

# Opendiem Training

## Exercise 1

Opendiem-TRN-0001

Revision	5.0.0		
Status	Initials	Date	Comment
Released	RAC	11/12/2010	Updated format and content



Engine



Connect



Designer

## Exercise 1 - Accessing the Opendiem Server through a Standard Web Browser

### Introduction

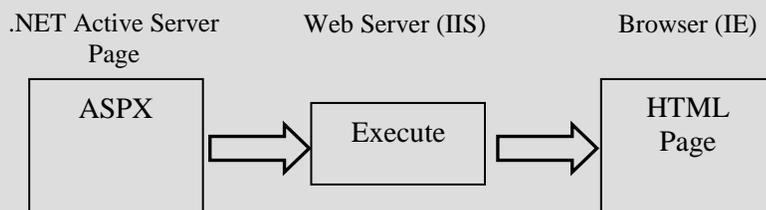
Opendiem screens are displayed in any compatible Web Browser such as Microsoft® IE and Google® Chrome. When a browser connects to the Opendiem Server a HTML page is loaded which contains tags instructing the browser to load the Opendiem Client application into the browser's Java® Virtual Machine. The Opendiem Client application then provides a Human Machine Interface (HMI) Graphical Presentation & Interaction with the Opendiem Engine via Connected drivers. The client handles real-time data from the Server, providing real-time updates in the Web browser.

The Client application resides on the Server and is automatically downloaded by the browser, removing the need for any additional software to be installed on the client PC. Updates to the Client need only be applied at the Server, reducing the Total Cost of Ownership.

### Additional Information

#### Active Server Pages

When a browser connects to the Opendiem Server, a .NET Active Server page is actually requested. This contains program code that is executed on the web server which then returns a HTML page to the browser. This is shown in the diagram below.





Engine



Connect



Designer

Opendiem-TRN-0001

## OPENDIEM TRAINING EXERCISE 1

---

### Objective

---

In this exercise you will connect to the Opendiem Server using a standard Web Browser (Microsoft® IE) and display Opendiem Screens containing live data from the network.

---

### Exercise Information

---

What comes with the Opendiem Suite?

#### Hardware

Customer provided\* meeting the following suggested requirements.

*(Note that the critical nature of the systems under control should dictate the complexity of the server running the Opendiem Suite of applications).*

- Pentium 4 class CPU, 2.8GHz; 2GB RAM; 160GB Hard Disk Drive; 10/100/1000 BaseT Network Interface Card or Wireless Network Connection.

#### Software

Customer provided\* meeting the following suggested requirements.

- Operating Systems: Microsoft Windows Server 2003; XP Professional, SP3; Windows7; Windows Server 2008\*\*, IIS is installed and .NET 2.0 (including ASP.NET, Java by Sun/Oracle).

\* Building Clouds can provide a turn-key hardware/software solution.

#### Configuration of the Opendiem Software Suite

The final configuration of the software suite depends on the requirements of the end user(s). Please refer to the published price list from Building Clouds for all possible configurations.



Engine



Connect



Designer

Opendiem-TRN-0001

## OPENDIEM TRAINING EXERCISE 1

### Additional Information

#### Setting Browser Security

When a browser downloads the Opendiem Client Software from a Server the browser performs additional security steps before allowing the Client software to run, introducing a slight delay before the user can access the Opendiem data. Changing the Server to a trusted site will reduce this delay, in some cases significantly.

#### Setting the Server to a Trusted Site in IE8

From the Tools menu in IE8 select 'Internet Options...'. Select the 'Security' tab and then select 'Trusted Sites'. Click on 'Sites...' Ensure that the 'Require server verification (https:)' for all sites in this zone' is **unselected**. Enter the IP address of Opendiem Server in the 'Add this website to the zone' box and click 'Add'. Click 'Close' then select 'OK'.



Engine



Connect



Designer

Opendiem-TRN-0001

## OPENDIEM TRAINING EXERCISE 1

### Background Information

#### Opendiem Client Security

When a client connects to the Opendiem Server the user needs to feel confident that the Opendiem Client software will not pose a security risk to their computer. Specifically, the user needs assurance that the Client software will not disclose any information from the computer and will not be able to access the local machine's file system or introduce a virus. For this reason the Opendiem Client Software is implemented in Java. Security is an integral feature of the Java platform. The Java security model offers a variety of ways to inspect, review, and restrict the execution of applications. In contrast, the binary security model, as used by for example ActiveX controls, offers only a small fraction of Java's capabilities, and in some instances, offers no security at all.

#### The Java Security Model

Java's security model differs greatly from traditional approaches. First, most operating systems permit applications broad access to system resources. Administrators must rely on the users to ensure that resources are adequately protected (e.g., permissions are set correctly). Second, it is usually incumbent upon users to verify a program's veracity before executing it (e.g., performing a virus scan). This approach has two obvious drawbacks: it relies on the user to perform the verification, and it relies on the accuracy of the verification software itself. Java however takes a much more proactive approach. Java allows users to download and execute un-trusted applications without undue risk by restricting such code to its own sandbox. Applets may wreak havoc in their own sandbox, but they cannot disrupt or affect any other sandboxes. Furthermore, restrictions may be placed on what the application can do within their own sandboxes. Thus, the Java Virtual Machine can allow un-trusted applications to execute in a trusted environment, without fear of corruption or subterfuge.

Java is a free download from <http://www.java.com>



Engine



Connect



Designer

Opendiem-TRN-0001

---

**OPENDIEM TRAINING EXERCISE 1**

---

Notes:

---

---

**Version 5.00 November 2010**

All Rights Reserved. Copyright © 2010 Building Clouds. Information contained in this document regarding device applications is intended through suggestion only and may be superseded by updates. No representation or warranty is given and no liability is assumed by Building Clouds, Inc. with respect to accuracy or use of such information or infringement of patents arising from such use or otherwise. Use of Building Clouds products as critical components in life support systems is not authorized except with expressly written approval by Building Clouds. No Licenses are conveyed, implicitly or otherwise, under any intellectual property rights.

All Trademarks mentioned herein are the property of their respective companies

---

**Building Clouds, Inc.**

3229 Whipple Road  
Union City, CA 94587

Email: [sales@buildingclouds.com](mailto:sales@buildingclouds.com)

<http://www.buildingclouds.com>