Description: Guide to using GENESIS32 with Windows Terminal Services
**OS Requirement:** Windows Server 2003
General Requirement: General understanding of GENESIS32 and some understanding of Windows Terminal Services.

Introduction

Windows Terminal Services is a thin client technology that allows remote application execution on a Windows 2000/2003 based server from a wide range of devices over virtually any type of network connection. With the integration of Windows Terminal Services into the core server operating system, you can choose to deploy the latest Windows-based applications, like GENESIS32, in a fully server-centric mode where applications run entirely on the server. This would mean using the server's memory and system resources even while logged in from another computer.

An immediate advantage is that when Terminal Services is enabled on Windows 2000/2003 Server, administrators do not have to install GENESIS32 (or any Windows-based 32-bit applications) on each desktop computer. Instead, the application is only installed on the server, and the clients automatically have access to the new or upgraded software package through Terminal Services Client software.
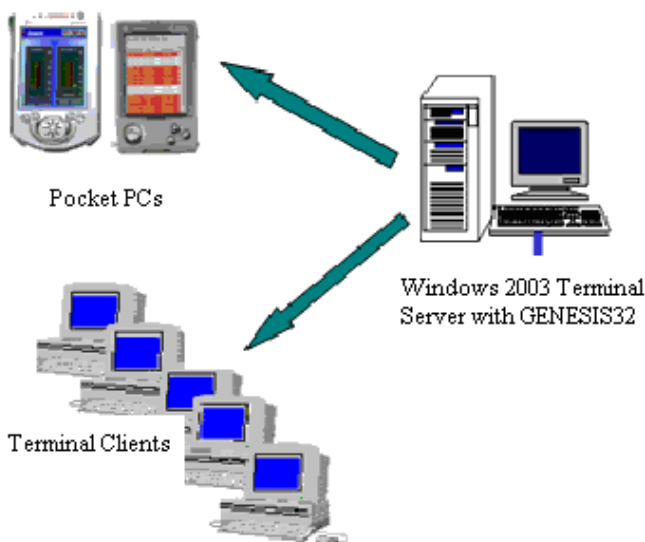

Figure 1 - Windows Terminal Services

Enabling Terminal Services

1. Go to Start → Settings → Control Panel → Add/Remove Programs.
2. Click Add/Remove Windows Components to open the Windows Components Wizard.
3. In Windows Components, select the Terminal Server checkbox and click "Next"

   NOTE: Terminal Services must be licensed through Microsoft. Please refer to the Microsoft Website for more information.

4. You may get a message warning you about Internet Explorer Advanced Security, as show. Either edit your internet Explorer Options as it says or continue with the current settings
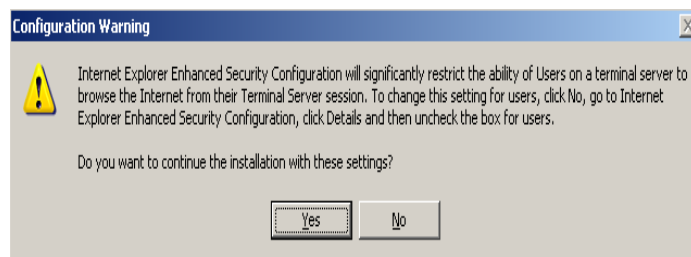
Figure 2 - Internet Explorer Warning

5. Select your preferred default permissions for application compatibility to be either "Full Security" or "Relaxed Security", based upon the descriptions given in the setup wizard.

   NOTE: You may see programs listed that will not work properly when Terminal Services is enabled. You need to reinstall these programs for multi-session access using Add/Remove Programs after Terminal Services is enabled.

6. You should also enable Terminal Services Licensing. In the setup wizard, specify whether you want the license server to serve your entire enterprise or your domain/workgroup, and then provide the directory location for the database.
7. The required files are copied to your hard disk and the server software can be used after restarting the system.
8. After restarting the system, the Terminal Service Help file will automatically open with a checklist for you to follow in order to finish setting up Terminal Services for your application.

   NOTE: Terminal Services and Terminal Services Licensing can also be enabled by running Windows 2000 Server Setup.

Installing GENESIS32

There are two modes in Terminal Services: execute and install. Any applications that need multi-session access via Terminal Services should install in the install mode. Because of this, **DO NOT** install GENESIS32 from auto-run application that comes up when you insert the CD. We will install by using Add/Remove Programs instead to automatically put Terminal Services in install mode.

1. Go to Start → Control Panel → Add/Remove Programs.
2. Click Add New Programs on the left hand side and browse to the ICONICS product DVD and run setup.exe (\GENESIS32\Software\GENESIS32_EE\setup.exe on the DVD).
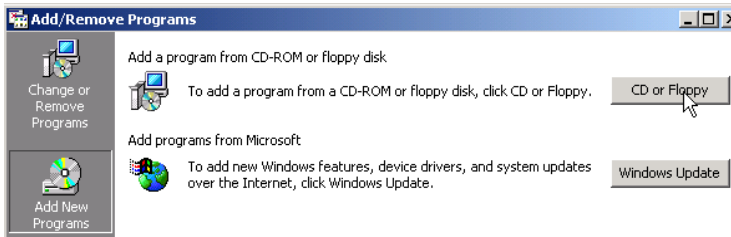
Figure 3 - Add New Programs

NOTE: The installation may ask for ADO components (MDAC) to be installed prior to installing GENESIS32. Continue with the MDAC installation and once you are done, you may be required to restart the system. Repeat step 1-2 after reboot to install GENESIS32.

3. Once you have installed GENESIS32, the installation will prompt you to install the Software Licensing. **DO NOT** install Licensing at this point.
4. Click Finish to exit out of the installation program and click Next in the Add/Remove Programs to complete the installation as shown in Figure 4.
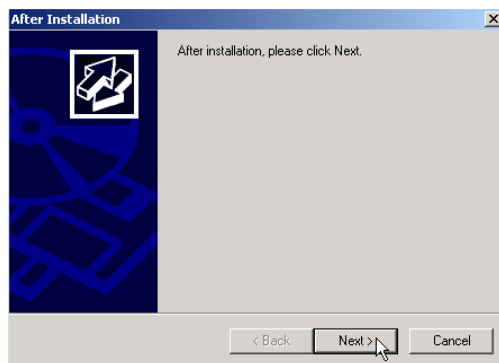
Figure 4 - Finish Installation through Add/Remove Programs

5. We will now install ICONICS Software Licensing through Add/Remove Programs. Browse to the Software Licensing Setup.exe

(\GENESIS32\Software\GenLic32\Disk1\setup.exe) and run it.

NOTE: Don't for get to complete the installation in Add/Remove Programs once setup.exe informs you that the installation is completed.

6. Once the installation is complete, close Add/Remove Programs to return Terminal Services to execute mode. Terminal Clients will now be able to run Internet Explorer within terminal sessions in order to view WebHMI displays.

Terminal Server Settings

Before using your GENESIS32 applications through terminal sessions, you will need to do the following user, application, and DCOM setup on the Terminal Server machine.

User Setup

All users that will log into the Terminal Server through terminal sessions and run GENESIS32 should be Power Users on the Terminal Server machine. For this reason, you should make a list of all of these users (and their passwords) and add them under the Power Users user-group in the Windows User Accounts setup in the Control Panel of your Terminal Server machine.

Application Setup

You should start all server-type applications such as the AlarmWorX32 Server, AlarmWorX32 Logger, OPC Servers, DataWorX32, etc. by as an Automatic NT Service. This will ensure that only one instance of the service is running at a time and the service is started by the Terminal Service server instead within the Terminal Service session.

NOTE: If configuration changes are to be made to these applications from within a terminal session, you must stop the applications from the services list before you make any configuration changes. The services must then be restarted on the server. You cannot simply click the traffic light from a terminal client to stop and start the service.

NOTE: You need to set the security server (security.exe) to run as "This User" in DCOM so that all of the COM clients are talking to the same instance.

DCOM Setup

The Application Setup Utility, which can optionally be run during installation or any time after, can be used to take care of the DCOM setup on the Terminal Server. It is located in Start → Programs → ICONICS Tools → Application Setup Utility. You can also manually configure DCOM by performing the following:

1. Run the DCOM configurator by going to Start → Run, typing in "dcomcnfg" (without quotes), and hit enter. The Component Services window will open.
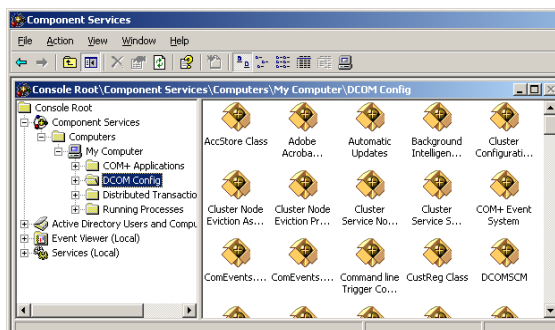
Figure 5 - Component Services

2. Browse into Component Services → My Computer → DCOM Config. Find the applications you need to configure in the list in the right-hand pane.
3. Right-click on the application and select properties.
4. In the properties window, go to the Identity tab and choose "This User"
5. Enter a username and password with administrative permissions.
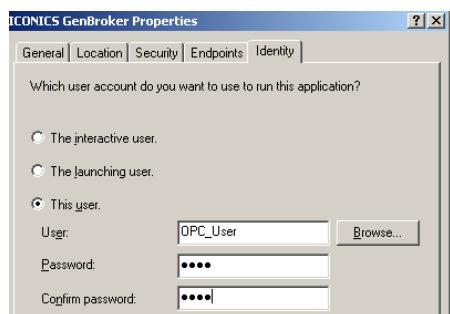
Figure 6 - Application Identity Properties

NOTE: You may want to create a user specifically fro this. You can do this in Control Panel → Stored User Names and Passwords.

6. Repeat steps 1-5 for every applications that will run as an Automatic NT Service.

NOTE: All of these applications should have their identities set to the same user.

7. Restart the system because DCOM changes always requires a system restart.

NOTE: Applications such as GraphWorX32 should be left with their default user settings because you should allow more than one instance of these applications to be run from different clients or access by other applications.

Terminal Clients

These 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 t o have is a Power User account on the server.

Refer to the Microsoft documentation and support for information on setting up terminal clients.

If you have further questions which have not been answered in regard to using ICONICS applications on Windows Server 2003 terminal server, please contact our Technical Support Department: support@iconics.com