



Description: Using Terminal Services to redirect WebHMI clients inside a Local Area Network (LAN) out to the World Wide Web.

OS Requirement: The WebHMI client must be a Windows 2000 Server or Windows 2003 Server (supporting Terminal Services).

General Requirement:

- General knowledge of (and the ability to configure) GENESIS32, WebHMI, Windows Terminal Services.
- The WebHMI client will need Internet Explorer 5.5 or more recent.
- The GENESIS32 system, WebHMI server, and WebHMI client must all be on an intranet or local area network.
- The WebHMI client/Terminal Server should have an Internet connection.

The Redirection Approach

The use of WebHMI allows GENESIS32 applications to be Web enabled by using GenBroker technology. GenBroker communications occur over Internet port 38080 by default. For this reason, in order to use WebHMI across the World Wide Web, users must open port 38080 in their firewalls to the outside world.

Windows Terminal Services opens a window for using WebHMI across the World Wide Web without having to lessen your security by opening a port other than the HTTP port (80), by allowing copy sessions of the WebHMI client across the Internet.

Network Setup

The setup involves a GENESIS32 system and a WebHMI server (may be one and the same), a WebHMI client that is a Terminal Server, and any number or Terminal Clients across the Internet. An example of this setup is shown in **Fig. 1**.



Fig. 1: Example of Network Setup

NOTE: Using this method of redirecting WebHMI via Terminal Services allows a firewall to exist between the WebHMI client and the World Wide Web with no special ports opened.

WebHMI Server Setup

The following should be done on the WebHMI Server machine:

1. Develop network aware displays and publish them to WebHMI, with reference to the **default.gbx** configuration file (created and configured during installation).
2. Run the GenBroker Server, which can be started from GenTray as shown in **Fig. 2**.

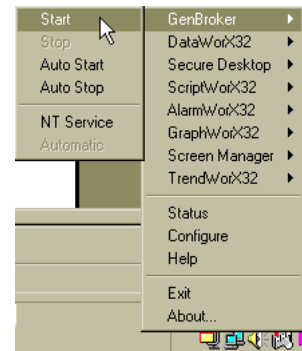


Fig. 2: Start GenBroker from GenTray

3. For more information on setting up the WebHMI Server and preparing it for clients, see the applications note entitled "**WebHMI – Setting up the Web Server and Client**".

Terminal Server (WebHMI Client) Setup

The Terminal Server will act as the WebHMI client, and will need Internet Explorer 5.5 or above in order to view your WebHMI displays. Each time a terminal client logs into a terminal session and browses to WebHMI displays through by launching the Internet Explorer on the Terminal Server, that terminal session will become a WebHMI client.

Enabling Windows Terminal Services in Application Server Mode:

You should enable Terminal Services in Application Server Mode so that applications (in this case Internet Explorer) can have multisession access. This will allow terminal clients to run



Internet Explorer inside a terminal session, and multiple instances of Internet Explorer can run at a time.

NOTE: Terminal Services and Terminal Services Licensing can be enabled when Windows 2000/2003 Server Setup is run, or after Windows is installed. For instructions on enabling Windows Terminal Services after Windows is already installed, refer the **Microsoft Windows 2000/2003 Server Documentation** on enabling Terminal Services in application server mode. This documentation can be found on www.microsoft.com/windows.

Terminal Clients

Terminal clients are machines that have the terminal client software installed on them. They serve as dumb stations that use none of their system resources to run GENESIS32 and or other applications on the server. They return mouse clicks and screen updates to the server. By logging into a terminal session from a terminal client, you are actually logged into the server itself. For this, all you need to have is a Power User account on the server (discussed earlier).

Refer to Microsoft documentation and support for information on setting up terminal clients. They can be Windows based machines, or much more stripped down operating systems.

Licensing Information

Because each terminal client is essentially a WebHMI client, you will need licensing to cover each of your terminal clients as full WebHMI clients. Just like WebHMI, however, these client licenses are not specific to a particular machine or user.

When you purchase a license for WebHMI, you will receive licensing for two simultaneous client connections automatically, and **WebHMI** will be checked in your **License Utility** as shown in **Fig. 3**. If you are using Terminal Services for redirection as described here, this license will allow two simultaneous terminal sessions running WebHMI displays. So, as far as ICONICS licensing is concerned, you do not need any additional, or special licensing as compared to a setup with Terminal Services.

Terminal Services itself needs to be license through Microsoft as well in order be allowed enough simultaneous terminal sessions to be running for your application. Contact Microsoft for more information.

For More Information

If you have further questions which have not been answered in regards to using ICONICS applications on Windows 2000 terminal server, please contact our Technical Support Department: support@iconics.com.

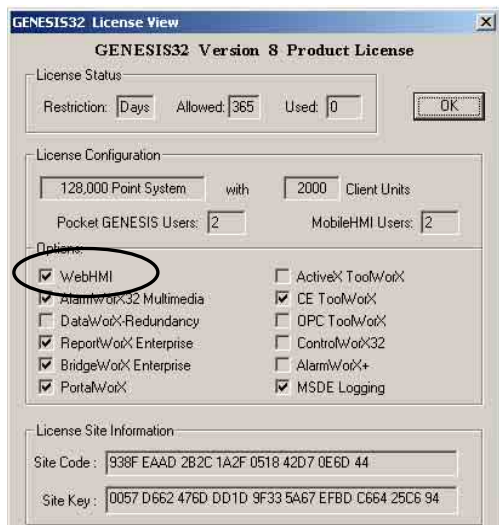


Fig. 3: License Utility with WebHMI License