

CELCAT[®] Timetabler 7

Installation and Configuration Guide

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Introduction

CELCAAT *Timetabler* software consists of several components (some of which are optional) that are installed on the *Microsoft® Windows®* operating system. If you have a CELCAAT distribution CD, all of the components are included. Components are also individually available on the CELCAAT web site (www.celcat.com).

Please take time to read this guide before installing CELCAAT *Timetabler* software.

The main software components are:

- Server
- Administrator
- Client
- Attendance
- Live
- Automation

Additional components include:

- Web Server
- Notification Service
- Auto Calendar Service
- Web Publisher
- Offline Attendance

The back end database uses Microsoft® SQL Server. SQL 2005 onwards can be used including the free Express editions. See www.microsoft.com for more information.

This guide shows you how to install and configure each of the components of *Timetabler*. It assumes a basic knowledge of the *Windows®* operating system and an understanding of how the software will be utilised in your workplace. Please contact us at the address given at the end of this guide if you require our assistance during installation or if you would like us to commission the software for you.

The next section describes hardware and software system requirements.

System Requirements

The following should be regarded as minimum hardware/software requirements for running the CELCAT *Timetabler* software:

<http://www.celcat.com/support/requirements.html>

Please refer to your database server documentation for minimum requirements.

The Distribution CD

The distribution CD contains all of the software you need to get started with *Timetabler*. Your serial number, site number and licence code are printed on the CD packaging, and you should make a note of these in case you need to contact CELCAT for technical support. You may make a backup copy of the CD if you wish.

Although the distribution contains *all* of the CELCAT *Timetabler* software, use of the various applications is governed by your license agreement.

NB - Always use *Timetabler* software components with matching version numbers.

The CD contains the following folders:

Server (CELCAT *Timetabler* Server)

CELCAT *Timetabler* Server is an 'Application Server' – it is a small *Windows*® application that acts as an intermediary between the database server and all other *Timetabler* client software. For this reason it is sometimes referred to as *Middleware*. You must install the *Timetabler* Server on at least one of your server computers in order to use any of the *Timetabler* products.

Admin (CELCAT *Timetabler* Administrator)

CELCAT *Timetabler* Administrator is used to administer access rights, common settings etc in an environment where the timetable is shared by a number of users. It is an essential component of the *Timetabler* software and should be installed on at least one server or workstation computer on your network. *Timetabler* Administrator should be accessible by privileged users only as it can be used to make extensive changes to the timetabling system.

Client (CELCAT *Timetabler* Client)

The main *Windows*® client software is used to construct, maintain and print timetables, and is usually made available (with appropriate access restrictions) to departmental timetablers, room-booking personnel and other administrative staff.

SAT (CELCAT Student Attendance)

CELCAT *Timetabler* Attendance is a system for recording student attendance at classes. It is fully integrated with *Timetabler* software. There is a stand-alone *Windows*® application and a web application serviced by the *Timetabler* Web Server.

Web2 (CELCAT *Timetabler* Live)

CELCAT *Timetabler* Live is a web server module that provides a rich user interface in a modern web browser and is designed for implementation on your intranet. Live offers a subset of the functions available in Client and Admin, but is suitable for most common tasks. In future releases this product will expand in scope to accommodate more functionality. Requires Microsoft IIS.

Automation (CELCAT *Timetabler* Automation)

CELCAT *Timetabler* Automation comprises the automated scheduling engine and all of the supporting mechanisms within the *Timetabler* Client software for storing and manipulating constraints, goals etc.

Web Server (CELCAT *Timetabler* Web Server)

CELCAT *Timetabler* Web Server is a stand-alone web server used to provide internet/intranet access (read/write) to timetables and attendance registers via a web browser. Web access to timetables is convenient for remote users and for those who only need to update timetables occasionally. NB – A 3rd-party web server (like *Microsoft*® *Internet Information Server*) is *not* required.

Notify (CELCAT *Timetabler* Notification Service)

CELCAT *Timetabler* Notification Service is a *Windows*® service that can be used to alert staff, students, groups and supervisors to certain timetable incidents such as a change to a scheduled event, unauthorised absences, etc.

AutoCal (CELCAT *Timetabler* Auto Calendar Service)

CELCAT *Timetabler* Auto Calendar Service is a *Windows*® service that can be used to update staff and student calendars in a *Microsoft*® *Exchange* environment.

WebPub (CELCAT *Timetabler* Web Publisher)

CELCAT *Timetabler* Web Publisher software enables you to publish hyperlinked timetables to the web in HTML and *Adobe*® *Acrobat*® PDF format.

OLA (CELCAT *Timetabler* Offline Attendance)

CELCAT *Timetabler* Offline Attendance provides a means of recording register marks using hand-held, disconnected data collector devices (barcode and MiFare identification is currently supported).

Docs

Installation and user documentation.

In this installation guide, we use these symbols to represent the main software components of the *Timetabler* system:



Software component symbols

The next section describes some of the issues you need to address when planning your software installation.

Planning Your Installation

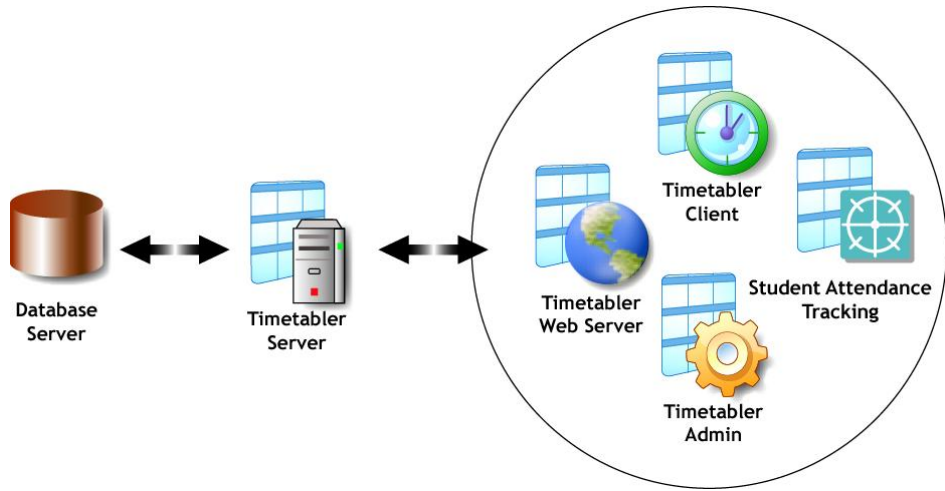
Before you begin installing *Timetabler* components on your computers you should decide how the application is to be used. The various software components can all be installed on one PC or shared among a number of machines depending upon your implementation requirements. To help you decide how best to proceed we have described the following three common scenarios (see below under Scenarios):

“**Test/Single User**”, where all components are installed on a single machine.

“**Remote Server**”, where the Server components of the system installed on a dedicated server machine, and the other components on workstation computers.

“**Distributed**”, where components of the system are distributed across several machines.

None of the installations is difficult, but if you want to configure *Timetabler* to run in a networked environment with dozens of users, then the installation is necessarily more complex. The scenarios described are not exhaustive; *Timetabler* can operate in other configurations, however communication between components and the flow of data is always as shown below:



Component Communication Layers

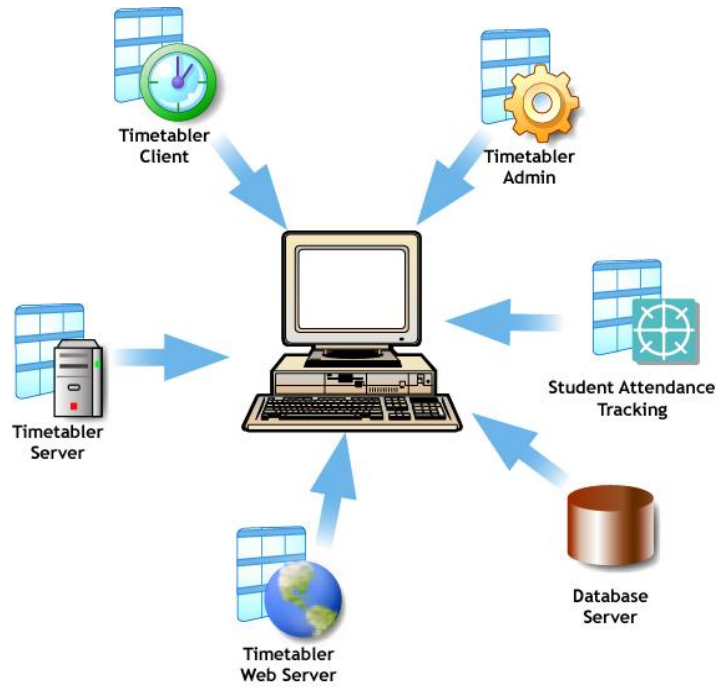
As you can see from the above diagram, the *Timetabler* Server is always used as a channel to access the database server that stores your timetable data.

Installation Scenarios

Described below are three common installation scenarios that illustrate how you might configure *Timetabler* software. The scenarios presented are only suggestions, and the configuration you use may depend on other factors such as how extensively you wish to use the software in your institution, whether you will be allowing students to access the timetable via web browsers, the availability of hardware/software to support the implementation, etc.

1. Evaluation (Single User Installation)

This is the simplest installation, and can be used to evaluate the *Timetabler* software or where *Timetabler* is to be used by a single operator. All components are installed on the same computer, which eliminates the need to configure networking and security. Because all *Timetabler* components are installed on a single machine, hardware requirements are more stringent, and performance somewhat poorer than with other configurations.

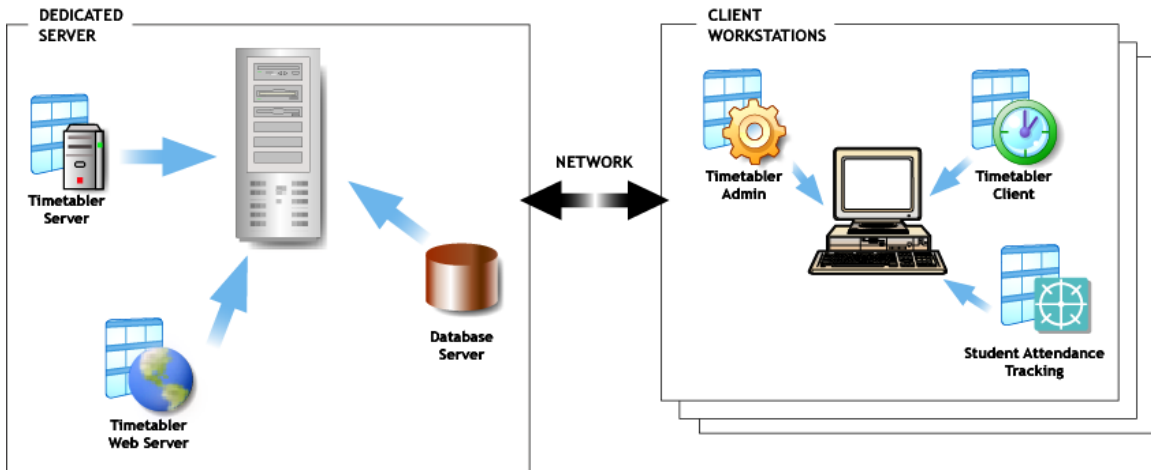


Single-User Installation

Install the components using the instructions given in the relevant sections below. Some component installations may require you to reboot your PC before proceeding with the rest of the installation. If you already have *Microsoft® SQL Server 2005 (or greater)* installed, you can use this to store your timetable data.

2. Remote Server (Department Installation)

In this scenario, the database server, *Timetabler* server and *Timetabler* Web Server components are installed on a dedicated server machine and the client components (*Timetabler* Client and Administrator) are installed on networked workstation computers. This configuration is suitable for departmental use and can accommodate multiple concurrent access to the timetable.

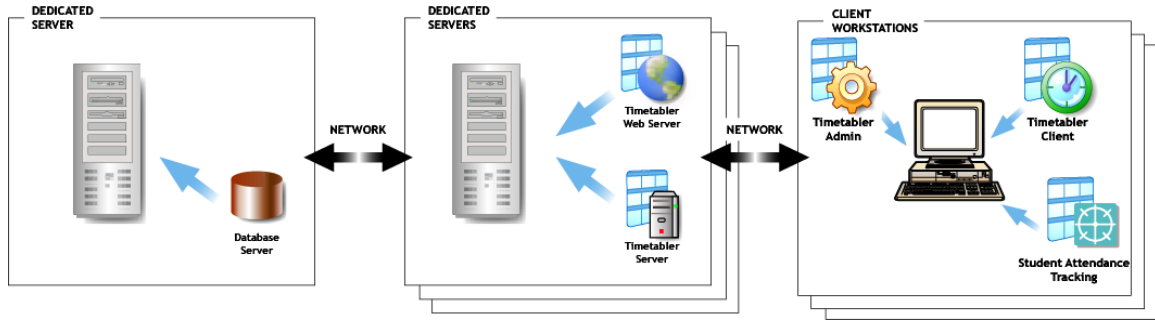


Dedicated Remote Server

Install the components using the instructions given in the sections below. When *Timetabler* is set up in this way, you need to consider networking and database security, and this is described in the appropriate sections. In particular, the *Timetabler* Server must have sufficient access to the Database Server, and the other components must have access to the *Timetabler* Server.

3. Fully Distributed (Institution Installation)

In this scenario, the *Timetabler* components are distributed among several machines. Additionally, there can be multiple installations of the *Timetabler* Server and *Timetabler* Web Server components to support a large number of users over multiple sites. This configuration is suitable for an institution-wide rollout of the software.



Fully Distributed

Install the components using the instructions given in the relevant sections below. In this scenario, one or more dedicated server computers host a *Timetabler* Server (and/or a *Timetabler* Web Server), and each client workstation communicates with one of these servers thus allowing you to balance the load in a large installation. Any number of *Timetabler* Servers can be set up (each running on its own server computer) to cater for many users of the client software. The *Timetabler* Server is multi-threaded and a single instance can easily accommodate 20 concurrent users on modest hardware. There is usually only a single installation of the Database Server, but see below under “Additional Installation Options” for details of database replication if required.

Establishing appropriate network and database access is an important factor in the success of this configuration. Please follow the installation instructions carefully.

Additional Installation Options

You may wish to employ database replication and/or server-based installation of the client software. Please skip this section and move to “Installing the Software” unless you must use one of these techniques.

Database Replication is a set of technologies supported by *Microsoft® SQL Server* for copying and distributing data from one database to another and then synchronizing between databases for consistency. This technique can be applied to your timetable data in order to provide better performance (for example you could configure a separate replicated database server for use by all of your web clients or for use by a bespoke data warehouse application). This is particularly useful when the clients require read-only access. Please see *Microsoft®* documentation for further information.

Server-Based Client Installation involves manually installing the client software (e.g. *CELCAT Timetabler Client* and *CELCAT Timetabler Administrator*) onto a shared network server and providing users with a shortcut link to the appropriate executables. The advantage of this technique is that the client software does not need to be installed on a large number of workstations; the rollout of a new version of the software can be much simplified. The disadvantages include extra network congestion as the application and support files are transferred from the server to workstations. The Server-Based Client Installation is not directly supported by CELCAT, but if you wish to use the technique please see the Installation Guide – Server-Based Client.

The next section provides instructions on conventional installation of the various *Timetabler* components.

Installing the Software

If you are installing from a CELCAT distribution CD, insert the disk and wait for the CELCAT *Timetabler* launcher application to appear. If the launcher is not automatically displayed, navigate to the CD drive and run the CTLauncher.exe file. Select the appropriate installation item from the launcher and follow the on-screen instructions.

Installing the Database Server

CELCAT *Timetabler* uses Microsoft® *SQL Server 2005* or greater or Microsoft® *SQL Server 2005 Express* to store your timetable data. If you already have a Microsoft® *SQL Server* installation you can skip this section. Microsoft® *SQL Server Express* editions should be used on small scale deployments only. For more information on the various versions of Microsoft® *SQL Server*, please visit www.microsoft.com/sqlserver.

During installation you may be asked to select an authentication mode, which will determine the method of access security used. Two types of authentication can be used by the database server; Windows Authentication Mode or Mixed Mode (Windows Authentication and SQL Server Authentication). CELCAT *Timetabler* can use a database server configured with either authentication mode. With Windows Authentication Mode, when a user connects through a Microsoft® *Windows*® user account, the SQL Server validates the account name and password using information in the *Windows*® operating system. SQL Server Authentication (available in Mixed Mode) is provided mainly for backwards compatibility. At this point it is recommended that you add a domain account exclusively for use by *Timetabler* Servers connecting to your database. Make a note of the user name and password and give the account administrative rights to your database server.

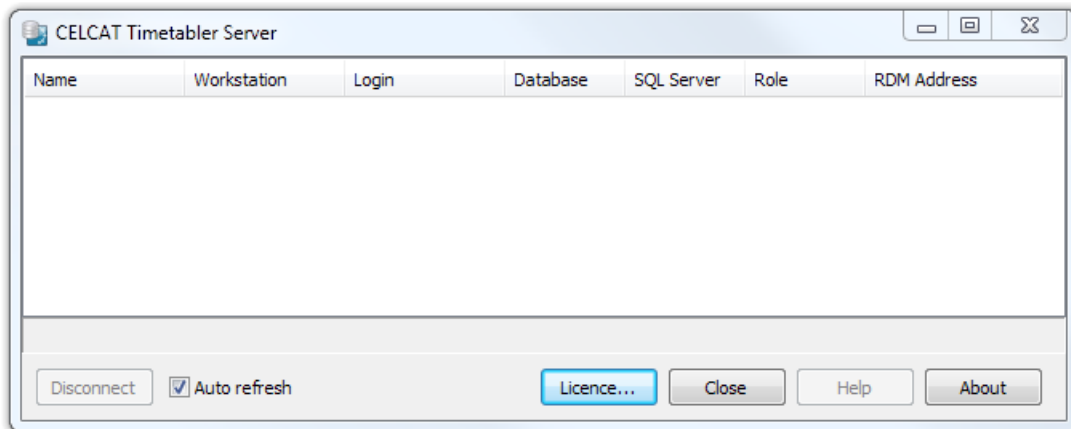
Once installed, the database server runs whenever the host machine is switched on (you don't need to log on to the server machine).

Installing Timetabler Server

Ensure you have Administrator access to your server machine and then install the *Timetabler* Server following the on-screen instructions.

The *Timetabler* Server is known as a DCOM server – clients communicate with it over the network using the *Distributed Component Object Model* (DCOM) protocol, and when *Timetabler* client software needs the services of *Timetabler* Server, it is launched automatically. Like all DCOM servers, *Timetabler* Server requires configuration before use and this is described below under “DCOM Configuration”.

After installing *Timetabler* Server, launch the server using the **Start | Programs | CELCAT | Timetabler | CELCAT Timetabler Server** menu. The *Timetabler* Server **Main Window** is shown below. You will notice that the phrase “Licence not registered” appears in the bottom left of the window.



Timetabler Server Main Window

Click the **Licence** button to display the **Licence Window**. Enter the CELCAT *Timetabler* software licence that came with your product packaging. The licence consists of 3 pieces of information; Site Name, Serial Number and Licence Code, and you must enter each of these exactly as printed to successfully register the licence. HINT – if you were sent your licence by email, simply copy the whole of the licence data to the clipboard before opening the Licence window.

When successfully registered, *Timetabler* Server displays the licence details in its **Main Window**. Licensing can also be managed using the *Timetabler* Administrator program, and you do not need to licence individual client programs.

CELCAT *Timetabler* Administrator can also be used to register licence information for *Timetabler* Server.

Finally, close the *Timetabler* Server by clicking the **Close** button.

DCOM Configuration of Timetabler Server

You can skip this section if you are installing the *Timetabler* Server and *Timetabler* Client components on the same machine.

You must configure DCOM to allow users appropriate access to the *Timetabler* server. These instructions should be followed very closely or you will be unable to connect the *Timetabler* Client software to your *Timetabler* Server.

If you are installing on Windows® XP or Windows® 2003 pre Service Pack 2, please see [Appendix A](#). If you are installing on Windows® 2003 SP2 onwards, Windows® Vista, Windows® 7 or Windows® 2008 or above, please see [Appendix B](#)

Appendix A

Microsoft® Domain

Open the DCOM Configuration tool by running DCOMCNFG.exe from the **Start | Run** menu. The **Component Services Window** is displayed, and you should open the Component Services node and navigate to My Computer and open properties.

Open the **COM Security Page** and in the **Access Permissions** group box click the **Edit Default** button and ensure that your user(s) and/or group(s) are allowed Local and Remote Access. In the **Launch and Activation Permissions** group box click the **Edit Limits** button and ensure that the 'Everyone' group (or appropriate users) is allowed **Remote Launch** and **Remote Activation** permissions.

With the **Component Services Window** open, navigate to Computers | My Computer | DCOM Config. Select "CTT Server" from the list of DCOM Applications, and click the **Properties** button to display the CT Server Properties window, and select the **Identity Page**.

When the *Timetabler* Server is launched, DCOM uses the security context of the user specified on this page. The default setting is "The launching user", i.e. the user who has logged in at the client machine. This is inefficient since it means that a new *Timetabler* Server process would be started for each distinct client user. The best setting for *Timetabler* Server is "This user". Create a new domain account for *Timetabler* Server to use and then enter the account details on the Identity page. Using this setting, all clients will create just one application server and use the security attributes of the given account.

Ensure that the new account has local administrator rights for the machine on which *Timetabler* Server is installed.

Now select the **Security** page, select **Launch and Activation Permissions, Customize** and click the **Edit** button. Specify the users or user groups that can access the *Timetabler* Server. Ensure that the SYSTEM user has access to the server. Also ensure **Access Permissions** is set to **Use Default**.

Be sure to give the SYSTEM account - the built-in account under which most NT services run - access permission to the *Timetabler* Server. During one phase of the remote activation process, a part of COM that runs in a service must call into the freshly launched server process. If you deny the SYSTEM account access permission, the call will fail.

NB - In normal distributed operation you will not see the *Timetabler* Server running on the server machine. This is because of a concept known as *Windows stations*, where the only Windows station able to write to the screen is the user who is currently logged in on the server machine. This is not a problem since *Timetabler* Server is administered using the CELCAT *Timetabler* Administrator component.

Appendix B

Microsoft® Domain

To assist with the setup of Distributed COM, Microsoft® has created a local user group called Distributed COM Users. You need to add the user(s) and/or user group(s) to the Distributed COM Users group that require access to the CELCAT *Timetabler* Server. To add these permissions, open Computer Management (compmgmt.msc via the run command), then open Local Users and Groups. Under the Groups section you will see Distributed COM Users. Open this group and add in the required permissions.

Open the DCOM Configuration tool by running DCOMCNFG.exe from the **Start | Run** menu. The **Component Services Window** is displayed, and you should open the Component Services node and navigate to My Computer and open properties.

Open the **COM Security Page** and in the **Access Permissions** group box click the **Edit Default** button and ensure that you user or group is allowed Local and Remote Access. You cannot add the Distributed COM Users group to **Edit Default** so you will need to add the same user(s) and/or user group(s) that were added in to the local Distributed COM Users group ensuring they have Local Access and Remote Access. There's no requirement to add any other permissions as these are dealt with by the built in Distributed Com Users group.

With the **Component Services Window** open, navigate to Computers | My Computer | DCOM Config. Select “CTT Server” from the list of DCOM Applications, and click the **Properties** button to display the CT Server Properties window, and select the **Identity Page**.

When the *Timetabler* Server is launched, DCOM uses the security context of the user specified on this page. The default setting is “The launching user”, i.e. the user who has logged in at the client machine. This is inefficient since it means that a new *Timetabler* Server process would be started for each distinct client user. The best setting for *Timetabler* Server is “This user”. Create a new domain account for *Timetabler* Server to use and then enter the account details on the Identity page. Using this setting, all clients will create just one application server and use the security attributes of the given account.

Ensure that the new account has local administrator rights for the machine on which *Timetabler* Server is installed.

Now select the **Security** page, select **Launch and Activation Permissions, Customize** and click the **Edit** button. Specify the local Distributed COM Users group to allow access the *Timetabler* Server. Ensure that the SYSTEM user has access to the server. Also ensure **Access Permissions** is set to **Use Default**.

Be sure to give the SYSTEM account - the built-in account under which most NT services run - access permission to the *Timetabler* Server. During one phase of the remote activation process, a part of COM that runs in a service must call into the freshly launched server process. If you deny the SYSTEM account access permission, the call will fail.

NB - In normal distributed operation you will not see the *Timetabler* Server running on the server machine. This is because of a concept known as *Windows stations*, where the only Windows station able to write to the screen is the user who is currently logged in on the server machine. This is not a problem since *Timetabler* Server is administered using the CELCAT *Timetabler* Administrator component.

Novell® and Workgroup

If you are using *Novell*® networking and have no ‘NT’ domain for *Microsoft*®-style network authentication then you must install the “Client for *Microsoft*® Networks” in the Control Panel networking applet on the client PCs and “File & Printer Sharing for *Microsoft*® Networks” on the server PC, and then follow the special *Novell*® instructions highlighted in the text below. DCOM uses *Microsoft*® authentication that is only available if you are using an NT domain (or later equivalents); this means that *Timetabler* does not enjoy the same level of security in an exclusively *Novell*® network.

Novell® – If you are using *Novell*® networking without any Microsoft authentication, specify “Everyone” in the custom access and custom launch permissions. Finally, ensure that the “Guest” account on the server is enabled.

Novell® - If you are using CELCAT *Timetabler* in a *Novell*® environment or a workgroup without any Microsoft authentication, you must take some additional steps. Configure the CELCAT DCOM interface to use a local Administrator account. This setting can be found using the DCOM Configuration tool, within the properties for the *Timetabler* Server (it appears as “CTT Server” in the list). The account used on the identity tab must also exist on the Client machines wishing to connect to the CELCAT *Timetabler* Server and the account must be a local administrator account with exactly the same credentials as the launching user on the CELCAT *Timetabler* Server machine.

Firewall Configuration

If you have a firewall installed between the *Timetabler* Clients and *Timetabler* Server, please ensure that you enable incoming and outgoing DCOM network access on the server machine (usually by opening TCP/IP port 135).

Unlike most Internet applications that have fixed TCP, DCOM dynamically assigns-at run time-one TCP port to each CELCAT *Timetabler* Server. *Timetabler* client software discover this port by connecting to DCOM's Service Control Manager (SCM). The SCM always operates at a fixed network port on every computer; this is always port 135 for both TCP and UDP. Because of this dynamic allocation, you may wish to restrict DCOM to a small number of ports (otherwise all ports must be open through the firewall). Microsoft recommends at least 15 to 20 ports be opened for DCOM above port 5000.

If you wish to use a static port for the *Timetabler* Server, open the DCOM Configuration tool by running DCOMCNFG.exe from the **Start | Run** menu.

The **Component Services Window** is displayed, and you should open the Component Services node and navigate to “DCOM Configuration” (under Computers | My Computer | DCOM Config).

Select “CTT Server” from the list of DCOM Applications, and click the **Properties**

Go to the Endpoints tab and click the Add button. Check the option ‘Use static endpoint’ and then enter the port number you wish to use.

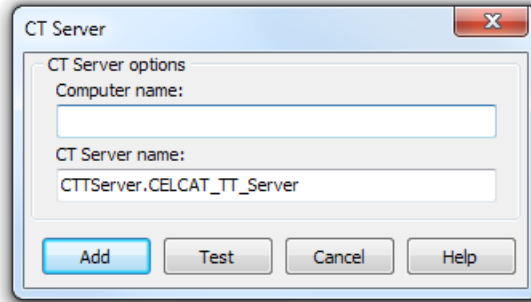
If there is a firewall between the CELCAT *Timetabler* Server and the SQL Server then the Firewall for the SQL Server machine will also need to be configured.

Installing Timetabler Administrator

Launch the *Timetabler* Administrator installer on your distribution CD and follow the on-screen instructions to install the application.

When *Timetabler* Administrator has been installed run it using the **Start | Programs | CELCAT | Timetabler | CELCAT Timetabler Administrator** menu command. The Administrator **Main Window** should be displayed.

Timetabler Administrator is used to administer the operation of *Timetabler* Servers on your network, and the first step is to register any server installations. Select the **Network** node in the left-hand pane and choose the **Servers | Register Server** command to display the **Register Server** window.



Register Server Window

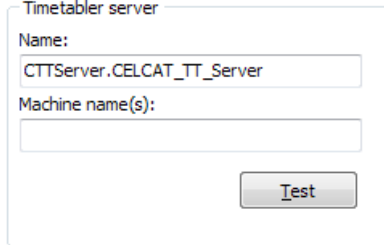
The **Computer Name** field refers to the name of the server computer on which the *Timetabler* Server is installed. The **CT Server name** field is the generic DCOM name for the *Timetabler* Server and should be left at the default setting. Enter the computer name and click the **Test** button. This tests the connectivity between *Timetabler* Administrator and the *Timetabler* Server. If the test fails you should ensure that you have entered the computer name correctly and also that the DCOM settings have been accurately configured on the server machine.

Click the **Add** button to add the *Timetabler* Server to the list of Administrator's servers.

Installing Timetabler Client

Install the *Timetabler* Client software using the appropriate installation option on your distribution CD. When you have completed the installation, load the client software using the **Start | Programs | CELCAT | Timetabler | CELCAT Timetabler Client** menu command.

Timetabler Client communicates with the database via an installation of *Timetabler* Server. To specify the *Timetabler* Server to use, open the **Tools | Options Window** and select the **Database Page**.



Timetabler Server Settings

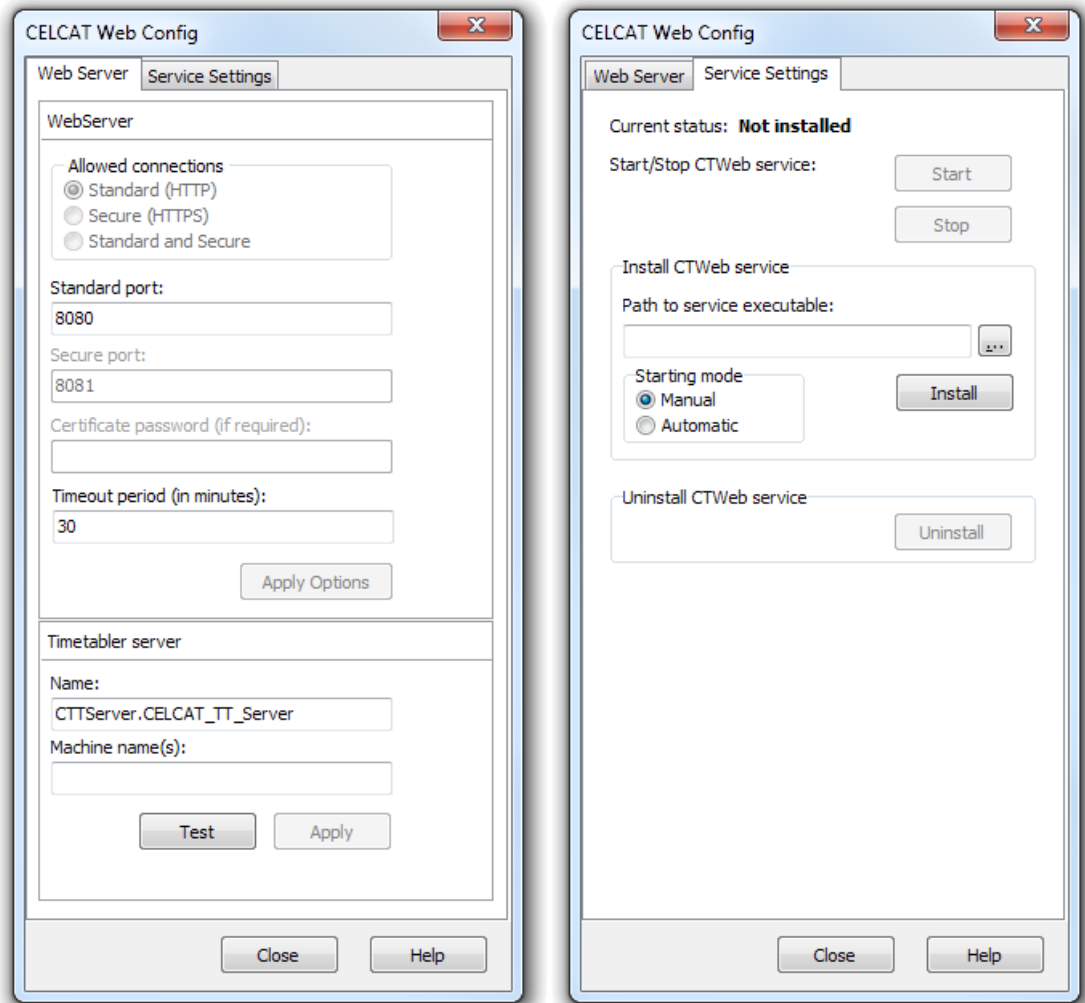
In the **Machine name(s)** box, enter the name of the *Timetabler* Server that you want the client to use. If you have configured multiple *Timetabler* Servers and you don't mind which one is used by this *Timetabler* Client, you can enter as many names as you wish in the **Machine name(s)** box separated by semi-colons. Leave the **Name** settings at its default value – this is the internal DCOM name for the *Timetabler* Server.

Installing Timetabler Web Server

If you wish to allow web access to the timetable and/or to your attendance registers you must install the *Timetabler* Web Server from your distribution CD. *Timetabler* Web Server can be run as a standard application or as a service. The advantage of running it as a service is that you don't need to be logged on to the server machine for the web server to be running. However, if you run the web server as a standard application it provides a Log Window for diagnostic purposes and an indication of activity. If *Timetabler* Web Server is run as a service you can access the log in the system's Event Log (**Control Panel | Administrative Tools | Event Viewer | Application**).

N.B. If you configure *Timetabler* Web Server to run as a service you must ensure that the account under which it runs has permissions to access your *Timetabler* Server. Use **Control Panel | Administrative Tools | Services** to determine the name of the account used to 'Log On' the *Timetabler* Web Service. By default this is the SYSTEM account, which is usually sufficient to access a locally installed *Timetabler* Server. However, if the *Timetabler* Server is remote then you should change the account to provide appropriate access rights - you can create a domain user account for the service, specifying the name and password in the *Timetabler* Web Service Configuration tool.

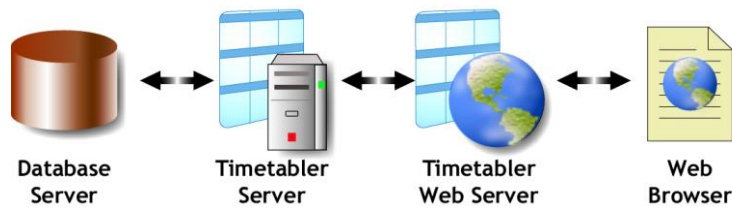
You must specify which *Timetabler* Server the *Timetabler* Web Server should use to communicate with the database. Open the *Timetabler* Web Server Configuration tool (as shown below) and specify the appropriate settings. The HTTP port to use can also be specified using the Configuration tool (8080 is the standard port value).



Web Server Configuration

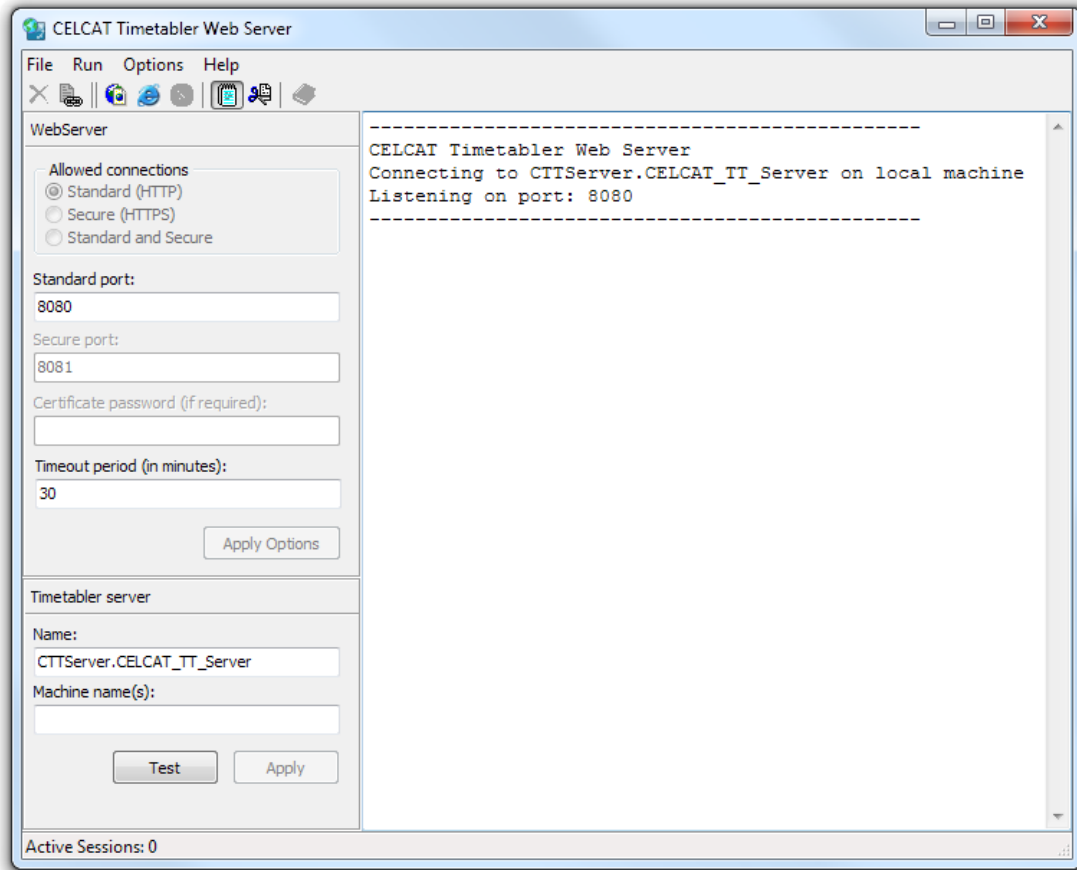
The Web Server Configuration tool can also be used to configure the Web Server to run as a service. Select the Service Settings page (as shown below) and install the CTWebServer.exe executable as a service.

As shown in the diagram below, the CELCAT *Timetabler* Web Server adds an additional tier to the communication layers.



Web Server Communication Layers

When installed you should check that the web server is functioning correctly by running the Web Server executable (**Programs | CELCAT | Timetabler | Timetabler Web Server**). The main window is shown below.



Web Server Main Window

Test that the web server can connect to your CELCAT *Timetabler* Server by clicking the **Test** button. In the screenshot shown, the **Machine names(s)** field is blank indicating that the CELCAT *Timetabler* Server resides on the same machine as the web server.

Installing Attendance

If you wish to use the Attendance component you should install it from your distribution CD. When you have completed the installation, load the Attendance software using the **Start | Programs | CELCAT | Timetabler | CELCAT Timetabler Attendance** menu command.

Attendance communicates with the database via an installation of *Timetabler* Server. To specify the *Timetabler* Server to use, open the **Tools | Options Window**.

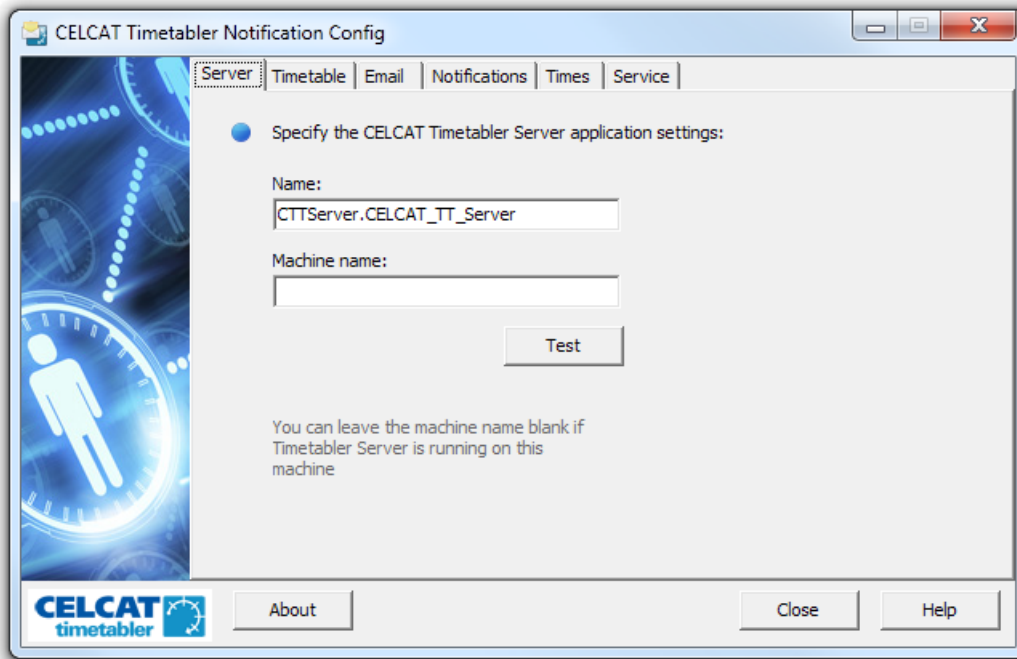
Installing Other Tools

The distribution CD contains a number of additional tools that you may find useful. You can install them using the appropriate links in the launcher application. Generally, the tools are client applications that require connection to a CELCAT *Timetabler* Server, and configuration of some of the main tools is described below:

Timetabler Notification Service

The CELCAT *Timetabler* Notification Service is used in conjunction with CELCAT *Timetabler* software to notify staff and students of changes to their timetables. The service performs periodic checks on timetable data to determine when an important change has been made and then notifies relevant staff and/or students using email or SMS (text messaging).

The service should be installed on a server computer and configured using the CELCAT *Timetabler* Notification Configuration Tool. Once installed, run the configuration tool using the **Programs | CELCAT | Timetabler | Notification Config** menu command and open the **Server Page**. The **Server Page** is used to specify the name and location of the CELCAT *Timetabler* Server. Enter the **Name** of the computer on which your CELCAT *Timetabler* Server application is running. If it's running on the same machine as the Notification Service, you can leave the **Name** field blank. Click the **Test** button to ensure that the service can communicate with the *Timetabler* Server.



Notification Configuration, Server Page

N.B. The ‘Test’ functions described above simply check for the existence of the *Timetabler* Server and *Microsoft® Exchange* server that you specify. Because *CELCAT Timetabler* Notification Service runs as a service (and not necessarily under the context of a user account), you must ensure that the account under which it runs has permissions to access your *Timetabler* Server and your *Microsoft® Exchange* server (if using email notification). Use **Control Panel | Administrative Tools | Services** to determine the name of the account used to ‘Log On’ the CT Notification Service. By default this is the SYSTEM account, which is usually sufficient to access a locally installed *Timetabler* Server or *Microsoft® Exchange* server. However, if either server is remote then you should change the account to provide appropriate access rights.

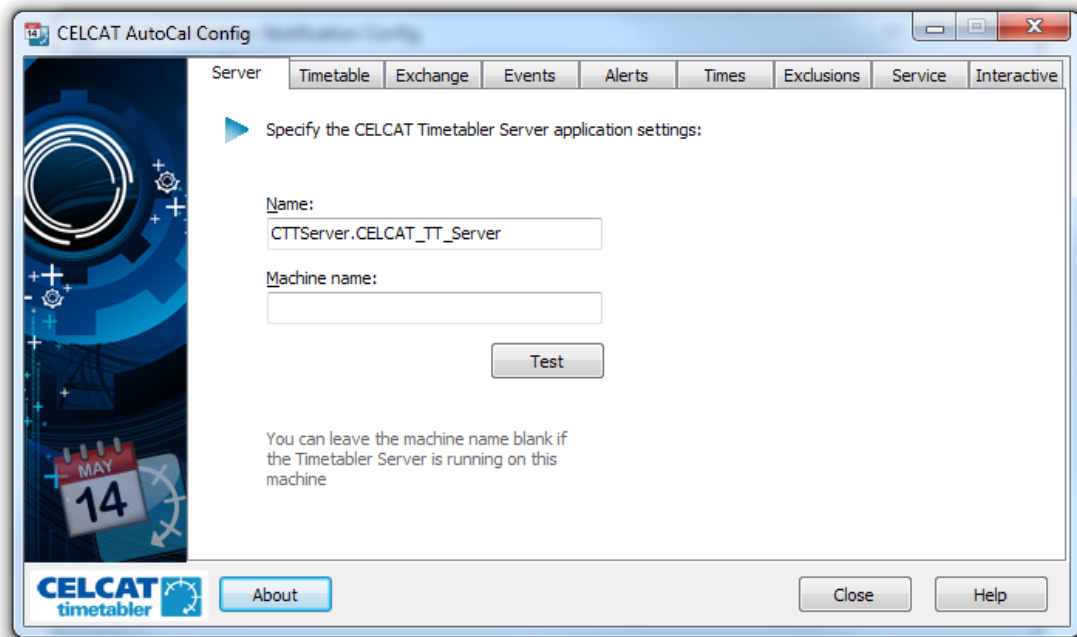
Because *CELCAT Timetabler* Notification Service runs unattended on a server computer, it is a good idea to configure the software to send you alerts by email if an error occurs (e.g. if the service can’t connect to the *Timetabler* Server). You can specify the alert email address in the **Notification Page**. If you wish to send notification messages by using SMS you will need to set up an account with one of the supported internet-based SMS service providers.

Timetabler Auto Calendar Service (AutoCal)

The *CELCAT Timetabler* AutoCal Service is used in conjunction with *CELCAT Timetabler* software to update staff and student *Microsoft® Exchange* calendars. The service performs periodic checks on timetable data and communicates with your *Microsoft® Exchange* server in order to synchronize calendars.

N.B. The AutoCal Service uses a Microsoft library called Collaboration Data Objects (CDO). This library will already be present on a *Microsoft® Exchange* server computer, but if you wish to run AutoCal Service on another server the best way of ensuring CDO is available is to install *Microsoft® Outlook* and select Collaboration Data Objects in the custom install options.

The service should be installed on a server computer and configured using the *CELCAT Timetabler* AutoCal Configuration Tool. Run the configuration tool using the **Programs | CELCAT | Timetabler | AutoCal Config** menu command and open the **Server Page**. The **Server Page** is used to specify the name and location of the *CELCAT Timetabler* Server. Enter the **Name** of the computer on which your *CELCAT Timetabler* Server application is running. If it's running on the same machine as the AutoCal Service, you can leave the **Name** field blank. Click the **Test** button to ensure that the *Timetabler* Server exists.



AutoCal Configuration, Server Page

On the **Exchange Page**, click the Test button to ensure that the *Microsoft® Exchange* server exists.

N.B. The ‘Test’ functions described above simply check for the existence of the *Timetabler* Server and *Microsoft® Exchange* server that you specify. Because *CELCAT Timetabler* AutoCal runs as a service (and not necessarily under the context of a user account), you must ensure that the account under which it runs has permissions to access your *Timetabler* Server and your *Microsoft® Exchange* server. Use **Control Panel | Administrative Tools | Services** to determine the name of the account used to ‘Log On’ the CT AutoCal service. By default this is the SYSTEM account, which is usually sufficient to access a locally installed *Timetabler* Server or *Microsoft® Exchange* server. However, if either server is remote then you should change the account to provide appropriate access rights.

Some versions of *Microsoft® Outlook* (notably 2003, but also 2000/2002 with email security patch applied) prevent applications that use CDO from automatically opening mailboxes. If the above *Test* function displays a dialog warning you that an “application is trying to access e-mail addresses...”, then the restriction is in place. Microsoft is aware of the problems this causes some applications and has provided an *Outlook Security Update Administrator* as part of the Office Resource Kit. This program allows you to modify the default security attributes. The download is called admpack.exe. Another possible solution is to use a free tool called *Advanced Security for Outlook* by MAPILab Ltd (download from <http://www.mapilab.com/outlook/security>).

Because *CELCAT Timetabler* AutoCal Service runs unattended on a server computer, it is a good idea to configure the software to send you alerts by email if an error occurs (e.g. if the service can’t connect to the *Timetabler* Server). You can specify the alert email address in the **Alerts Page**.

Timetabler Web Publisher

CELCAT Timetabler Web Publisher is used to publish timetables to an intranet or to the web in *Adobe® Acrobat®* PDF format. It is essentially an alternative to printing and distributing timetables on paper. Install the *Timetabler* Web Publisher software from your distribution CD, and see the *Getting Started Guide* for a tutorial.

Getting Started Guide

Once you have CELCA**T** *Timetabler* software is installed, please see the *CELCA**T** Timetabler Getting Started Guide* for more information on using the product.

Technical Support & Installation Services

We are here to help! If you need any assistance during the installation of the *Timetabler* software, or would like us to commission the software for you, please call us on 024 7646 3489 between 9am and 5pm Monday to Friday. Alternatively, email our technical support team at tech@celcat.com

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