

Title: **Installing and Configuring the Aquarius client**

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3 Document Control

Description	Author / Reviewer	Date
Version 1.0 This document supercedes the following items:- <ul style="list-style-type: none">o 'System Configuration and Troubleshooting the Installation of eProducts Internet.doc'o 'System Configuration and Troubleshooting the Installation of eProducts Intranet.doc'	Geoff Norton	20-08-2008
Version 1.1 <ul style="list-style-type: none">o Added section 9 - Contacts	Geoff Norton	26-08-2008
Version 1.2 <ul style="list-style-type: none">o Added to section 6.1 – Java Runtime Issue	James Smith	17-12-2008

4 References

Item	Title	Author	Date
1	http://www.java.com/en/download/help/5000020300.xml	Sun Microsystems	
2	http://java.com/en/download/help/index_installing.xml	Sun Microsystems	
3	http://www.java.com/en/download/help/index_configuration.xml	Sun Microsystems	
4	http://java.com/en/download/help/5000040200.xml	Sun Microsystems	

5 Introduction

5.1 Document Purpose

This document describes the steps required to install the Aquarius client software. A 'troubleshooting' section is also provided at the end of this document.

5.2 Overview

The Aquarius client is a custom Applet and is available to authorised users from Health Solutions Wales Internet and Intranet sites¹. The client is required to use Health Solutions Wales 'eProducts' applications such as 'eHealthshow' and the 'Welsh National Database for Substance Misuse'.

5.3 Intended Audience

This document is intended for registered users of HSW 'eProducts' applications, P.C. technicians and Network analysts. Familiarity with the following concepts and technologies is recommended:-

- TCP/IP and HTTP networking protocols
- Network level infrastructure including firewalls and proxy servers
- The Java Runtime Environment and Java Control Panel.

If you are accessing the 'eProducts' applications behind a corporate firewall we recommend you contact your network administrator or P.C. technician.

If you are not a registered user and would like more information on HSW 'eProducts' applications or how to register please contact:-

<p>Information Products Unit Health Solutions Wales Brunel House 2, Fitzalan Road Cardiff CF24 0HA Tel: 0292050 0500 WHTN: 1790 100</p>

¹ Please contact the Client Services Team. See the 'Contacts' section below.

6 Installation & Configuration

6.1 Prerequisites

To install Aquarius a number of prerequisites must be in place:-

1. A P.C. running suitable web browsing software. The browser must be configured to enable **Cookies**, **Java** and **JavaScript**. The address of the 'eProducts' web site must be added to the browser's **Popup Blocker settings**.
2. The P.C requires a connection to the NHS DAWN2 network and DNS server² with any local Firewall, Proxy or DNS servers configured to allow access to the Aquarius server.
3. Java Runtime Environment (JRE) version 1.5 or later.

Please Note: The Aquarius developers have stated that the applet is experiencing issues with Java Runtime Environment at version 1.6.0_10 and higher. The issue has been noted and will hopefully be rectified soon. In the mean time users are advised not to upgrade Java Runtime Environment beyond V1.6.0_7 (which was the last known compatible version) until further notice.

We advise that in order to prevent the above from occurring, users can disable the automatic update facility in Java's settings. This is accessible through the update tab where the "Check for Updates Automatically" can be unchecked.

² In the case of the Welsh National Database for Substance Misuse only a connection to the public Internet is required.

6.2 Installation

1. First navigate to the appropriate eProducts application. Assuming the browser is configured to accept applets the applet is installed immediately. For security reasons the applet is signed by Health Solutions Wales. If the applet has not been installed previously the following security dialogue appears:-



Figure 1 Applet Security dialogue

2. If you are happy to accept the applet click **Run** to begin the install.
3. After installation the JRE 'caches' or stores the applet on the client P.C thus preventing the need to install the client each time you visit the page. Reinstallation is not required unless the applet is updated. A standard Java dialogue (like that shown below) displays the installation's progress.



Figure 2 Applet installation dialogue

4. On completion the eProduct application is displayed. The picture below shows the 'Welsh National Database for Substance Misuse'.

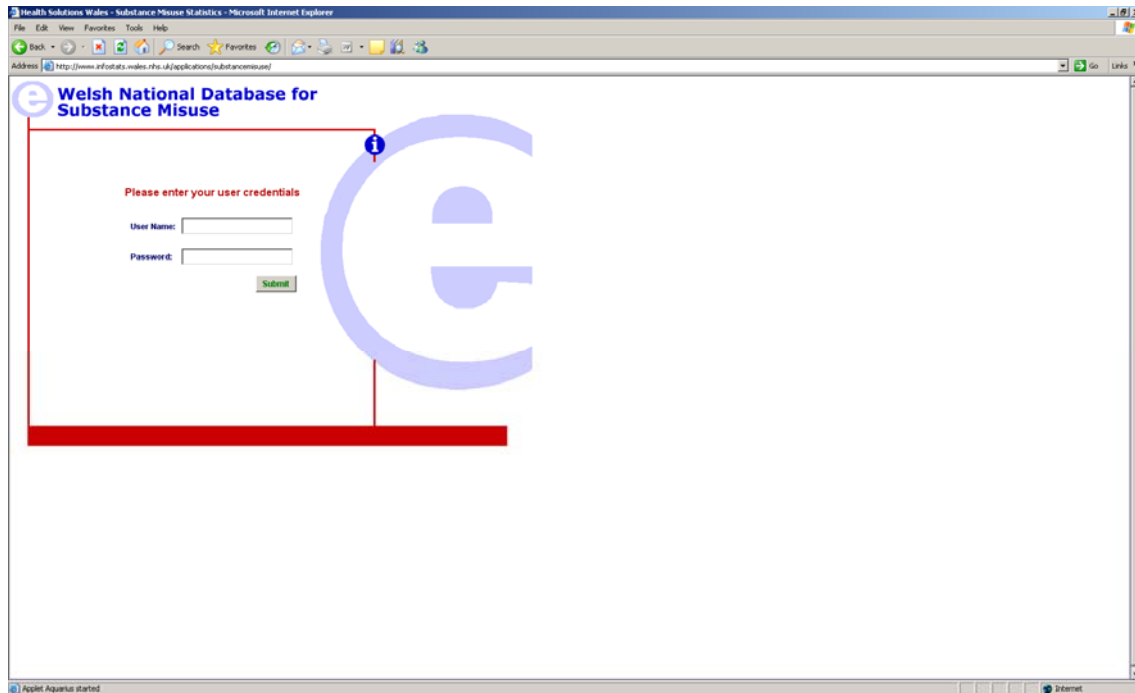


Figure 3 Welsh National Database for Substance Misuse

6.3 Clearing the JRE's Cache

It is unlikely that you shall ever need to clear the JRE's applet cache because each applet is dynamically updated if the JRE detects a newer version on the web server. However, you may wish to occasionally clear the cache to ensure you are using the very latest version. For information on how to clear the JRE cache see the 'References' section.

7 Troubleshooting

7.1 The applet doesn't install.

This problem occurs when the JRE is not installed and results in a variety of blank screens as shown in below³.

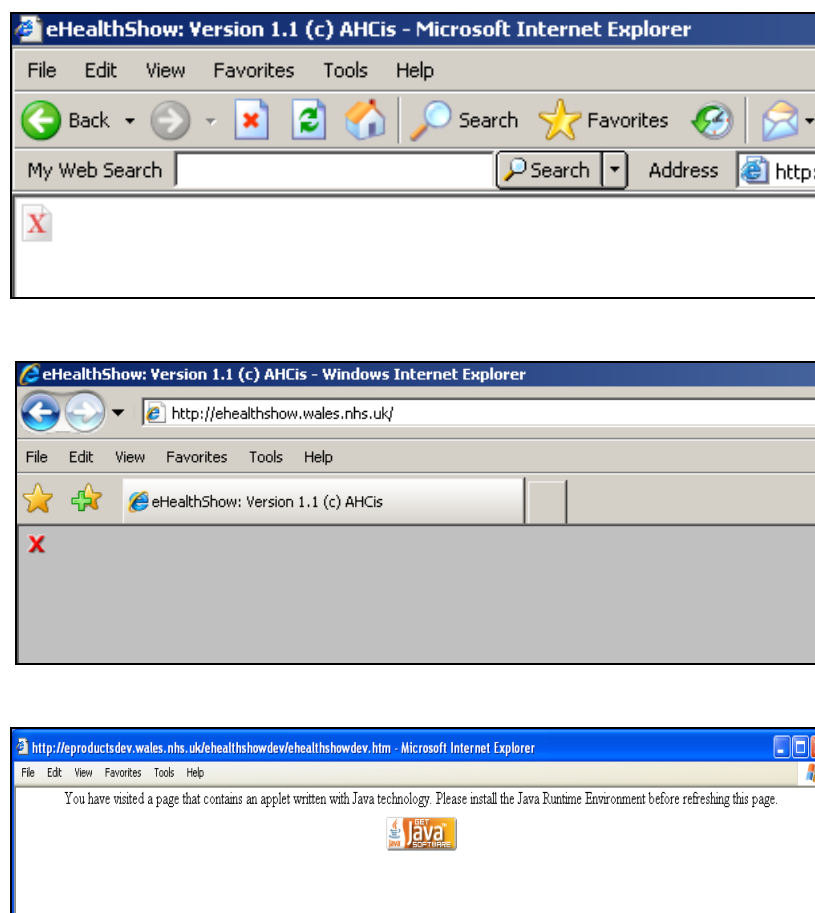


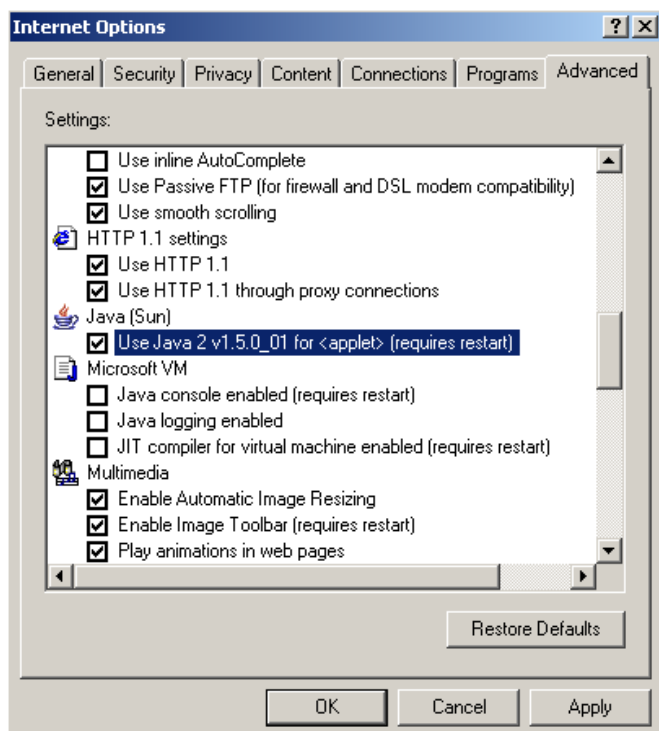
Figure 4 Java Plug-in not installed

Download the JRE and ensure your browser is configured to use it. The instructions on the following page describe how to configure Microsoft Internet Explorer to use the JRE.

³ The actual screen displayed varies depending on the software configuration of the P.C.

7.2 Configuring MSIE for the JRE

- In **Internet Explorer (MSIE)**
- Open the **Internet Options** dialogue box: Select **Internet Options** from the **Tools** menu.
- In the **Advanced** tab tick the **Use Java....** checkbox (situated underneath the **Java (Sun)** heading - as shown below.)



- Select **Apply** and **OK**
- Please note '**requires restart**' refers to the MSIE browser window and not your machine. Just close any currently open MSIE browser windows and open a new browser window to retry.
- If the problem persists check that the Java Control Panel is configured correctly.

Figure 5: MSIE Internet Options dialogue box.

7.3 Java applet fails to load

This problem occurs when the browser is not configured to allow scripting applets. The browser window appears as a blank grey screen and the error message '**load:class bbMain not found**' appears in the status bar.

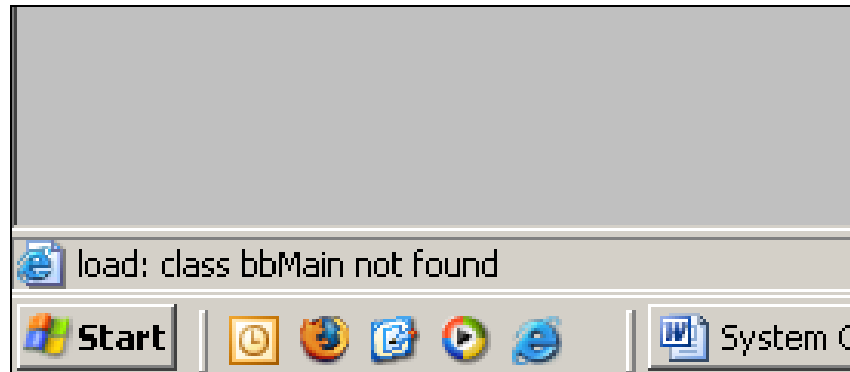


Figure 6: Java applet fails to load

To enable scripting applets in MSIE:-

- First make a note of the **Web content zone**. This is located on the right-hand corner of the MSIE status bar. In our example the **Web content zone** is set to **Local intranet**.

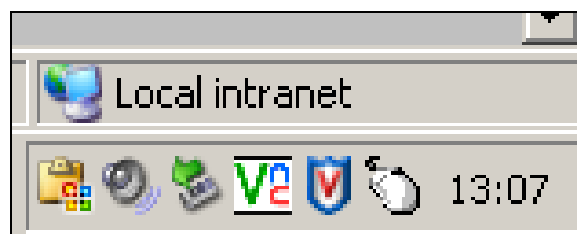


Figure 7: Internet Zone

- Open the **Internet Options** dialogue box. Select **Internet Options** from the **Tools** menu.
- In the **Security** tab select the appropriate **Web content zone** and click the **Custom Level** button to open the **Security Settings** dialogue box.

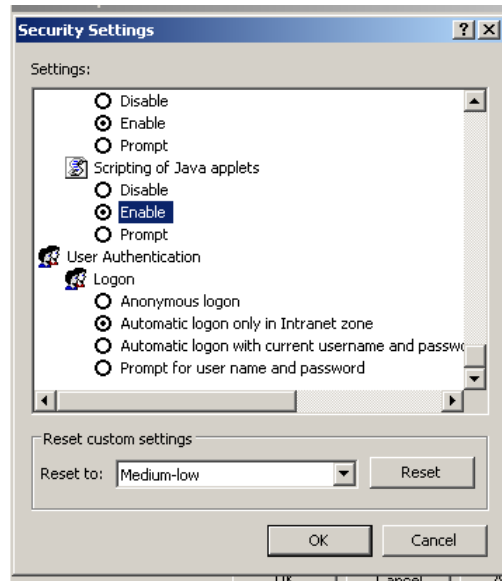


Figure 8: MSIE Security Settings Dialogue Box

- Scroll down to **Scripting of Java applets**.
- Make sure the **Enable** radio button is checked.
- Click **OK** to save your preference.

7.4 'AE:1 Connection Failure' error displays in the browser window.

This is a very common error when attempting to use the Aquarius client through a corporate proxy server or firewall. Once loaded, the applet attempts to establish a connection to a bespoke Java server using a protocol known as the **Transfer Control Protocol (TCP)**. This connection is made using the following information, passed to the applet via HTML parameter tags:-

```
<param name="ServerIP" VALUE="<appropriate e-products domain name>">  
<param name="ServerPort" VALUE="<appropriate e-products port number>">
```

The domain name points to a machine IP address or more frequently a domain name. The port number is specific to the e-products application. If it cannot establish this connection the following error message is displayed:-

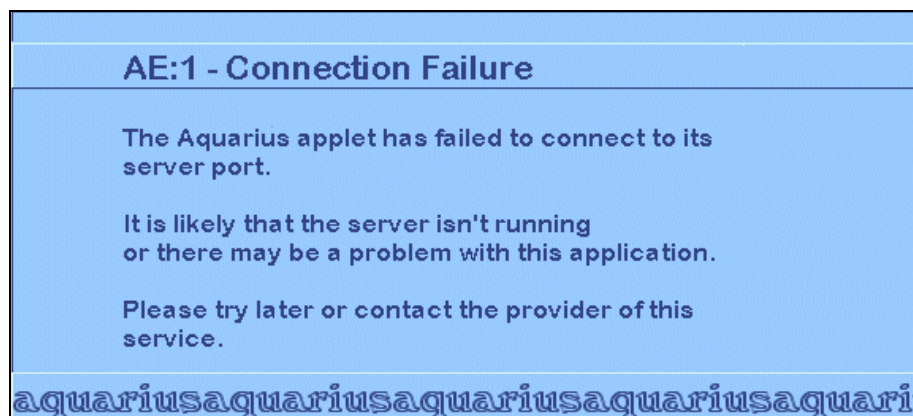


Figure 9: 'AE:1 - Connection Failure' displays in the browser window.

There are a number of possible reasons why the applet could not establish a connection. The most common are:-

- The corporate proxy or firewall is not configured to allow TCP/IP connections to the server IP or DNS from the client machine.
- The JRE is not configured to connect to the proxy server.

First check that any local or corporate firewall or proxy software is not preventing the applet from establishing a TCP/IP connection with the server. Secondly check that the JRE is configured to use the corporate proxy (if applicable.)

7.5 Java Applet Error

The following error occurs:-

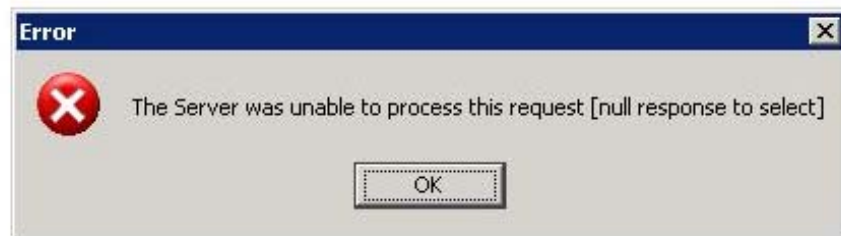


Figure 10 'Java Applet error'

Once the Java applet has established a connection to the application server it makes an initial request for data. For example, in the case of ePEDW it attempts to upload the dictionary. If the client does not receive a response, a message is displayed to the user (as shown above.) and an error logged in the Sun Java console (as shown below.)

```
***** PEDW *****  
-----> PEDW  
isRolap = false  
Loading Data Dictionary...  
Error in number format - [null] - null  
java.lang.NegativeArraySizeException  
at olap.aquariusDict.loadDictionaries(aquariusDict.java:225)  
at mss.bbMainApp.loadApplication(bbMainApp.java:390)  
at mss.bbMainApp.init(bbMainApp.java:323)  
at bbMain.start(bbMain.java:216)  
at sun.applet.AppletPanel.run(Unknown Source)  
at java.lang.Thread.run(Unknown Source)
```

Figure 11 Sun Java Console error

Again please check you have the access to the domain name specified by the parameter value '**Server IP**' and make sure no firewall or proxy software is preventing access on the port number specified by the parameter value "**Server Port**".

For more information on troubleshooting please refer to the 'References' section.

8 Using the Sun Java console

The Sun Java console displays messages received from the Sun JRE. The picture, below, shows the console displaying a Java *'IO Exception Error'* caused because a Proxy server is preventing the applet establishing a connection with the 'Aquarius' server.

In this instance any Personal Firewall software or Proxy Server settings **MUST** be configured to provide access to the **ServerIP** and **Server Port** described earlier.

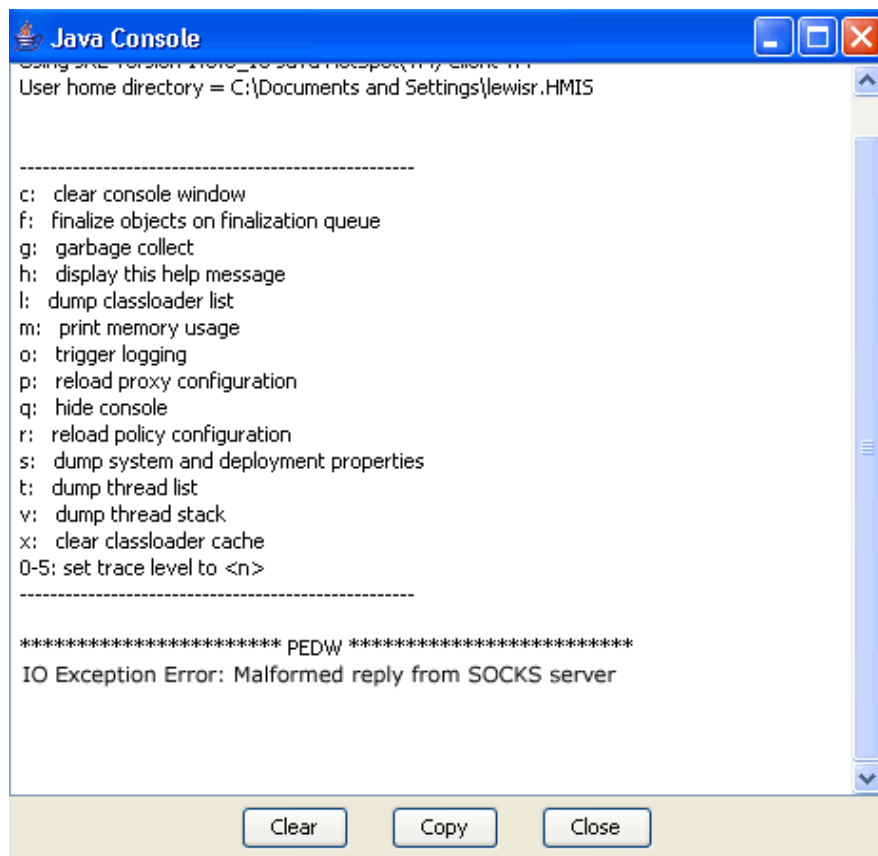


Figure 12: 'IO Exception Error: Malformed reply from SOCKS server' displays in the Sun Java console window.

Using MSIE you can view the Sun Java console by taking the following steps

- Select **Sun Java Console** from the '**Tools**' menu.

9 Contacts

Name	Role	Email
James Smith	Senior Software Developer	James.Smith@hsw.wales.nhs.uk