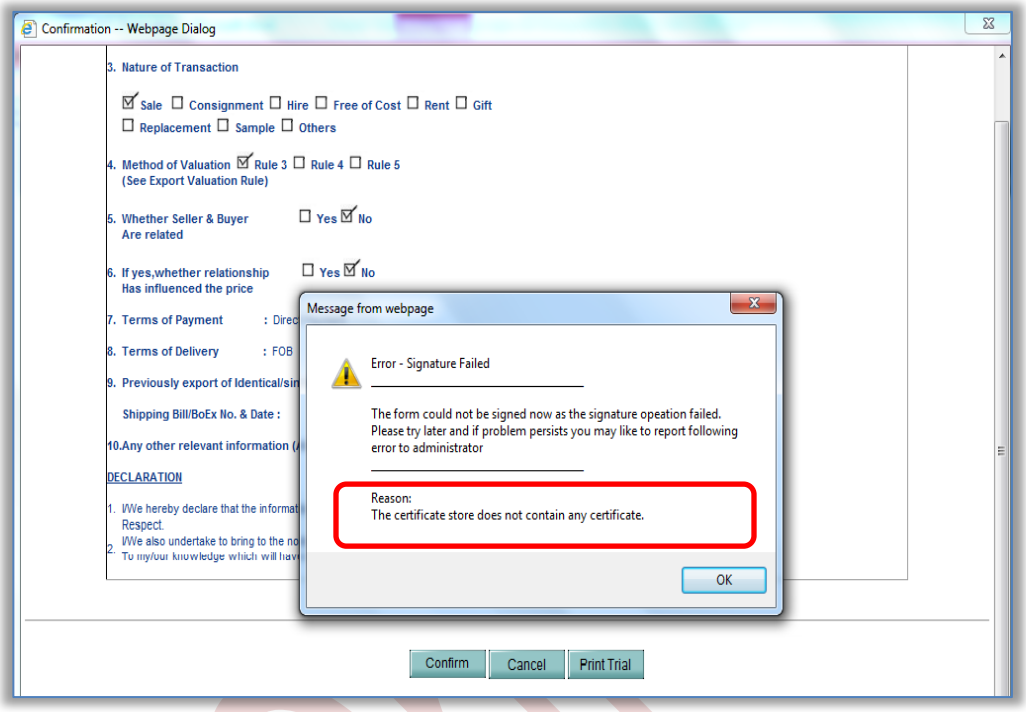
	Note: *If the certifying Authority is not present in the available list of CA, email to sezinfo@nsdl.co.in with dummy certificate.*

(viii) Error Message:	**"Cannot Sign the Data. No certificate information registered with the System"**
Error Screen:	
Solution:	✓ Login as Admin user ✓ Go to Administration -> Maintain Unit Users ✓ Search for the User to whom DSC supposed to map ✓ Click on Edit ✓ Check the Add DSC Check box ✓ Add the Serial Number of DSC ✓ Select the appropriate Certifying Authority and Save.

(ix) Error Message:	**"The Certificate Store does not contain any certificate"**

Error Screen:	
Solution 1:	Check whether the certificate has been expired. To check: Go to *Tools—>Internet Options—>Content—>Certificates—>Personal*—select the certificate and click on the view button. In General details tab, you will find the Validity Period of the certificate.
Solution 2:	Check whether the related certificate is imported/installed in the browser or not. If Not, then import the certificate in the browser or installed the token based DSC.

(x) Error Message:	**"The Certificate Store does not contain any certificate"**

Error Screen:	
Solution 1:	Check whether the certificate has been expired. To check: Go to *Tools—>Internet Options—>Content—>Certificates—>Personal*—select the certificate and click on the view button. In General details tab, you will find the Validity Period of the certificate.
Solution 2:	Check whether the related certificate is imported/installed in the browser or not. If Not, then import the certificate in the browser or installed the token based DSC.

4 ANNEXURE I: JAVA CONSOLE SETTING

Advanced Tab Settings for JRE 1.8_60:

i. Go to Control Panel

ii. Click on Java

iii. Go to Advanced tab and update the settings as below

Properties:		Checked	Un Checked
Debugging	Enable Tracing	☑	
	Enable Logging	☑	
	Show applet lifecycle exceptions		☒
Java Console	Show Console		☒
	Hide Console	☑	
	Do not Start Console		☒
Default Java for Browsers	Microsoft Internet Explorer	☑	
	Mozilla family		☒
Shortcut creation	Always allow	☑	
	Always allow if hinted		☒
	Prompt User		☒
	Prompt user if hinted		☒

SEZ Online

	Never allow		☒
JNLP File / MIME Association	Always allow	☑	
	Prompt user		☒
	Never allow		☒
Application Installation	Install if hinted	☑	
	Install if shortcut created		☒
	Install if hinted and shortcut		☒
	Never install		☒
Secure Execution Environment	Allow user to grant permission to signed content	☑	
	Show sandbox warning banner	☑	
	Allow user to accept JNLP security requests	☑	
	Don't prompt for client certificate selection when no certificates or only one exists		☒
	Warn if site certificate does not match hostname	☑	
	Show site certificate from server even if it is valid		☒
Mixed code (sandboxed vs. trusted) security verification	Enable – show warning if needed		☒
	Enable – hide warning and run with protections	☑	
	Enable – hide warning and don't run untrusted code		☒

SEZ Online

	Disable verification (not recommended)		☒
Perform signed code certificate revocation checks on	Publisher's certificate only		☒
	All certificates in the chain of trust	☑	
	Do not check (not recommended)		☒
Check for certificate revocation using	Certificate Revocation Lists (CRLs)		☒
	Online Certificate Status Protocol (OCSP)		☒
	Both CRLs and OCSP	☑	
Advanced Security Settings	Enable the operating system's restricted environment (native sandbox)		☒
	Use certificates and keys in browsers keystore	☑	
	Enable blacklist revocation check	☑	
	Enable caching password for authentication	☑	
	Use SSL 2.0 compatible ClientHello format		☒
	Use TLS 1.0	☑	
	Use TLS 1.1		☒
	Use TLS 1.2		☒
Miscellaneous	Store user settings in the roaming profile		☒
	Place Java icon in system tray	☑	

SEZ Online

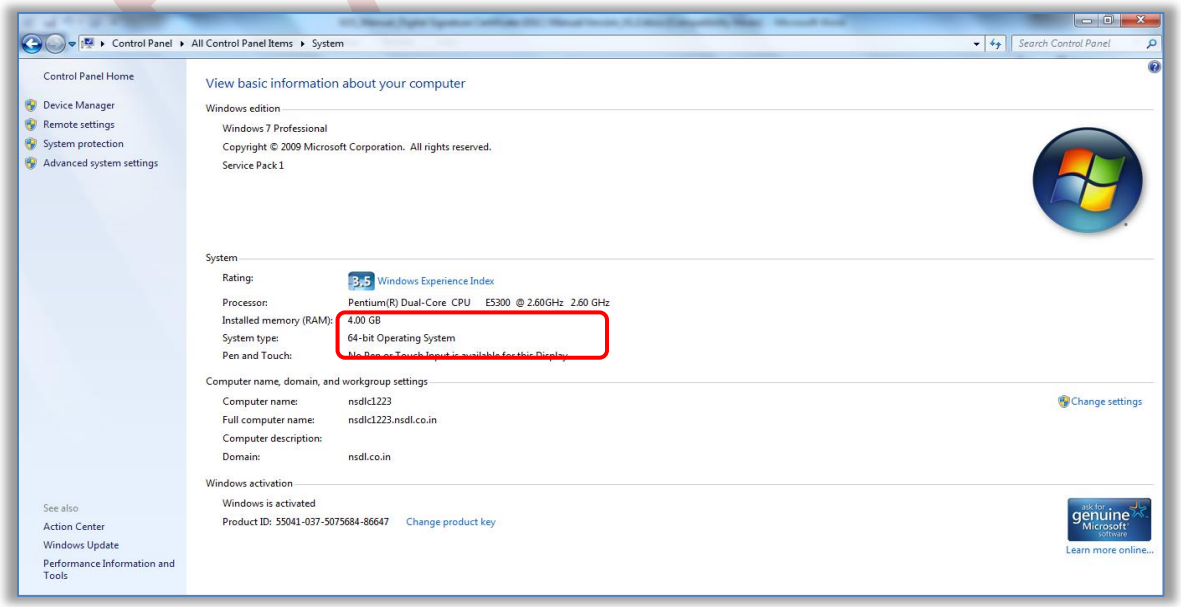
	Java Quick Starter		☒

5 ANNEXURE II: INSTALLATION OF JRE

Java Applet functionality is applicable to 64 bit windows operating system only. For 32 bit windows operating system "CAPICOM" functionality will work. In case of 64 bit OS, Java Runtime Environment [**JRE]** with **32 bit version** should be installed irrespective of the Internet Explorer bit versions.

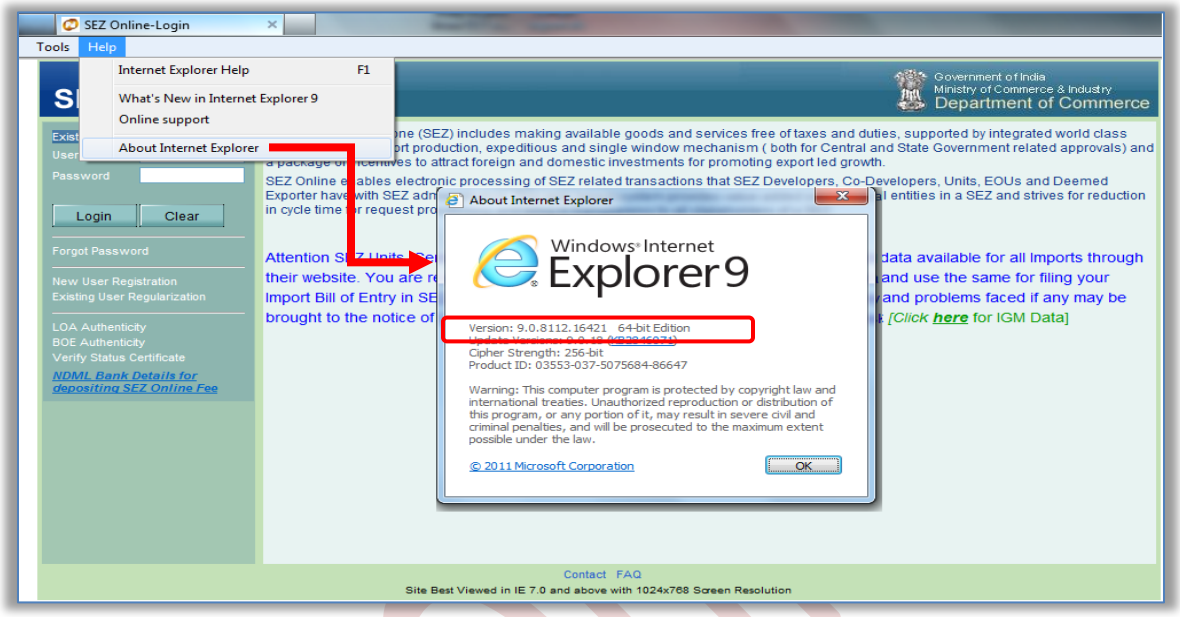
Case	Windows bit version	Internet Explorer bit version	Functionality	JRE bit version
1	32	32	CAPICOM	Not applicable
2	64	32	Java Applet	32
3	64	64	Java Applet	32

- To identify the bit version of the Operating system: Go to ***Control panel*** → ***System***

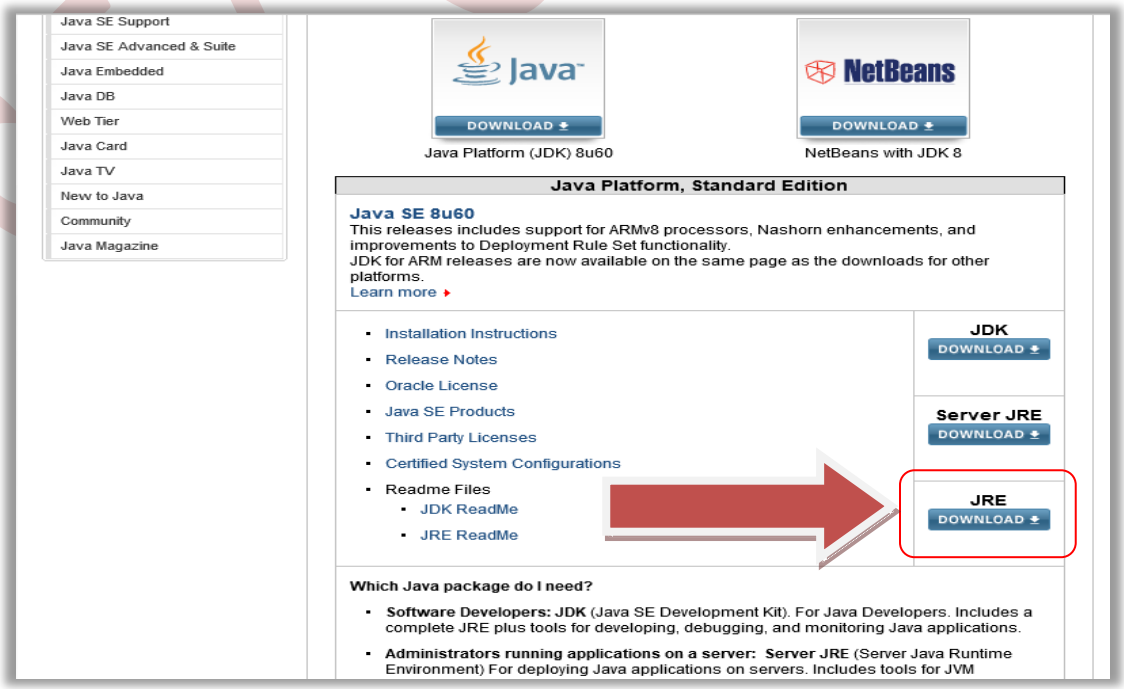


- To identify the bit version of the Internet Explorer :

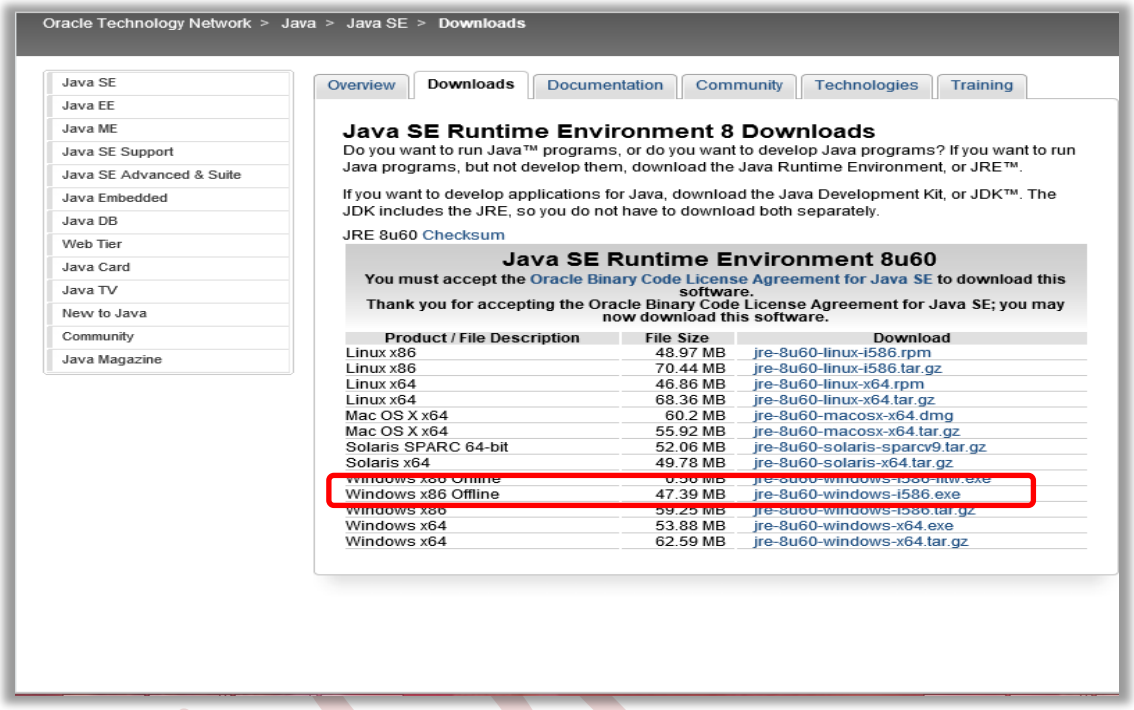
  Open ***Internet Explorer → Help → About Internet Explorer***



- JRE setup files can be download from below mentioned official web site:
  - Go to http://www.oracle.com/technetwork/java/javase/downloads/index.html
  - Click on JRE Download



- Accept License Agreement and download offline executable of 32 bit JRE version where “Product / File Description” is “Windows x86 offline”

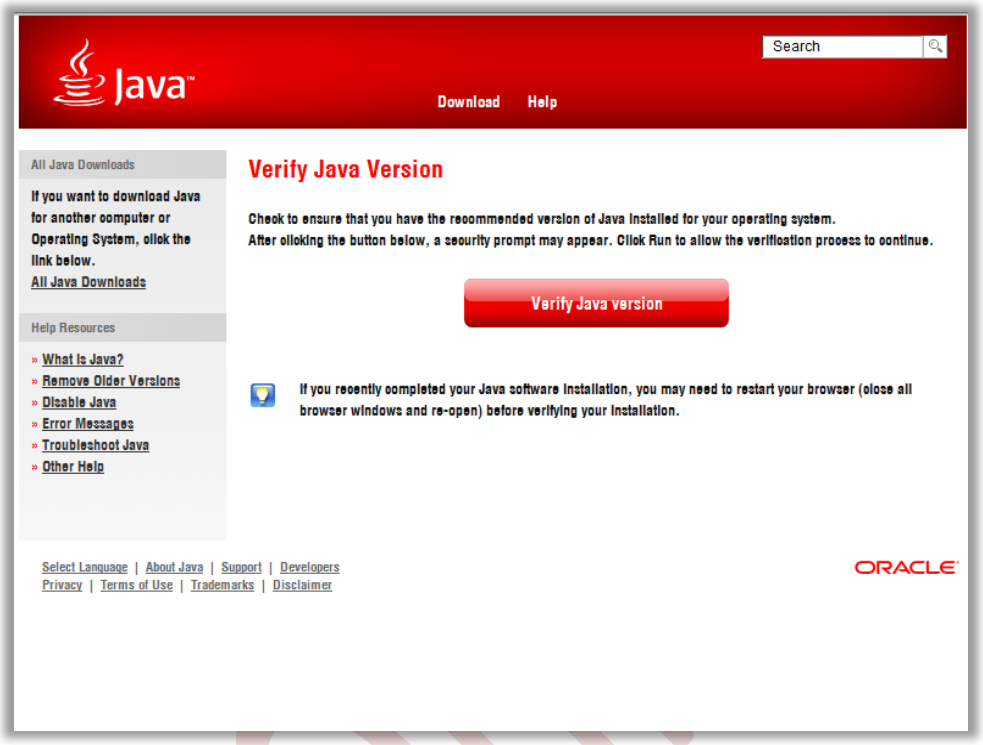


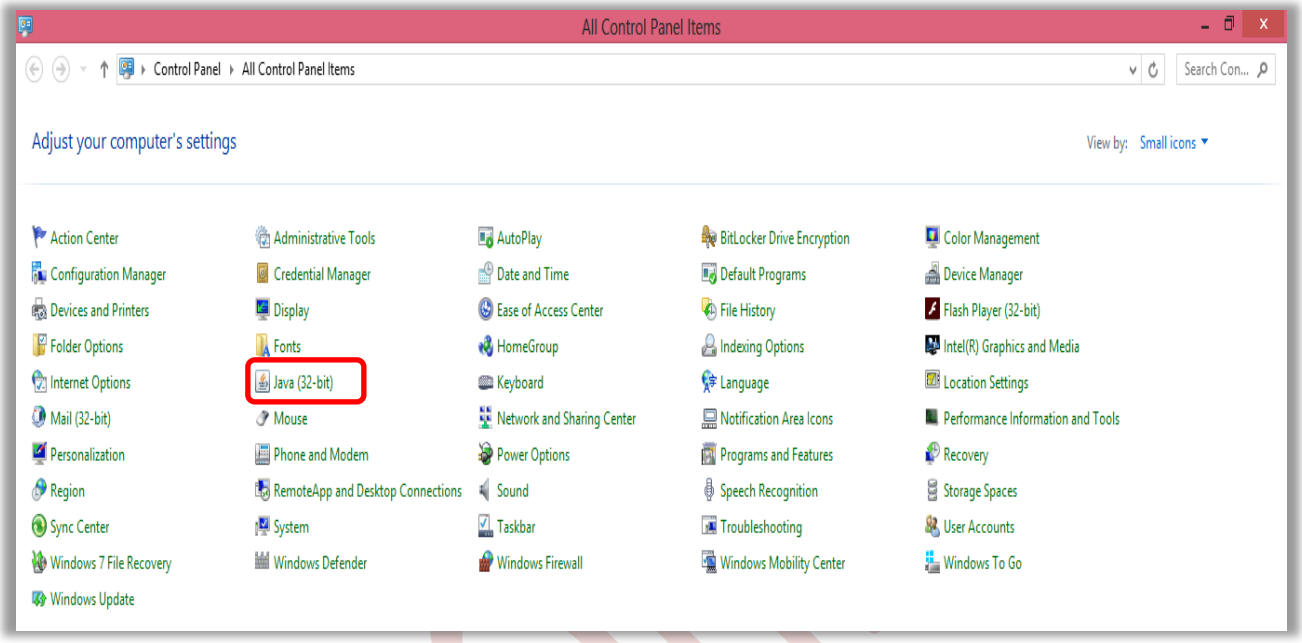
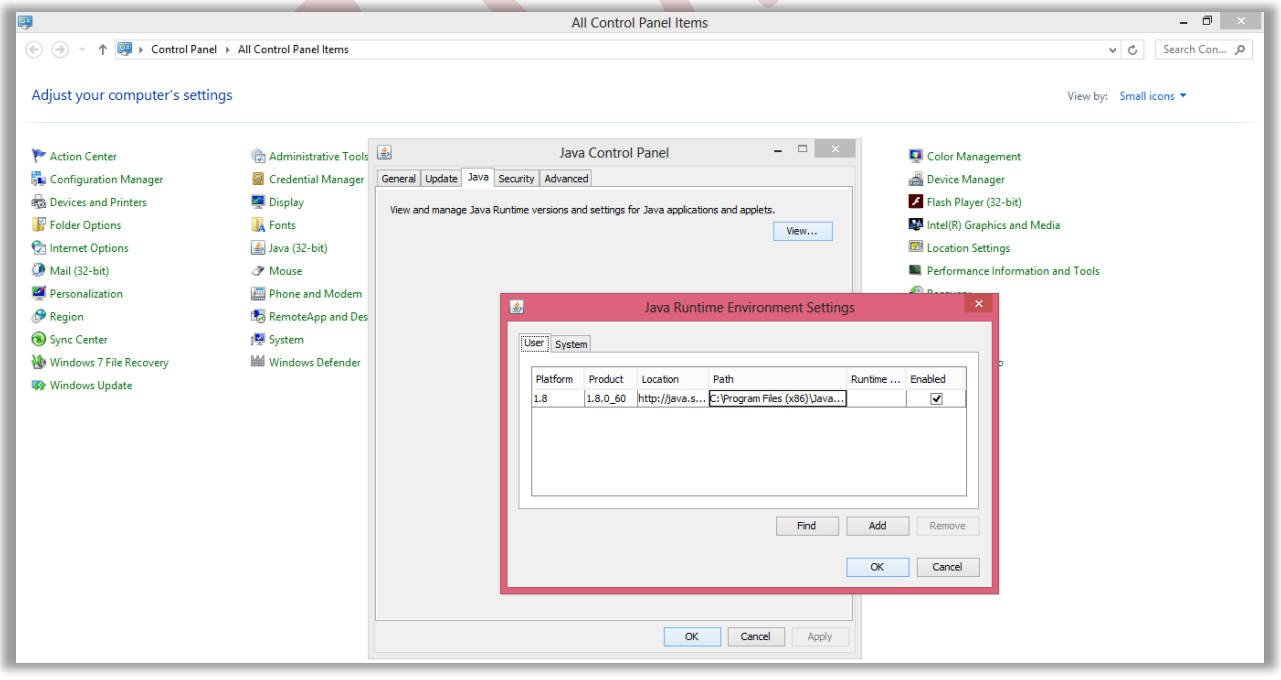
- **Installation Steps:**

Step 1: Download the files from above mentioned link or the setup files which are enclosed in the above table 1. Double click on the setup [**.exe**] file, installation will start.

Step 2: Click on Install button

Step 3: After Successful message, click on Close button. It will redirect to Java web site for Verification of Java installation as shown below. Click on "**Verify Java Version**"


Java
Search
Download
Help
All Java Downloads
If you want to download Java for another computer or Operating System, click the link below.
All Java Downloads
Help Resources
» What Is Java?
» Remove Older Versions
» Disable Java
» Error Messages
» Troubleshoot Java
» Other Help
Verify Java Version
Check to ensure that you have the recommended version of Java installed for your operating system.
After clicking the button below, a security prompt may appear. Click Run to allow the verification process to continue.
Verify Java version
If you recently completed your Java software installation, you may need to restart your browser (close all browser windows and re-open) before verifying your installation.
Select Language | About Java | Support | Developers
Privacy | Terms of Use | Trademarks | Disclaimer
ORACLE

Java
Search
Download
Help
All Java Downloads
If you want to download Java for another computer or Operating System, click the link below.
All Java Downloads
Help Resources
» What Is Java?
» Remove Older Versions
» Disable Java
» Error Messages
» Troubleshoot Java
» Other Help
Verified Java Version
Congratulations!
You have the recommended Java installed (Version 7 Update 25).
Windows Users: Improve the security of your computer by checking for old versions of Java and removing them using the Java Uninstall Tool.
Select Language | About Java | Support | Developers
Privacy | Terms of Use | Trademarks | Disclaimer
ORACLE

Confirmation about the Java installation will be displayed as shown above.
You can verify the Java version from Control Panel as follows: Go to **Control Panel → Java → Java Tab → View Button**