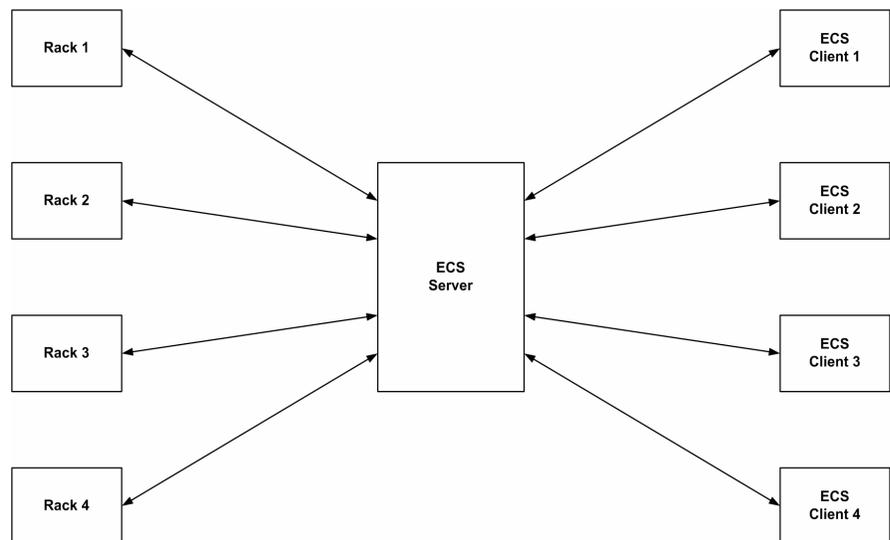


# CLIENT SERVER

This option needs to be purchased and provides a client license required to log in to an ECS server from a client (see chapter 2). Client/Server licenses are on a per installation basis so for a single installation only one license would be required for all the clients.

## CLIENT/SERVER OPERATION

Client/Server operation is used to allow multiple clients to share and download configurations to one or more matrices via a central server which runs ECS. The application ensures that while a user is editing a configuration, other users are prohibited from also making edits to the same configuration. If client/server operation is being used then all the ECS PCs on the network should be configured to run in this mode.



*Figure 11-1: ECS Client Server Wiring*

Note that the specification of the server PC influences performance. Satisfactory results were obtained using a 3GHz Pentium with 3Gb of RAM.

## CLIENT

A complete ECS (including SQL server) must be installed on each client that is used to make edits to configurations or update racks. The user chooses the server to use when logging in as ECS starts up. The server distinguishes between clients by Username.

## SERVER

The server runs ECS and the SQL database server and controls all the communications between the clients and the matrices. The database server running on the ECS server holds all the master configurations and ensures that when one configuration is being edited by a client no other client can edit that configuration at the same time. The server must also be running IIS (Internet Information Services - a web server provided by Microsoft). The ECS server provides the 'back-end' services, such as map-building, configuration sharing, and access to the matrices. Clients access the Server using Web-Services over Ethernet.

## INITIAL SETUP

The following steps need to be completed:

1. Install and configure IIS on the server system.
2. Install ECS on the server system.
3. Install ECS on each client PC.
4. Configure each client PC to access the server.
5. Login to the Server from a client machine.

Note that the default installation path is assumed to be "C:\Program Files\ClearCom\Eclipse Configuration System 5.1\".

## Install and Configure IIS on the Server Machine Only

### Stage 1 - Verify IIS is installed

1. Click the windows start button and select 'Control Panel'.
2. Double click 'Administrative Tools'.
3. Verify 'Internet Information Services' exists. If it does not exist complete stage 1b otherwise proceed to stage 2. On Windows 2000 machines it is called 'Internet Services Manager'.

### Stage 1b - Install IIS

1. Click the windows start button and select 'Control Panel'.
2. Double click 'Add or Remove Programs'.
3. Click the Add/Remove Windows Components tab. The OS installation Disc may be required.
4. Click the 'Internet Information Services' checkbox and complete the install using the wizard.

### Stage 2 - install ECS on the server

Install ECS on the server as described in chapter 13. This will install the SQL server database system and ASP.Net. For Windows 2000, Windows XP and Windows Vista systems ASP.Net should automatically be configured in IIS but in the case of Windows 2003

Server additional steps are required as described later in this sequence.

Run the Mode Switcher application, found in <ECS Install Path>ModeSwitcherApp.exe. Ensure that the Multi User Mode option is selected.

### **Stage 3 - copy the EclipseServerWS file path**

1. Log on to Windows on the server using an account that is a member of the administrators group.
2. Start Windows Explorer.
3. Navigate to the location where ECS is installed.
4. Navigate to \web\EclipseServerWS.
5. Select the file path in the Address textbox at the top of the window, right click it and select copy.

### **Stage 4 - create the IIS virtual directory**

***Note: If upgrading from an earlier version of ECS an EclipseServer virtual directory may already exist. If this is the case, it should be deleted.***

1. Click the windows start button and select 'Control Panel'.
2. Double click 'Administrative Tools'.
3. Double click 'Internet Information Services'.
4. Expand the top branch (local computer).
5. Expand the 'Websites' branch.
6. Expand the 'Default Web Site' branch.
7. Select the 'Default Web Site' branch and right click it and choose New | Virtual directory...
8. Click on Next.
9. Type EclipseServer in the Alias textbox and click Next.
10. Right click the Directory textbox and select paste (the file path copied in STAGE 2 step 5 should appear) and click Next.
11. Ensure the first two checkboxes are ticked (Read and Run scripts) and the following three checkboxes are not ticked (Execute, Write and Browse).
12. Click Next.
13. Click Finish.

### **Stage 5 - Verify the directory has been created**

1. Open Internet Explorer.
2. Enter 'http://localhost/EclipseServer' and press go.
3. Verify that the text 'Eclipse Server .Net 2.0' is displayed.

### **Stage 6 - Verify ASP.Net has been registered**

1. Open Internet Explorer.
2. Enter 'http://localhost/EclipseServer/Command.aspx' and press go.

3. Verify that the text 'The following operations are supported. For a formal definition, please review the Service Description' is displayed at the top of the page. If this text is displayed ASP.Net is already registered. If the operating system is Windows 2003 Server installation should proceed directly to stage 8. If the operating system is Windows 2000, Windows XP or Windows Vista the IIS installation is complete.
4. If text starting "<%@ WebService Language="c#" is displayed this means ASP.Net has not been registered. In this case complete Stage 7. If the operating system is Windows 2003 Server ASP.Net must also be enabled after registering.

### **Stage 7 - Register ASP.Net**

1. Click the Windows Start button and select Run...
2. In the text box type cmd and press ok.
3. On Windows XP systems at the command prompt type 'cd C:\Windows\Microsoft.NET\Framework\v2.0.50727' and press enter.

On Windows 2000 systems at the command prompt type 'cd C:\WINNT\Microsoft.NET\Framework\v2.0.50727' and press enter.

On Windows Vista systems at the command prompt type 'cd C:\WINNT\Microsoft.NET\Framework\v2.0.50727' and press enter.

On Windows 2003 Server systems at the command prompt type 'cd C:\Windows\Microsoft.NET\Framework\v2.0.50727' and press enter.

4. At the command prompt type 'aspnet\_regiis -i' and press enter.
5. If the operating system is Windows 2003 Server or Windows Vista proceed to Stage 8. If the operating system is Windows 2000 or Windows XP the IIS installation is complete.

### **Stage 8 - Enable ASP.Net in IIS**

#### **Windows 2003 Server**

When running Windows 2003 Server ASP.Net must be enabled under IIS for the ECS Client Server system to function. To check this and enable ASP.Net if required complete the following steps.

1. Click the Windows Start button and open the Control Panel.
2. Open Administrator Tools.
3. Open IIS Manager.
4. Expand the Web Services Extensions in the left pane to display a list of web services extensions known to IIS. ASP. Net should be in this list.
5. If ASP.Net is listed as 'Allowed' close the manager. If ASP.Net is not allowed select ASP.Net in the right hand pane. A menu of options will be displayed. Click on the 'Allow' entry to allow ASP.Net under IIS.
6. Close the Control Panel.

## **Windows Vista**

When running Windows Vista ASP.Net must be enabled under IIS for the ECS Client Server system to function. To check this and enable ASP.Net if required complete the following steps.

1. Click the Windows Start button and open the Control Panel.
2. Open Programs & Features.
3. Select "Turn Windows features on or off" from the side bar.
4. Expand the "Internet Information Services" menu.
5. Expand the "World Wide Web Service" menu.
6. Expand the "Application Development Features" menu.
7. If the "ASP.NET" box is checked (enabled) close the manager. If "ASP.NET" box is not checked click on the box to enable it (checked).
8. Close the Internet Information Services menu.
9. Return to the Control Panel.
10. Close the Control Panel.

## **IIS Pool Recycling**

In order for the ECS server to operate with continuous logging enabled IIS pool recycling must be disabled. If pool recycling is not disabled event logging from the server to clients may stop when the server process is automatically restarted by the IIS Manager. The pool recycling configuration options are only available in IIS manager under Windows Server 2003 and Windows Vista.

### **Disabling IIS Pool Recycling in Windows 2003 Server**

1. Click on the Start icon (bottom left) to open the Start menu.
2. Click on "Programs", then "Administrative Tools".

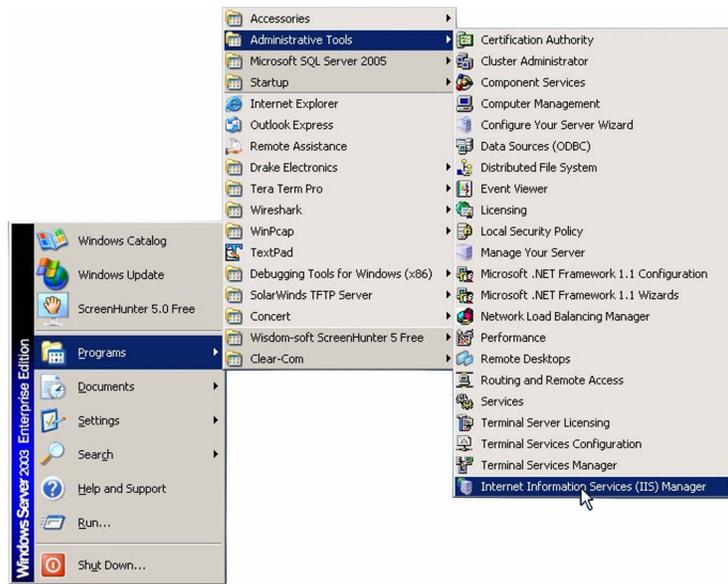


Figure 11-2: Selecting the IIS Manager in Windows 2003 Server

3. Select “Internet Information Services (IIS) Manager” to open the IIS management screen

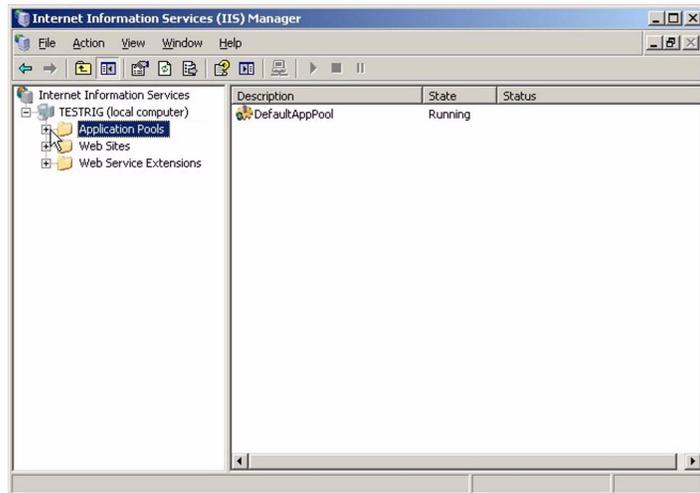


Figure 11-3: IIS Manager in Windows 2003 Server

4. Expand the “Application Pools” list and right-click on the “DefaultAppPool” entry to display the options.

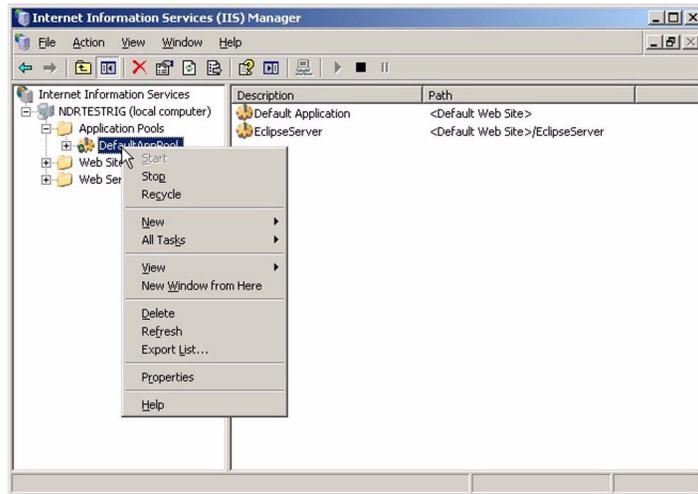


Figure 11-4: Windows 2003 Server IIS Default Pool Options

Click on the “Recycle” option to open the pool recycle options screen.

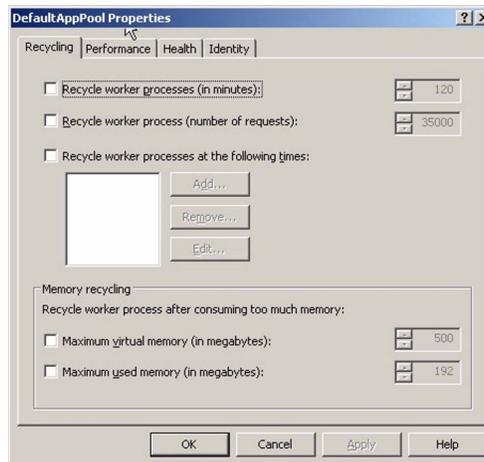


Figure 11-5: Windows 2003 Server IIS Pool Recycling

5. Ensure that all the checkboxes are cleared to disable pool recycling and click on ‘OK’.
6. Close the IIS Manager.

### Disabling IIS Pool Recycling in Windows Vista

1. Click on the Start icon (bottom left) to open the Start menu.
2. Click on “IIS Manager” to open the IIS Manager screen.

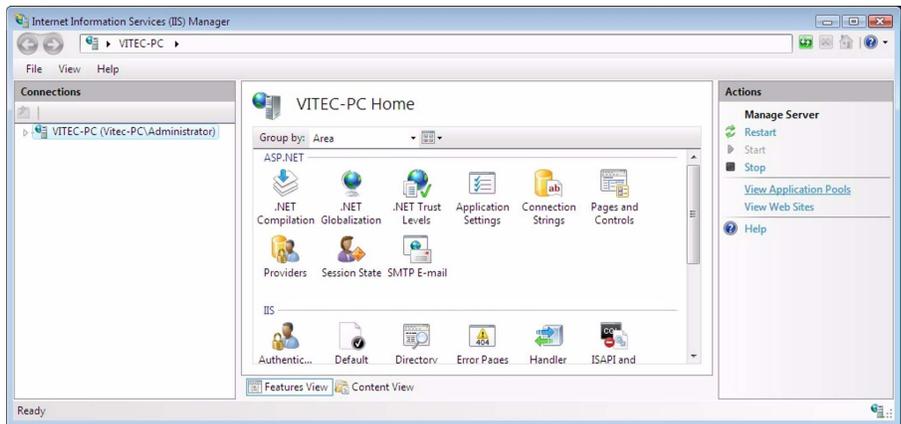


Figure 11-6: IIS Manager in Vista

3. Click on “View Application Pools” in the right hand column to display a list of IIS applications pools.

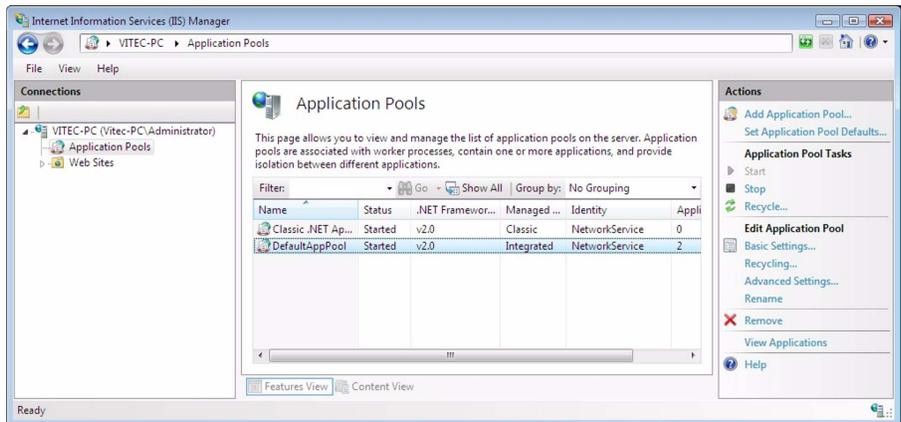


Figure 11-7: IIS Application Pools

4. Select “DefaultAppPool” and the click on “View Application” to check the applications using the pool. The application “EclipseServer” should be listed.

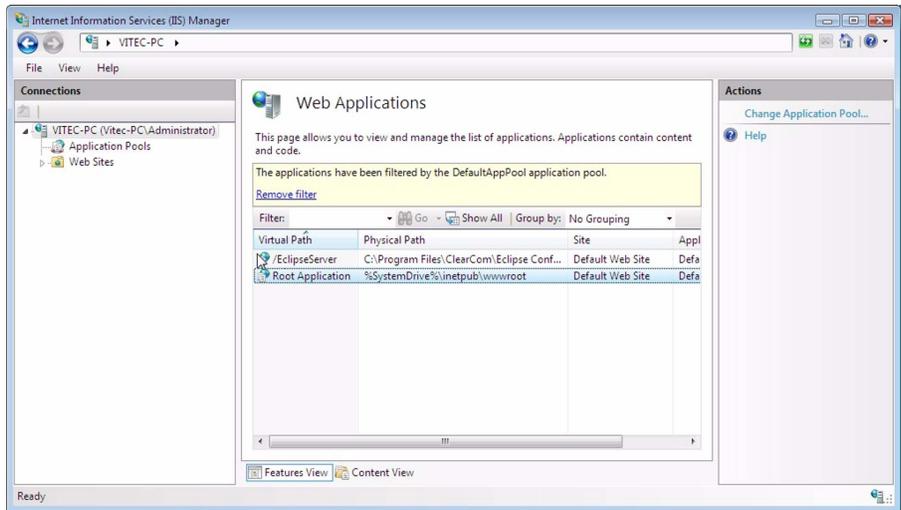


Figure 11-8: IIS Pool Applications List

- Return to the “Application Pools” list and click on “Recycling...” to display the pool recycling parameters.

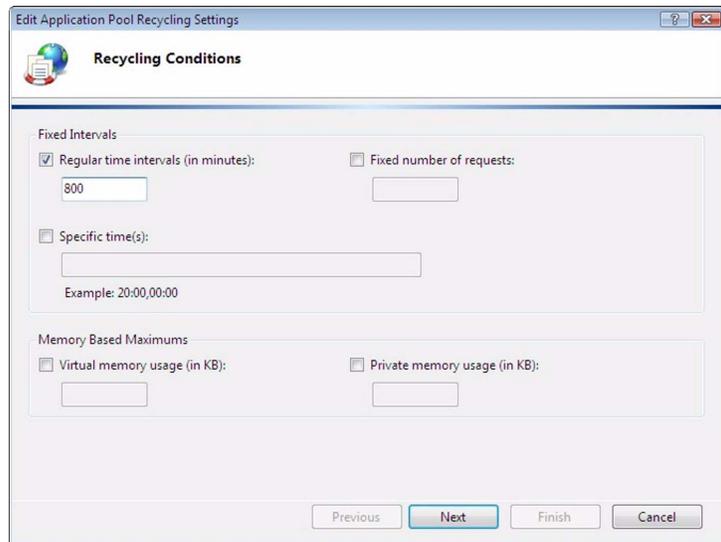


Figure 11-9: Pool Recycling Parameters

- Disable all recycling by deselecting all the scheduling tick boxes.

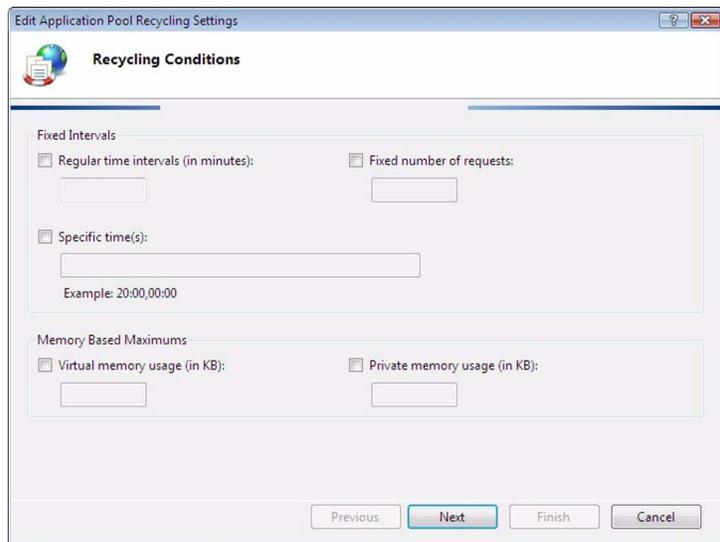


Figure 11-10: Pool Recycling Disabled

7. Click on 'Next' to continue

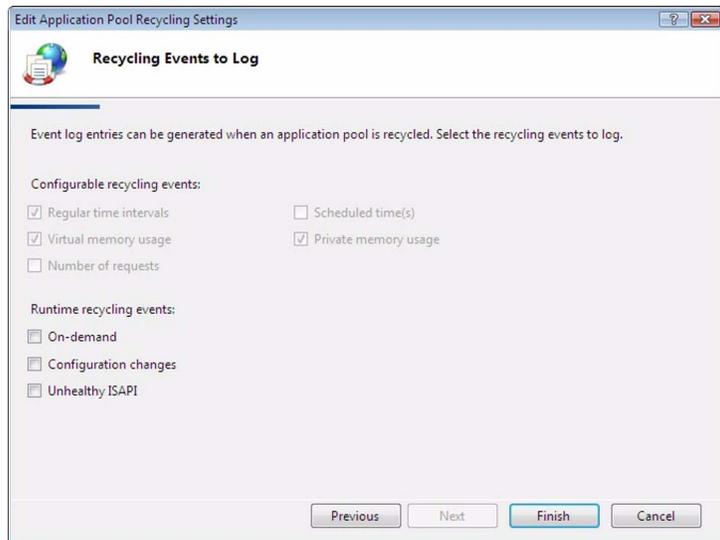


Figure 11-11: Recycling Events

8. The logging setup for recycling should show timed events disabled. Click on 'Finish' to completed the configuration change.
9. Check any other IIS application pools to ensure that the server process is not using another pool. If any other pool is being used recycling of this pool should also be disabled.
10. Open the 'Web Sites' menu in the 'Connections' pane and right click on the 'EclipseServer' entry. Ensure that it is classed as an Application and not a Service. If it is classed as a service click on 'Convert to Application' to convert it to an application.
11. Close IIS Manager.

## Disabling IIS Pool Recycling in Windows XP

Normally Windows XP is supplied with IIS Manager 5.1 which does not support pool management.

## Client Configuration

A full ECS installation is required on each client system before it can be used as described in chapter 11.

## Configure each Client PC to access the Server

On each ECS client PC, run the Mode Switcher application, found in <ECS Install Path>\ModeSwitcherApp.exe. Ensure that the Multi User Mode option is selected.

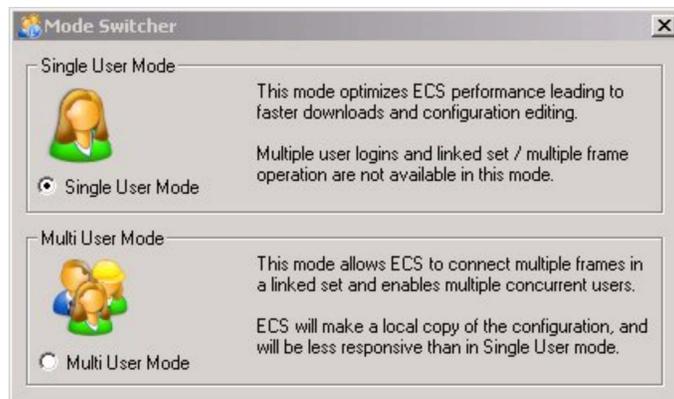


Figure 11-12: Mode Switcher Dialogue

## Login to the Server from a Client machine

1. At the ECS login dialog box click the Options button to display the 'Log on to' field.
2. Type the following string, replacing <Machine Name> with the name of the ECS server: "http://<Machine Name>/EclipseServer/".



Figure 11-13: ECS Client Logon

When a user logs in to a client for the first time a client license key will be requested if one is not already installed on the client.

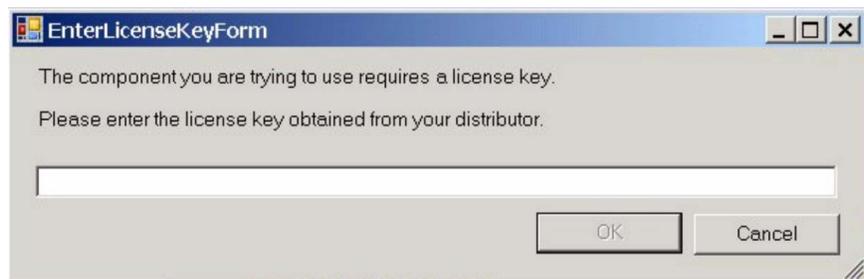


Figure 11-14: Client License Key Request

Enter the license key as supplied and click on the 'OK' button. The client/server facility will then be enabled. ECS login will not request the license key again once it has been successfully entered.

**Note: To determine the ECS server Machine Name log in to the ECS server. Click Start and then Run. Type 'cmd' into the box and click ok. At the command prompt type 'ipconfig /all'. Use the listed Host Name as the ECS server name.**

## Using Client/Server

### Username

Each user is distinguished by Username and users on different clients should always use different Usernames when logging in to the ECS server.

Usernames on the ECS server are set up by logging in to the ECS server and using the User Management facility as described in chapter 3 to set up and manage users.

If a user on a client attempts to log in to the ECS server with a Username that is already in use a warning is shown. If the new user continues, the existing user session is terminated, and the user who has now been logged out is informed.

### **Host Name**

When logging in to an ECS server running in client/server mode use the 'Options' button to display the server that the user is logging on to and enter the server name explicitly instead of using the default "localhost" name.

### **Configuration Editing**

While a user is editing a configuration, no other user can edit that configuration. To make the configuration available for another user to edit, the configuration must be closed. If ECS is closed in an abnormal manner, e.g. the power to the client is removed, the ECS server will not be aware that the configuration is closed. In this case the Client should log back in to the ECS server, reopen the configuration and close it correctly.

The ECS server applies a 200 minute inactivity timeout to each client and if there is no client activity on the server for that length of time the user is automatically logged out by the server.

### **Activating a System Layout**

A system layout cannot be activated while other users are editing configurations within it. Before activating a system layout users should close all configurations within it. Once the layout is activated the configurations are automatically opened to the operator activating the system layout. Once the operator has closed these configurations the other users can reopen the configurations for editing.

# SYNCHRONISE SERVERS

Synchronise Servers function allows the transfer of configurations from one ECS server to another. The operation of the Synchronise Servers is that ECS on the server will firstly search the network for other instances of a running ECS server. When other ECS servers are found the name will appear and the user would select the required server. The next stage is to list the configurations then transfer a required configuration from one server to another.

This may be used as a rapid method of transferring configurations between PCs without exporting the configurations to files, copying the files across and then importing them. It can also be used to transfer configurations from a central server in a client/server setup to one of the clients. To carry out this operation the client should be reconfigured for local operation using the Mode Switcher application, found in <ECS Install Path>\ModeSwitcherApp.exe. Ensure that the LocalHost Mode option is selected.

The synchronize servers operation on the main server will then treat the reconfigured client as a server and copy the configuration data over.

This option could be used if it was intended to take a copy of the configuration data to modify without doing so on the live system. However it should be noted that normally all client PCs in a client/server environment should operate in client server mode to ensure that any configuration changes go through the ECS server rather than directly to the matrix.

## SEARCHING FOR ECS SERVERS

To search for other ECS servers that are currently running on the Network, select the Synchronise Server function from the File menu. The Synchronise Servers screen opens.

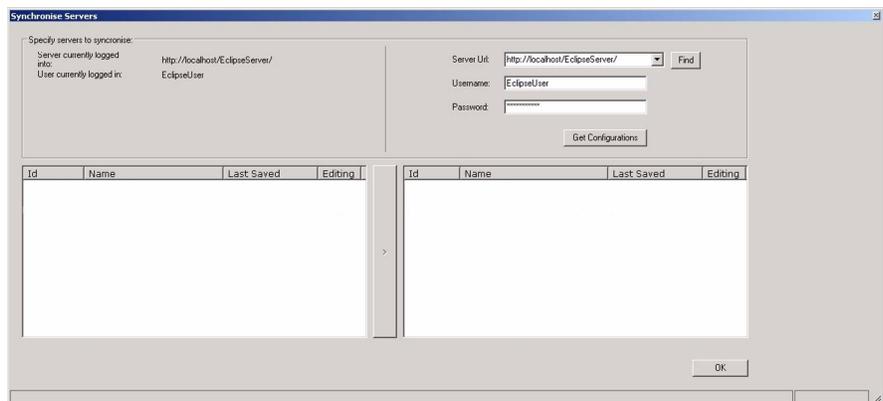


Figure 11-15: Synchronise Servers Screen

The Server URL, Username and Password are required fields. From the left hand side select “find” and ECS will search for all instances of other servers running. Select the required server, and then select “Get Configurations” to retrieve a list of all the configurations on that server.

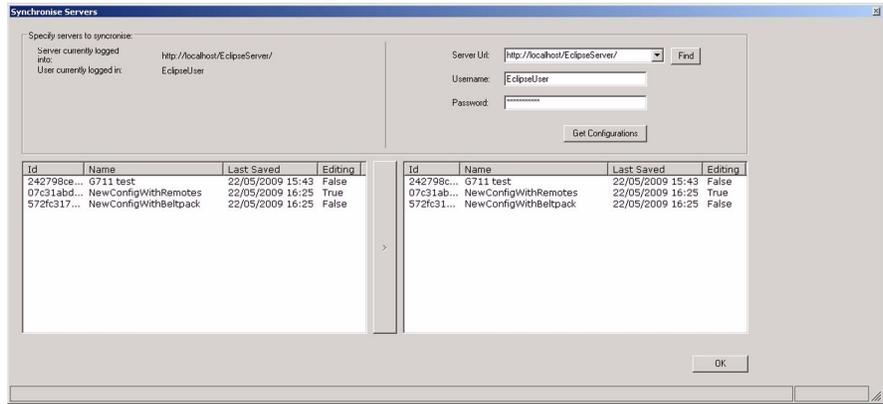


Figure 11-16: Server Search Screen

Repeat the same steps to retrieve a list of configurations from a required server on the right hand side.

## TRANSFERRING CONFIGURATIONS

Transferring configurations requires deciding on the required servers and also the required configuration. Once the servers have been found, locate the configuration and highlight this by left clicking the mouse on that configuration. Using the middle arrow left click the mouse to take a copy of the configuration from one server to another.

## HELP ON SERVER SEARCH

ECS searches the DNS table for all other hosts connected onto the LAN. Therefore if the computer name is recorded on the DNS table ECS will list the name. However there are instances where the computer name is not on the DNS table and as such ECS will not locate the computer.

When search has failed to find the computer, the machine name or IP address can be input directly into the "Server URL" box, and then pressing "Get Configurations" should allow ECS find it.

The syntax required for this method is to put the IP address in the server URL line:

<http://111.111.111.111:8080/EclipseServer>

Where 111.111.111.111 is the IP address of the Computer

The Username and Password entered into the server search dialogue will be used to log in to a target server remotely. If that user is already logged in to the target server, for example locally, then a warning message will be displayed on the server making the request. If the requesting server proceeds with the synchronise request the user on the target server will be logged out by the requesting server.

For this reason it is advisable that in systems with multiple servers extra users should be set up on each server for use by remote servers logging in and such remote servers should not use the default local login. This will avoid user identity clashes when carrying out remote operations.