Date	2015/09/16	SR#	1-2235211175
Category	■FAQ □SOP	Related OS	N/A
Abstract	ADAM-6000(Java Applet based) Web Page Open Fail with Latest JRE 1.8 (Java 8)		
Keyword	ADAM, Java Applet, JRE, JAVA 8		
Related Product	ADAM-6000 Series		

■ **Problem Description:**

This document describes the workaround while encountering ADAM-6000(Java Applet based HTML Application) web page open fail under Java JRE v1.8(or later) environment.
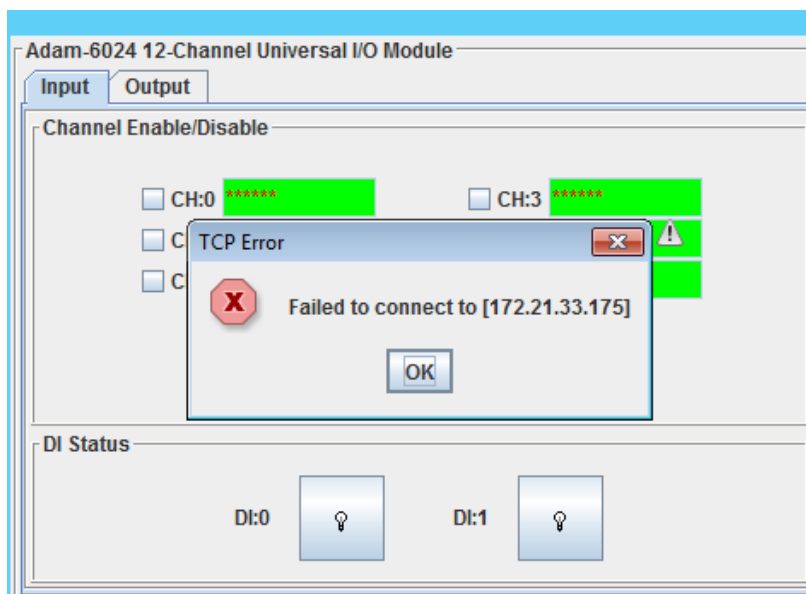

■ **Brief Solution - Step by Step:**

Table below describe support status of Java Applet based HTML application among ADAM-6000-BE, ADAM-6000-CE and 6200 series.

	ADAM-6000-BE	ADAM-6000-CE	ADAM-6200
HTML/Java Applet	Yes	Yes	No
HTML5/Java Script	No	Yes	Yes

In some cases, for user who open web page by applying Java Applet based HTML application under Java JRE v1.8(or later) environment, it may encounter web page open fail with error message "Failed to connect to IP[X.X.X.X]" as shown below.
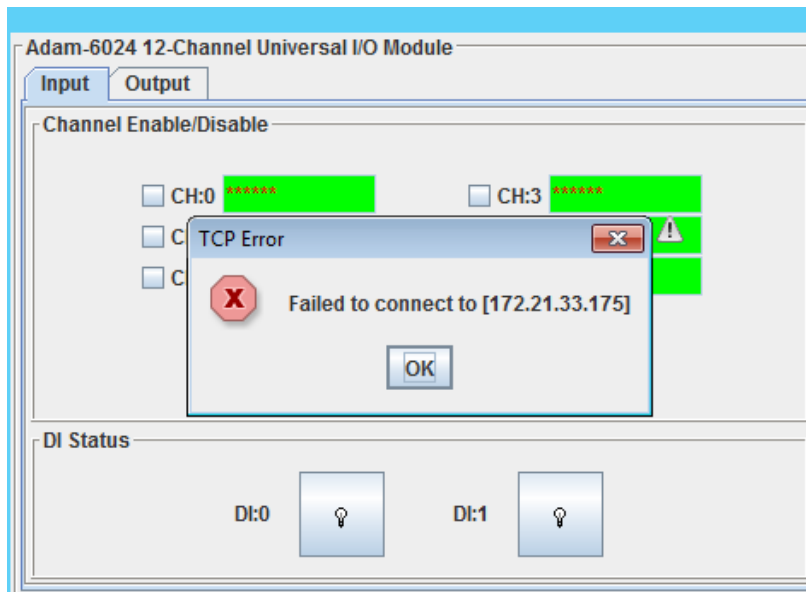
The real problem is somehow <u>Java Applet</u>(i.e. socket based) application cannot pass-through security policy which changed in Java 8(i.e. JRE v1.8).

JRE version of your working station can be checked from Java Control Panel
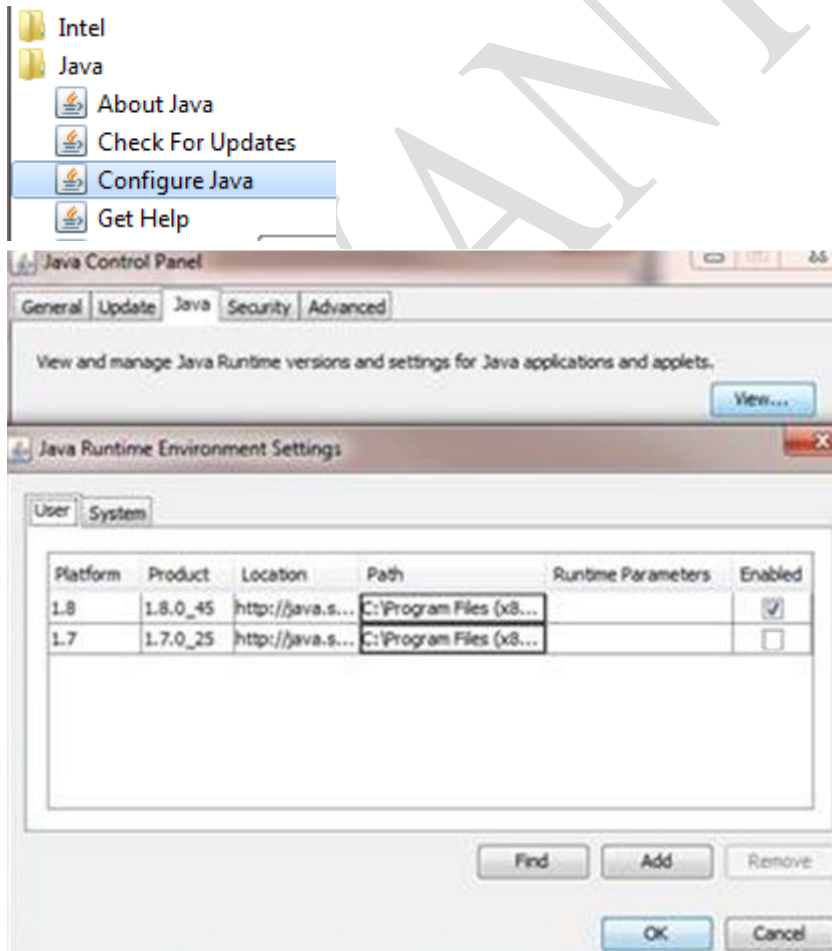
While issue is happening, an error message can also be observed
"java.security.AccessControlException: access denied...." from Java Console.

===================Error Message From Java Console======================

Java Plug-in 11.45.2.15

JRE Version 1.8.0_45-b15 Java HotSpot(TM) Client VM

--

CacheEntry[http://172.18.3.240/Adam6060.jar]: updateAvailable=true,lastModified=Sun Sep
25 01:00:00 CST 2005,length=31295

0

Initialization...

*Exception in thread "AWT-EventQueue-2" **java.security.AccessControlException: access denied***
("java.net.SocketPermission" "172.18.3.240:1025" "connect,resolve")

       at java.security.AccessControlContext.checkPermission(Unknown Source)

       at java.security.AccessController.checkPermission(Unknown Source)

       at java.lang.SecurityManager.checkPermission(Unknown Source)

       at java.lang.SecurityManager.checkConnect(Unknown Source)

       at sun.plugin2.applet.SecurityManagerHelper.checkConnectHelper(Unknown
Source)

===================Error Message From Java Console======================

The link below explains the root cause of seeing this error in Java 8, which specifically point
out the way of "creating new socket" is no longer applicable in Java 8.
Only allows the creation of using URL, such as RESTFul way.

http://stackoverflow.com/questions/23189650/new-java-security-accesscontrolexception-in-java-8

- For sandbox RIAs, `URLPermission` is now used to allow connections back to the server from which they were started. `URLPermissions` is granted based on protocol, host and port of the code source. This change has the following implications:

  - For sandbox RIAs, `SocketPermissions` for the origin host is no longer granted. Calls from JavaScript code to the RIA are not granted `SocketPermissions` beginning with JDK 8.

  ...

In other words, you cannot create a new `Socket` in a sandbox anymore. You can only create a `URL` using the same host, *same port*, and *same protocol* as the codebase from a fully sandboxed applet then.

Unless Oracle changes its mind, there is no way for a sandboxed applet to get around this (otherwise it would render the entire security concept broken).

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■ **Workaround:**

For issue encounter with ADAM-6000-BE or ADAM-6000-CE units(Java Applet based HTML),
customer may either:

a)   Downgrade to Java 7, OR
b)   Download HTLM5(Java Script) from Advantech website and update accordingly.

Link below is example where to download HTLM5(Java Script) of ADAM-6052-CE from
Advantech support portal web site.

http://support.advantech.com.tw/support/DownloadSRDetail_New.aspx?SR_ID=1-NQ1WN&
Doc_Source=Download

ADAM-6052 HTML5 file (CE version)

Solution :   HTML5 file for ADAM-6052 (CE version)

Download File	Released Date	Download Site	
ADAM6052-Version1.00.html	2014-03-19	Primary	Secondary

ADAM-6052 Firmware (CE version)

Solution :   Firmware for ADAM-6052 (CE version)

Download File	Released Date	Download Site	
ADAM6000_DIO_v504B01_UT.bin	2014-08-12	Primary	Secondary