



# eTakeoff Client/Server Installation & Configuration

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# Overview

The Client/Server Software supports high-level database management, including:

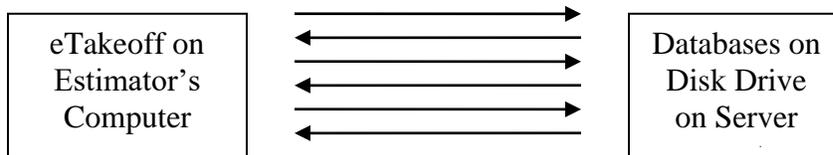
- **Client/server computing** - Increases performance of workstations communicating with databases on a server or with users communicating with databases in a Terminal Server environments.
- Most importantly, it provides the ability to **maintain database integrity, especially in multi-user environments.** The basic principle of client/server computing is: applications, or “clients”, interact with the server, which manages file operations and communicates with clients.

All eTakeoff Dimension information (except drawing files) is stored in two databases:

- The Project database keeps all project specific information (drawing file names, measurements, annotations, quantity worksheet items, etc.).
- The Standards database keeps information used across projects (standard scales, traces, layers, etc.)

## How eTakeoff Dimension works in a Workstation(client)-Server environment

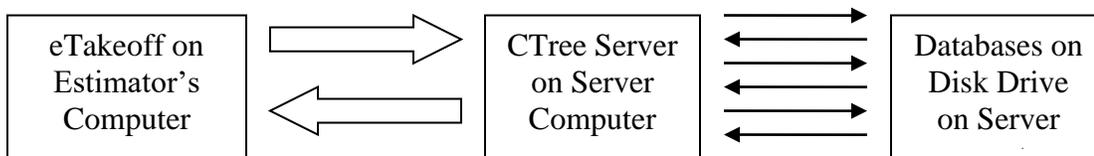
Most eTakeoff users keep separate copies of this information for each user on that user’s computer (stand-alone computer). But in some environments, multiple estimators may work on the same estimate at one time. This requires that they use common databases. So, all access to information is via the computer network from the estimator’s computer to a server:



The standard (non-server) version of eTakeoff supports this configuration in a **stand-alone computer environment**. However, if you set up eTakeoff from a workstation to access the server, the transfer of information is done in many small steps because that’s all that disk drives support. For each step, a request is sent to the server, the server gets the information from the disk drive and sends it back.

So the time for each step includes the time required for the two network messages. This is much more time than it actually takes to get the information off the disk drive. When lots of information needs to be transferred, the delays can be serious.

The Client/Server software (CTree Server) for eTakeoff avoids this problem. Instead of exchanging many messages, a general command is sent to a server application on the server computer. This application then performs the numerous steps required to get the information from the disk drive. The response is then returned in a single message.



This can improve performance by as much as 5,000%.

## How eTakeoff Dimension works in a Terminal Server environment

### Software Installation

In a Terminal Server environment, the eTakeoff software installation does the following:

- Load the application files – In an environment with multiple servers, these files must be installed on any server

where an eTakeoff user may be assigned. This is done by performing the install on each server.

- Specify where the application files are located (the Application Folder). This information is provided by the user during installation and stored in the Local Machine section of the registry. Because this section of the registry is shared by all users on a server, all users will use the same Application Folder. This works well and is not a concern.
- Specify where the database files are located (the Database Folder). This information is provided by the installer during installation and stored in the Local Machine section of the registry. Because this section of the registry is shared by all users on a server, all users will use the same Database Folder. If multiple servers are used, the database folder can NOT be on the server's primary drive. It must be on a drive that will always be available and have the same name no matter which server the user is using.

### **User Preferences**

eTakeoff remembers many preferences for each user. These include default functionality, window positions, last project used, etc. These are stored in the Current User section of the registry. Because each user has their own version of this part of the registry, the preferences are kept separate for each user.

But the registry is stored on the server. That means as a user moves from server to server, it will only have the preferences last set on each server. This is not critical but may be annoying to the user.

### **Licensing**

eTakeoff allocates licenses to each user login. The license is installed for each user, but there is no limit to the number of computers a single concurrent license can be installed on. A three-user concurrent license could be installed on a hundred computers. Each time a user starts eTakeoff, a license is allocated from the license manager (in the cloud). Once all the licenses are in use, other users lose functionality until a license is freed up.

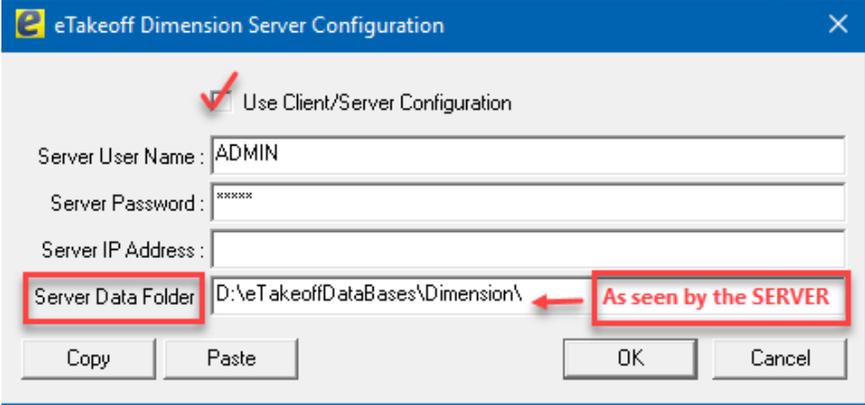
Configuring the Client/Server software is a complex configuration requiring expertise to set up and maintain. The following expertise is needed within the user's organization:

1. How to install software on the server.
2. How to configure an application so that it starts each time the server starts.
3. How to configure the eTakeoff server and backup scripts so that the files are backed up. (This is described in Appendix A).
4. How to determine the IP address of the server.

Typically, the network administrator will have this expertise. The eTakeoff support staff can assist but we have little or no knowledge of your network configuration.

## **QUICK START Installation & Configuration in a Workstation(client)-Server environment**

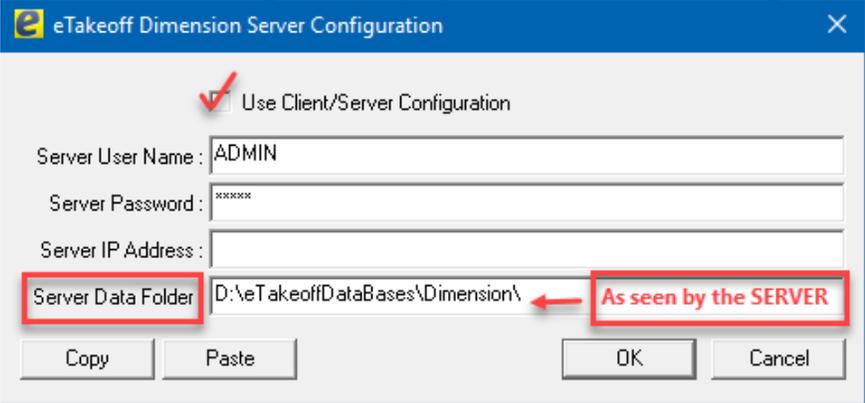
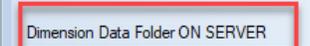
Use this “Quick Start” section to install and configure the Client/Server software using all recommendations and defaults.

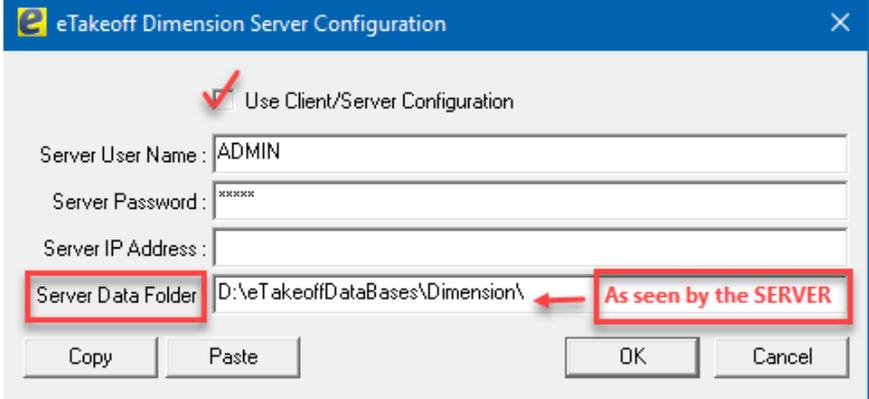
Steps	Details
<p>1. <b>Install Server Software &amp; copy license file</b></p>	<p>a. Download the client/server install package to the Server:</p> <ul style="list-style-type: none"> <li>Go to <a href="http://etakeoff.com/support/dimension/software-install-links/">http://etakeoff.com/support/dimension/software-install-links/</a></li> <li>Click on “eTakeoff Server NEW or UPGRADE Install”</li> </ul> <p>b. <b>Run the client/server install file as Administrator.</b></p> <ul style="list-style-type: none"> <li>By default, the server software is installed in the folder “C:\Faircom\ETkoServer”. We will use that folder in the rest of these instructions.</li> </ul> <p>c. <b>Copy your license activation file to the server software folder., “C:\Faircom\ETkoServer”</b></p>
<p>2. <b>Determine where to locate Databases on the Server</b></p>	<p>Create the folder, “eTakeoffDataBases”, on the drive dedicated to storing data.</p> <ul style="list-style-type: none"> <li>Create a subfolder, <b>Dimension</b> <i>i.e.: D:\eTakeoffDataBases\Dimension</i></li> </ul>
<p>3. <b>Locate the databases in the corresponding folders</b></p>	<p>a. <b>New Users:</b></p> <ul style="list-style-type: none"> <li>Download empty database files</li> <li>Go to <a href="http://etakeoff.com/support/dimension/software-install-links/">http://etakeoff.com/support/dimension/software-install-links/</a></li> <li>Click on “Empty Data Files” for Dimension.</li> </ul> <p>b. <b>Existing Users:</b></p> <ul style="list-style-type: none"> <li>Copy over Dimension databases from user that has the MOST projects to the respective folders</li> </ul>
<p>4. <b>Configure the Server</b></p>	<p>a. <b>Manually start the CTree Server</b></p> <ul style="list-style-type: none"> <li>Double click on the “C:\Faircom\ETkoServer\ctsrvr.exe”</li> </ul> <p>b. Determine the <b>IPv4 Address (or domain name)</b> of the server.</p> <ul style="list-style-type: none"> <li>The Windows program “ipconfig” will display it as the “IPv4 Address” for your Ethernet adapter. You will need this and the database folder name when installing the clients or configuring the users in Terminal Server environment.</li> </ul>
<p>5. <b>Configure the Server as a client workstation before configuring client workstations to test client/server setup</b></p>	<p>a. Download and install the latest version of eTakeoff Dimension</p> <ul style="list-style-type: none"> <li><a href="http://etakeoff.com/support/dimension/software-install-links/">http://etakeoff.com/support/dimension/software-install-links/</a></li> <li>Click on “eTakeoff Dimension NEW Install”</li> </ul> <p>b. Double click on C:\Program Files (x86)\eTakeoff\RView\ETkoCnfg.exe</p>  <p>c. Open Dimension – Click on File/Help/ About Application</p> <p>Window should show the Data folder <b>ON SERVER</b> <span style="border: 1px solid black; padding: 2px;">Dimension Data Folder ON SERVER</span></p>

Steps	Details
<p>6. <b>Configure the client workstations</b></p>	<p><b>Dimension :</b></p> <ul style="list-style-type: none"> <li>• <b>New users</b> - Repeat steps in #5 on each workstation</li> <li>• <b>Existing users</b> – Perform the steps below on each workstation.               <ol style="list-style-type: none"> <li>1. Install the latest version of Dimension - <a href="http://etakeoff.com/support/dimension/software-install-links/">http://etakeoff.com/support/dimension/software-install-links/</a> - Click on “eTakeoff Dimension UPGRADE Install”</li> <li>2. Click on the link below to: <a href="#"><b>Merge Dimension workstation databases into one database on server</b></a></li> <li>3. Repeat steps “b.” &amp; “c.” in #5</li> </ol> </li> </ul>
<p>7. <b>Finish fine-tuning the Server Configuration</b></p>	<ul style="list-style-type: none"> <li>• Modify the Dump backup Scripts in the C:\Faircom\TkoServer folder with the locations and names of the databases. (<a href="#">Appendix A</a>)</li> <li>• Create a Windows Service for C:\Faircom\TkoServer\ctsvr.exe (<a href="#">Appendix B</a>)</li> </ul>

## **QUICK START Installation & Configuration in a Terminal Server environment**

Use this “Quick Start” section to install and configure the Client/Server software using all recommendations and defaults.

Steps	Details
<p>1. <b>Install Server Software &amp; copy license file</b></p>	<p>a. Download the client/server install package to the Server:</p> <ul style="list-style-type: none"> <li>Go to <a href="http://etakeoff.com/support/dimension/software-install-links/">http://etakeoff.com/support/dimension/software-install-links/</a></li> <li>Click on “eTakeoff Server NEW or UPGRADE Install”</li> </ul> <p>b. <b>Run the client/server install file as Administrator.</b></p> <ul style="list-style-type: none"> <li>By default, the server software is installed in the folder “C:\Faircom\ETkoServer”. We will use that folder in the rest of these instructions.</li> </ul> <p>c. <b>Copy your license activation file to the server software folder., “C:\Faircom\ETkoServer”</b></p>
<p>2. <b>Determine where to locate Databases on the Server</b></p>	<p>Create the folder, “eTakeoffDataBases”, on the drive dedicated to storing data.</p> <ul style="list-style-type: none"> <li>Create a subfolder, <b>Dimension</b> <i>i.e.: D:\eTakeoffDataBases\Dimension</i></li> </ul>
<p>3. <b>Locate the databases in the corresponding folders</b></p>	<p>Download empty database files</p> <ul style="list-style-type: none"> <li>Go to <a href="http://etakeoff.com/support/dimension/software-install-links/">http://etakeoff.com/support/dimension/software-install-links/</a></li> <li>Click on “Empty Data Files” for Dimension.</li> </ul>
<p>4. <b>Configure the Server</b></p>	<ul style="list-style-type: none"> <li><b>Manually start the CTree Server</b> - Double click on the “C:\Faircom\ETkoServer\ctsrvr.exe”</li> <li>Determine the <b>IPv4 Address (or domain name)</b> of the server. – The Windows program “ipconfig” will display it as the “IPv4 Address” for your Ethernet adapter. You will need this and the database folder name when installing the clients or configuring the users in Terminal Server environment.</li> </ul>
<p>5. <b>Configure the Server as a Terminal Server User to test client/server setup</b></p>	<p>a. Download and install the latest version of eTakeoff Dimension</p> <ul style="list-style-type: none"> <li><a href="http://etakeoff.com/support/dimension/software-install-links/">http://etakeoff.com/support/dimension/software-install-links/</a></li> <li>Click on “eTakeoff Dimension NEW Install”</li> </ul> <p>b. Double click on C:\Program Files (x86)\eTakeoff\RVView\ETkoCnfg.exe</p>  <p>c. Open Dimension – Click on File/Help/ About Application</p> <p>d. Window should show the Data folder <b>ON SERVER</b></p> 

<p>6. <b>Configure the users in a Terminal Server environment</b></p>	<p><b>Dimension :</b></p> <p>a. Login to server as User (Repeat this process for <b>EACH</b> User login)</p> <p>b. Double click on C:\Program Files (x86)\eTakeoff\RVView\ETkoCnfg.exe</p>  <p>c. Open Dimension – Click on File/Help/ About Application</p> <p>d. Window should show the Data folder <b>ON SERVER</b></p>
<p>7. <b>Finish fine-tuning the Server Configuration</b></p>	<ul style="list-style-type: none"> <li>• Modify the Dump backup Scripts in the C:\Faircom\eTkoServer folder with the locations and names of the databases. (<a href="#">Appendix A</a>)</li> <li>• Create a Windows Service for C:\Faircom\eTkoServer\ctsrsvr.exe (<a href="#">Appendix B</a>)</li> </ul>

## Custom Installation & Configuration

If you want to configure the Client/Server software using customized settings (**NOT RECOMMENDED**), follow the procedures for the following sections.

- Custom Installation & Configuration .....
- Preparation .....
- Installing the Server Software.....
- Copying the Dimension Databases .....
- Configuring the Server .....
- Installing the Clients .....
- eTakeoff Dimension .....

If estimators are already using eTakeoff Dimension (without the server) they should not use them during the installation process.

### Preparation

1. If you already have estimators using Dimension, determine which estimator's databases will be used on the server. Other estimators should export any projects they wish to keep. They can import them once they have switched to the new database files.
2. We recommend that the network administrator briefly review the C-tree Server Administrator's Guide. It is available at:

<http://www.faircom.com/doc/ctserver/>

The section on "c-TreeACE Basic Operations" is the primary area of interest.

**The Network Administrator is responsible for configuring the server so that the CTree server is properly started and stopped whenever the server hardware is started or stopped.**

**Also, the CTree server should be stopped before backing up the eTakeoff data and restarted after backup.**

3. Make sure you have your license activation file from eTakeoff
4. Determine where you are going to install the server software and where you are going to store the Dimension databases. We recommend the following **where "D\" represents the drive letter dedicated to DATA on the Server.**

Server Software:	C:\Faircom\eTkoServer
Dimension Databases:	D:\eTakeoffDataBases\Dimension

**Note:** You will need to modify the backup scripts. See Appendix A for more information.

### Installing the Server Software

1. The server application is the C-tree Server. It is provided by Faircom. eTakeoff has a special install package for the server that includes special configuration information. You can download the install package here:

Go to <http://etakeoff.com/support/dimension/software-install-links/> and click on "eTakeoff Server NEW or UPGRADE Install"

**Note:** You will need to download that file to the server and **Run it as Administrator.**

By default, the server software is installed in the folder "C:\Faircom\eTkoServer". We will use that folder in the rest of these instructions. If you override the folder, the CTree utility paths will need to be changed too.

2. **WARNING: Be sure to perform this step BEFORE you start the server!** Copy your license activation file to the server software folder. (default is "C:\Faircom\eTkoServer")

3. If you have security concerns you can use the ctree utility “C:\Faircom\TKoServer\ctadmn.exe” to change the CTree administrator’s password from the default (username ADMIN, default password ADMIN). **Be sure to record that change!** You can also set up a non-administrative account for the client software.

## Copying the Dimension Databases

1. Create a folder to contain the eTakeoff Dimension databases. (See Preparation, step 4 for recommendations.)
2. If you are installing the server **before any estimators are using Dimension**, you will need to download empty database files and put them in the eTakeoff database folder created in step 8 above::

Go to <http://etakeoff.com/support/dimension/software-install-links/> and click on “eTakeoff Dimension Empty Data Files”

If you already have estimators using Dimension, copy the selected estimator’s Dimension databases to the folder. You can run Dimension and display the “About Application” (File/Help/About the Application - Ribbon Bar or Help/About Application - Classic Toolbar) dialog to display the folder where the database files are stored. The filenames for the database are version dependent:

Version	Standards Database	Project Database
<b>6.0</b>	<b>Dimension60Stdsdata.ctr</b>	<b>Dimension60ProjData.ctr</b>
5.0	Dimension50Stdsdata.ctr	Dimension50ProjData.ctr
4.0	eTakeoff40StdsData.ctr	eTakeoff40ProjData.ctr
3.2	eTakeoff32StdsData.ctr	eTakeoff32ProjData.ctr
3.1	eTakeoff31StdsData.ctr	eTakeoff31ProjData.ct
3.0	eTakeoff30StdsData.ctr	eTakeoff30ProjData.ctr
2.6	eTakeoffStdsData.ctr	eTakeoffProjData.ctr
Earlier	RViewStds.ctr	RViewProj.ctr

**Be sure to use the latest version you have!**

3. **If you don’t have the latest version of the database files**, copy the data conversion program “C:\Faircom\TKoServer\TKoDBCvt.exe” to the database folder and run it. It will perform any needed data conversion. **BE SURE TO RUN IT ON THE SERVER. IF YOU RUN IT ON A CLIENT IT WILL TAKE FOREVER TO FINISH!**

## Configuring the Server

1. Configure the server computer so the C-tree Server is halted when it shuts down and started when it re-starts. See the C-tree Administrator’s Guide for details.

“C:\Faircom\TKoServer\ctsrvr.exe” starts the server

“C:\Faircom\TKoServer\ctstop ADMIN ADMIN ETKOSRVR” will stop the server. The second argument should be the administrator password.

**WARNING:** Be sure the server runs in the folder where the executable and configuration files are located (C:\Faircom\TKoServer). If you need to run it in another folder, copy the configuration file “ctsrvr.cfg” to that folder. The server will create work files in a subfolder “data” to the folder where it runs.

**NOTE:** You can have the server run as a Windows Service. Then it will start and stop automatically. You will still may need to stop and restart it for backup unless you’re using the Dynamic Dump described in Appendix A. See the C-tree Administrator’s Guide for information on using it as a Windows Service.

2. Configure the backup scripts and CTSRVR.CFG to match your folders and backup procedures. See Appendix A for more information on backup.
3. If you use the Dynamic Dump for backup as described in Appendix A, be sure your backup process will copy the files created by the dynamic dump.

- Determine the IP Address (or domain name) of the server. The Windows program “ipconfig” will display it as the “IPv4 Address” for your Ethernet adapter. You will need this and the database folder name when installing the clients.
- Start the server: “C:\Faircom\eTkoServer\ctsrvr.exe”

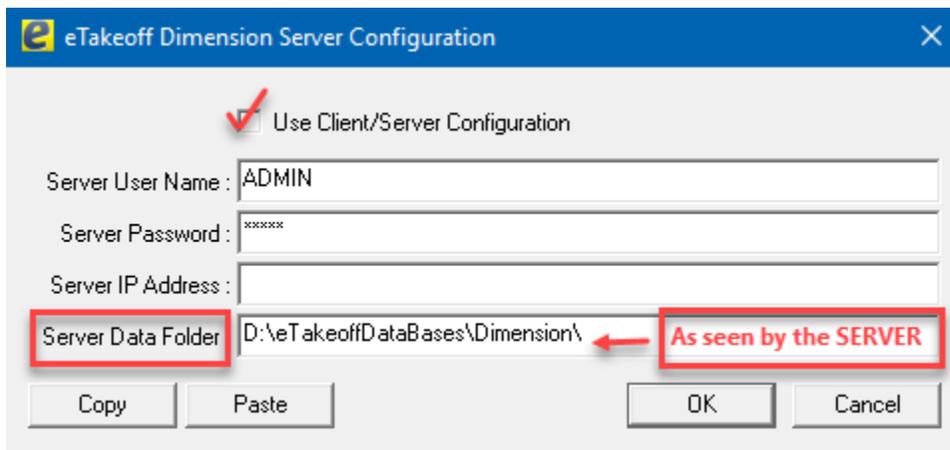
**Note:** The server can run in the background or you can display the server console to see a brief log of the startup and termination. (Right-click on the sys-tray icon.) You can also display the Function Monitor Window. This displays a log of every call to the server. **The function monitor window puts a huge load on the server. Don't leave it open under normal operations.**

## Installing the Clients

These steps need to be performed on each estimator's computer.

### eTakeoff Dimension

- Download and install the latest version of eTakeoff Dimension:  
Go to <http://etakeoff.com/support/dimension/software-install-links/> and click on “eTakeoff Dimension NEW Install (for new users)” or eTakeoff Dimension UPGRADE Install (for existing users”
- In the eTakeoff **Dimension programs folder** (by default “C:\Program Files\eTakeoff\RView” or “C:\Program Files (x86)\eTakeoff\RView” on 64-bit systems) find and run the application “**ETkoCnfg.exe**”. It will display this dialog:



**Use Client/Server Configuration:** Be sure this box is checked. If you ever have the need to use eTakeoff standalone, you can uncheck this box without losing your client/server settings.

**Server User Name:** Enter the user name. This is “ADMIN” if you're using the administrative account for all users.

**Server Password:** Enter the user password. This will be ADMIN if you are using the administrative account and have not changed the password.

**Server IP Address:** Enter the IP address for the server (or its domain name). If the server is running on the estimator's computer, leave this blank.

**Server Data Folder:** **The data folder should be the folder's name on the server, not the folder as seen from the estimator's computer.** For example, the estimator's computer may see the folder as “F:\eTakeoffDataBases\Dimension...”. But the estimator's “F:” drive is mapped to the server's “D:” drive. So from the server perspective, the folder is “D:\eTakeoffDataBases\Dimension...”.

**Copy** Pressing this will copy the configuration to the clipboard. It will be encoded to protect the account and password. This is useful when setting the configuration on numerous clients.

**Paste** If you have copied the encoded configuration to the clipboard, you can press this to load the fields from it. Fill in the fields and press OK

- Run eTakeoff Dimension. Select “Help/About” from the main menu. (“File tab/Help/About the Application...” from the ribbon bar.) Make sure the expression “Client/Server” appears in the “Extensions”.

## Data Recovery

If the CTree server is not properly stopped, the next time it is started users may encounter error 14 when trying to access the eTakeoff data. In this case, the following steps will fix the problem:

1. Stop the CTree server
2. Backup the database files (see the tables above).
3. Run the CTree utility "C:\Faircom\eTkoServer\ctscmp.exe" on the files.
4. Restart the CTree server.

## Database Upgrades / Conversions

Major releases of eTakeoff often require conversion of the databases. In the client/server environment this requires a coordinated effort. The databases must be converted while they are not in use. All clients must be upgraded to the new release before they can access the converted data.

### On Each Client or User Login

1. Make sure the estimator is not using eTakeoff Dimension.
2. If the estimator uses the eTakeoff Excel Add-in, make sure they are not running Excel.
3. If the eTakeoff Excel add-in is in use and clients wish to use Excel (for ANY workbooks) during the conversion period, do the following to disable the add-in:
  - a. Exit any running copies of Excel.
  - b. While running eTakeoff, select "Admin/User Preferences..." from the main menu.
  - c. Click on the "General" tab.
  - d. UN-check the box "Use eTakeoff Excel Add-in".
  - e. Press "OK"

### On the Server

1. Stop the server
2. Install the server software upgrade (if there is one). For major new releases of the server, you may need a new license activation file. This will be provided by eTakeoff.  
Go to <http://etakeoff.com/support/dimension/software-install-links/> and click on "eTakeoff Server New and UPGRADE Install"
3. Copy the data conversion program "C:\Faircom\eTkoServer\eTkoDBCvt.exe" to the database folder and run it. It will perform any needed data conversion. **BE SURE TO RUN IT ON THE SERVER. IF YOU RUN IT ON A CLIENT IT MAY TAKE SIGNIFICANTLY LONGER TO FINISH!**
4. Modify the dump scripts and your backup procedures to reflect the new database names. For example, upgrading Dimension from version 5 to version 6 would mean making these changes

Version 5 Name	Version 6 Name
Dimension50ProjData.ctr	Dimension60ProjData.ctr
Dimension50StdsData.ctr	Dimension60StdsData.ctr

1. Restart the server

### On Each Client

1. Install the software upgrades.
2. If the eTakeoff Excel Add-in was disabled before the conversion, re-enable it:

- a. Exit any running copies of Excel.
- b. While running eTakeoff, select “Admin/User Preferences...” from the main menu.
- c. Click on the “General” tab.
- d. Check the box “Use eTakeoff Excel Add-in”.
- e. Press “OK”
- f. In Excel you may need to re-enable the add-in.

# Appendix A – Backup Scripting

While the server is running, you can't make copies of the databases. The server caches a lot of data so simply copying the files will copy incomplete data.

You could shut down the server, copy the files and restart the server but this causes problems. Any users logged into the server at the time of the shutdown will get errors the next time they access the database (even if the server is restarted).

Faircom provides a facility called "Dynamic Dumping" that dumps data while the server is still running. The databases can then be restored from the dump file. Dumps are driven by dump scripts. eTakeoff provides a dump script for Dimension. The script as provided assume you are using the default folder structure:

Server Software:	C:\Faircom\TKoServer
Dimension Databases:	D:\eTakeoffDataBases\Dimension

If you override these folders you will need to modify the backup scripts. The scripts are simple text files you can edit with Notepad or any other text editor.

**Warning: These scripts simply create a copy of the databases on the same disk drive in a different folder. That has two drawbacks:**

- **If the disk is damaged, both the active databases and the copies will be lost. We recommend the files be moved to another drive after they are created.**
- **Each time the backup scripts are executed, if the previous copies are still in the same place, they will be overwritten. This means you will only have the most recent backup. If you need earlier (or later) information you will be out of luck.**

**You should consult with your IT staff on a complete backup procedure.**

## Dimension Dump Script

The script for Dimension is DimensionDump.txt. Its contents as provided by eTakeoff are:

```
!DUMP C:\Faircom\TKoServer\Backup\DimensionDump.bak
!FREQ 24
!TIME 03:00:00
!IMMEDIATE_RESTORE
!REDIRECT C:\Faircom\TKoServer\data\ D:\eTakeoffDataBases\Dimension\Backup\
!REDIRECT D:\eTakeoffDataBases\Dimension\ D:\eTakeoffDataBases\Dimension\Backup\
!DELETE
!FILES
C:\Faircom\TKoServer\data\FAIRCOM.FCS
D:\eTakeoffDataBases\Dimension\Dimension60ProjData.ctr
D:\eTakeoffDataBases\Dimension\Dimension60StdsData.ctr
!END
```

The specification of the Server Software folder is highlighted in yellow. If you change the server software folder, change these parts of the script.

The specification of the Dimension Database folder is highlighted in light blue. If you change the server software folder, change these parts of the script.

The time and frequency of the dump is highlighted in light green. !TIME 03:00:00 means the dump will be performed at 3:00 AM. The dump time is specified as HH:MM:SS. PM hours are 12:00:00 through 23:59:59. !FREQ 24 means the dump will be repeated every 24 hours.

The !DELETE option means that the backup files created by the previous dump will be deleted and overwritten if they still exist when the next backup is done.

## CTSTATUS.FCS Log File

If you want to review the result of the dumps, you can read this file using Notepad or any other text editor:

C:\Faircom\eTkoServer\Backup\CTSTATUS.FCS

The dumps should take place before the actual backup. When the backup is done, it should not backup the database files used by the server but rather the dumped/restored files:

<b>eTakeoff Dimension</b>
D:\eTakeoffDataBases\Dimension\Backup\Dimension60ProjData.ctr
D:\eTakeoffDataBases\Dimension\Backup\Dimension60StdsData.ctr

### CTSRVR.CFG Configuration File

The execution of the dump scripts can be done manually, but it's easier to put a simple command in the CTSRVR.CFG file to invoke them. The default CTSRVR.CFG includes the following commands:

```
; CUSTOM FOR ETAKEOFF  
DUMP C:\Faircom\eTkoServer\DimensionDump.txt
```

The first and third lines have a semicolon prefix. This means they are comments. The second line loads the dump script for Dimension.

### Restoring from Backup

1. Stop the CTree server
2. Restore the database files from the saved backup.
3. Restart the CTree server.

## Appendix B – Windows Service

You can set up the server to run as a Windows Service. Then it will be started automatically when Windows starts on the server and shutdown when Windows shuts down. There are three batch files included in the install:

### ServiceCreate.bat

Run this script **AS ADMINISTRATOR** to create the Windows Service. Its contents as provide by eTakeoff are:

```
sc create eTakeoffServer binPath= "C:\FairCom\TkoServer\ctsrvr.exe" start= auto DisplayName= "eTakeoff Database Server"
```

The specification of the Server Software folder is **highlighted in yellow**. If you change the server software folder, change this part of the script.

### ServiceStart.bat

Creating the service in the step above does NOT start the service the first time. Run this script **AS ADMINISTRATOR** to start the service the first time.

### ServiceDelete.bat

Run this script **AS ADMINISTRATOR** to delete the service if you longer want the server to run as a Windows Service, If you want to manage Windows Services in Windows, simply type "services.msc" at the command prompt.

## Appendix C – Troubleshooting

ISSUE	CAUSE	SOLUTION
C-Tree Error Code	All C-Tree Error Codes	<a href="#">C-Tree Reference Guide Errors</a>
Error installing Client/Server Software - Unable to save file: \\~Server 5.0.0.msi		You need to run the install <b>As Administrator</b> .
“Server Operation Now Stopped” message received when trying to start ctsrvr.exe	1. The license file has not been copied into the server software folder.  <b>OR</b> 2. The server may already be running.	1. You should have received a license file that has a name <b>like</b> “ <i>ctsrvr39001234.lic</i> ” from eTakeoff. Copy the license file into the server software folder (C:\Faircom\eTkoServer by default).  <b>OR</b> 2. The server may already be running. Check task manager to see if the Background Process, “ <b>c-tree Server (32 bit)</b> ” is running.
Firewall Port Numbers	to open for Client workstation to communicate with Server	1. Using Notepad or any text editor, open the file “CTSTATUS.FCS” in the C:\Faircom\eTkoServer\data folder. 2. <b>Search for “Socket Port Number:”</b> 3. Have IT open Port(s).
C-Tree Error 12	The program could not open the database file(s). Either the file(s) does not exist, the configuration points to an incorrect file name, or the file is locked by another process.	1. Verify that the Server Data Folder path in the C:\Program Files (x86)\eTakeoff\RView\eTkoCnfg.exe is the correct path <b>as seen by the server</b> . 2. Compare the data in the C:\Program Files (x86)\eTakeoff\RView\eTkoCnfg.exe on a workstation that is working to the same file on the client station that is having the issue. 3. Test to see if the server's firewall is blocking the client. Turn it off temporarily and try to open eTakeoff on the client's system. 4. If you discover it is a firewall issue, on the server, open the text file, C:\Faircom\eTkoServer\data\CTSTATUS.FCS and search for "Socket Port Number". Open that port # in your server's firewall.
C-Tree Error 14	File appears corrupt at open.	1. <a href="#">Rebuild Database files - CTree Error 14 opening ~\Dimension50ProjData.ctr</a>

ISSUE	CAUSE	SOLUTION
		<p><b>OR</b></p> <p>2. Restore Database files from a backup.</p>
<p>C-Tree Error 133 when client workstation tries to open program.</p>	<p>Workstation cannot communicate with the Server</p>	<p>1. Make sure that the background process, ctsrvr.exe is running on the Server.</p> <p>2. Navigate to C:\Program Files (x86)\eTakeoff\RView and open ETkoCnfg.exe file. Enter the correct the server settings.</p> <p>3. <b>Open Port Numbers on Server Firewall.</b></p>
<p>The server is running but the client is still using local database files.</p>		<p>You may not have configured the client to use the server. Make sure the "Use Client/Server Configuration" box is checked in the client's C:\Program Files (x86)\eTakeoff\RView\ETkoCnfg.exe file.</p>
<p>When we switched to client/server, we lost the Dimension projects for most of our estimators.</p>	<p>Chances are, your estimators had independent databases before you switched. When you switched you used the databases from just one estimator.</p>	<p>Click on the link below and perform the steps on each workstation.</p> <p><a href="#">Merge Dimension workstation databases into one database on server</a></p>
<p>Can't Find the Answer?</p>		<p>Email a <b>detailed description of the issue</b> and attach the <b>C:\Faircom\eTkoServer\data\CTSTATUS.FCS log file</b> to <a href="mailto:support@eTakeoff.com">support@eTakeoff.com</a></p>

