Fencing Time

Version 4.2

Server System Guide

April 2016

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Chapter 1: Fencing Time Server System Overview

The Fencing Time server system is the next evolution of the Fencing Time Tournament Management Solution. This system centralizes your tournament data so that multiple computers can operate on it simultaneously. This new architecture can scale to support many client PCs running in multiple roles: tournament operator, check-in desk, and remote monitor.

Server System Components

The Fencing Time system is comprised of several components. Not all are required to use the server system; however, a fully-realized system will include all of the components.

1. **Fencing Time database server (required)**
   The heart of the Fencing Time system is the database server running Microsoft SQL Server Express. A valid Fencing Time Server license must be installed on the server.

2. **Fencing Time clients running in operator mode (required)**
   The Fencing Time clients are the standard Fencing Time application running in "operator" mode. Operator mode allows the user unrestricted access to the tournament data so that they can run the tournament. Each client must have a valid Fencing Time Standard license installed.

3. **Fencing Time clients running in check-in mode (optional)**
   Fencing Time clients can also be run in "check-in" mode. This is a mode that is restricted to only performing check-in activities; check-in clients cannot modify the tournament, events, or scores. The Fencing Time client can be operated in "check-in" mode without a license.

4. **Remote Monitors (optional)**
   Remote monitors are PCs used to control large displays or projector screens at the venue. These PCs only need to run the Fencing Time Remote Monitor application. Remote monitors do not need an installed license.

5. **Fencing Time web services (optional, required if using Remote Monitors)**
   The Fencing Time web services are a set of services running on a PC running Microsoft IIS (Internet Information Services). These services are needed by the remote monitor(s) for communication with the Fencing Time database server. The web services do not need a license.

System Architecture

The figure below shows a standard server system architecture. In this example, the database server and web services are installed on the same physical computer.

Tournament Operator #1

Tournament Operator #2

Tournament Operator #n

Fencing Time Server
(Database, Web Services)

Local Network Switch

Check-in Desk #1

Check-in Desk #2

Check-in Desk #n

Remote Monitor #1

Remote Monitor #2
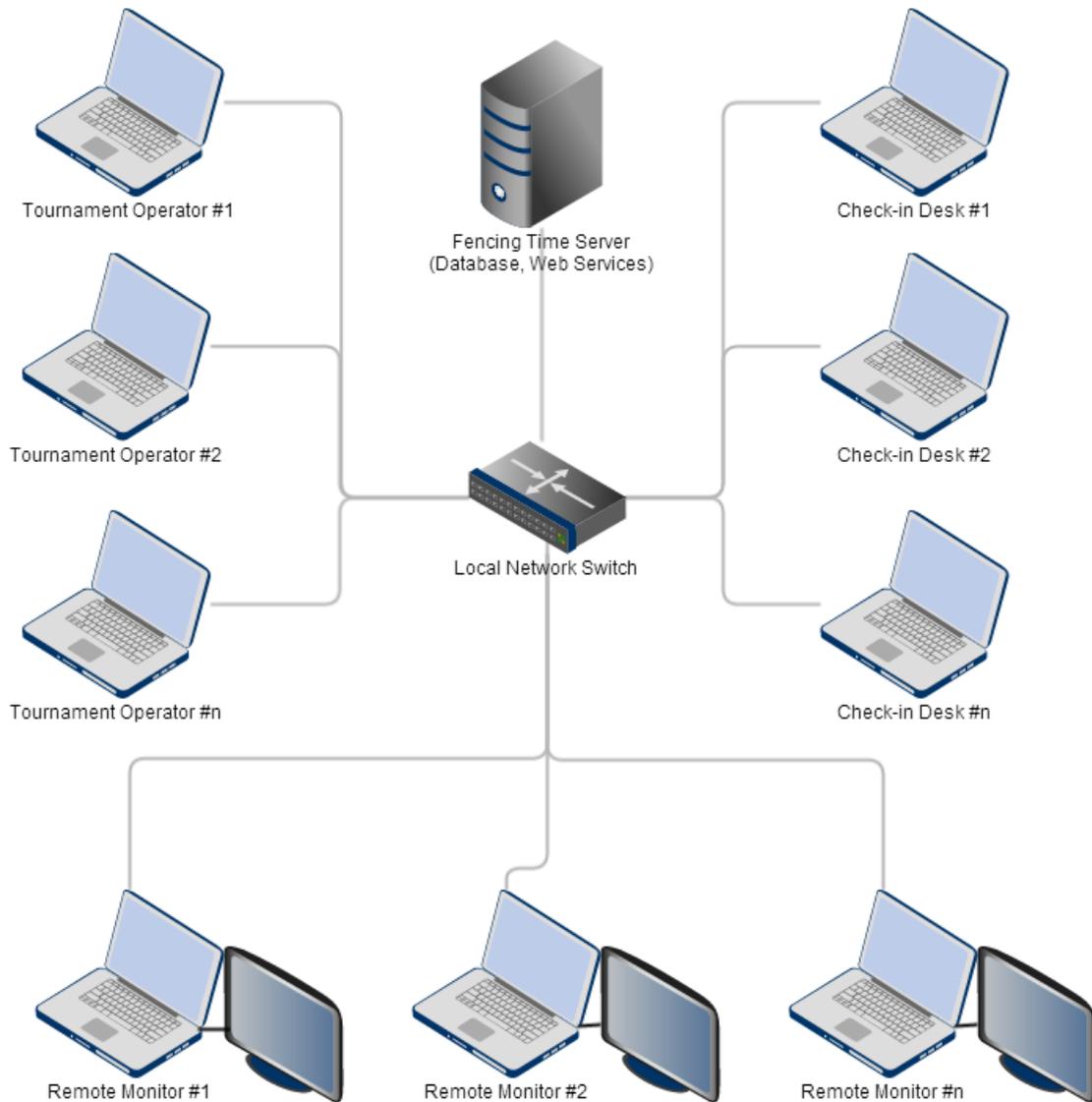
Remote Monitor #n

All of the computers in the Fencing Time system must be on the same local area network. A wired network is recommended for Fencing Time clients (operators and check-in mode), while wireless networks can be used for the remote monitors.

The network used for the Fencing Time system should be a private network not available for general-purpose use. Do not put the Fencing Time system on the same network used to provide public internet access to people at your venue.

Chapter 2: Hardware Requirements

Each component in the server system has slightly different hardware requirements. The following requirements are recommendations; using less powerful PCs will usually work, but you may experience degraded system performance.

All computers running Fencing Time require Version 4.0 of the Microsoft .NET Framework. If your computer does not have this framework installed, you will be notified during the installation process. If you need to install .NET 4.0, it can be downloaded from Microsoft at http://www.microsoft.com/en-us/download/details.aspx?id=17718.

Database and Web Server

The database and web server have similar hardware requirements. For simplicity, it is recommended that you install both components on the same PC. There is little reason to separate the two components.

The recommended hardware configuration for the database and web server is a PC with a dual-core CPU running at 1.5 GHz and a minimum of 4 GB of RAM.

The recommended operating system for the database and web server is Windows Server 2008 R2 or late. However, since these server products are expensive and rarely seen outside of corporate environments, you may also use Windows Vista, Windows 7, Windows 8/8.1, or Windows 10. If using one of these versions, you must use the "Home Premium", "Professional", or "Ultimate" edition. The "Starter" and "Home Basic" editions are not recommended.

The database and web server cannot be installed on Windows XP or other ancient versions of Windows.

Operator and Check-in Clients

The standard Fencing Time client can be installed on any PC running Windows XP or a later version of Windows. A Pentium CPU running at 1 GHz with at least 1 GB of RAM is recommended.

Remote Monitors

The Fencing Time Remote Monitor software can be run on any PC running Windows XP or later. Since this is a fairly lightweight application, just about any CPU should work (including Atom-based systems.)

Chapter 3: Setting up the Fencing Time Server

Installing Fencing Time on your server is a fairly straightforward process. The steps below are a basic outline of the process, although you may need to tailor the process a bit for your specific situation.

Find your Computer Name

Throughout the installation process, you will need to know your server's **computer name**. This is the unique name of the computer so that it can be identified on the network. You will need to provide this name every time you connect a Fencing Time client to the server.

To find your computer name (if you do not know it), open the Windows Control Panel and find the "System and Security" or "System and Maintenance" item (this will vary depending on which version of Windows you are using.) Find the "System" item, which should take you to the screen showing which version of Windows you are running. Near the bottom of that page, the computer name should be listed.

Installing the Fencing Time database and server license

Run the FT42DatabaseSetup.exe program on your server PC to begin the process of installing the database. You will need to do this from an account with administrator privileges.

The installer will prompt you for three passwords. The first password is for the administrator account, which you will use to manage the Fencing Time database. **DO NOT FORGET THIS PASSWORD**. Without this password, you will be unable to maintain your database.

The second password is for the "tournament operator" account which you will use when the running Fencing Time client in "operator" mode. You will be able to change this password later if desired.

Finally, the third password is for the "check-in" account, which is limited to performing competitor check-in functions at an event. You will be able to also change this password later if desired.

The installer will proceed to install SQL Server 2014 Express, which is the database that stores Fencing Time's data. (Note: If you get a "program compatibility" warning when SQL Server is installing, you can ignore the warning and continue the installation.) After the database in installed, the installer will configure it for use by Fencing Time.

The final step in the installation process is to install your server license. You can skip this step if you wish, but your server will not be usable until a license is installed. If you have your license available, paste it into the box and click "OK." You should then see a message telling you that the license was properly installed.

If you skip the license installation step, you will need to use the Fencing Time Database Manager (described in Chapter 6) to install it at a later time.
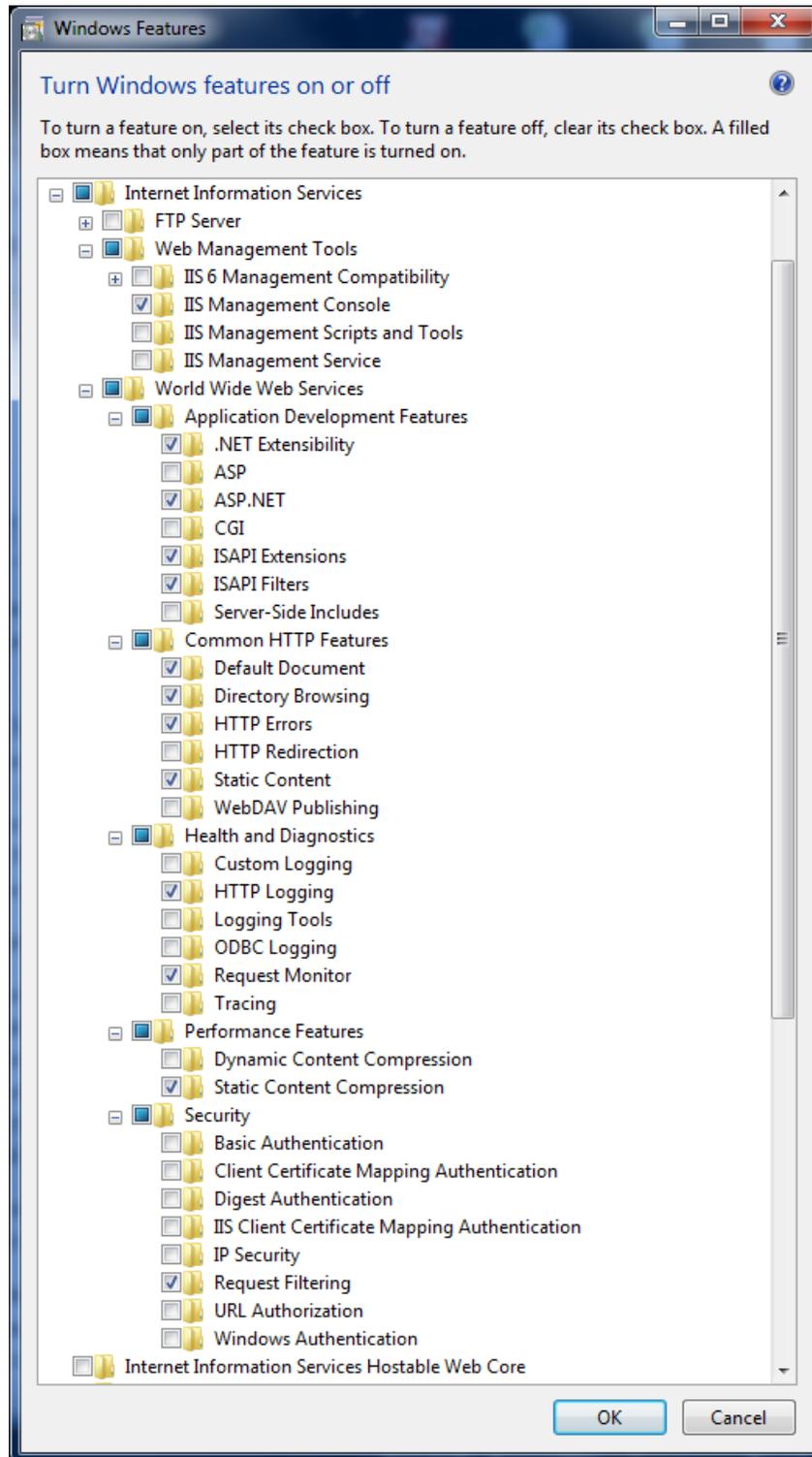
Installing the Fencing Time Web Services

You will need to install the Fencing Time web services if you want to use the Fencing Time remote monitor program to display tournament information on screens or projectors in the venue. If you do not plan to use the remote monitors, you can skip this step. The web services can always be added to your server at a future date.

Before installing the web services, you must make sure that Internet Information Services (IIS) is enabled on your server. IIS is a full-featured web server that is built into Windows but usually is not enabled by default. To check whether IIS is installed on your server, open a web browser on the server and enter http://localhost. If you see a banner page showing the IIS logo, IIS is already enabled. If you get a "page not found" error, this means you will need to install IIS.

On Windows Server, enable the "Web Server" role from the Server Manager to install IIS. On Vista, Windows 7, Windows 8/8.1, and Windows 10 open the Windows Control Panel and navigate to the "Programs and Features" page. Select the "Turn Windows Features on or off" option. Locate the Internet Information Services item in the list and check the checkbox to enable it. Review the options shown and compare them with the screenshots below to ensure the proper settings are enabled.

For more information on installing IIS, visit the Microsoft website:
http://www.iis.net/learn/install/installing-iis-7/installing-iis-on-windows-vista-and-windows-7

IIS Settings for Vista, Windows 7, and Windows Server 2008:

IIS Settings for Windows 8/8.1, Windows 10 and Windows Server 2012:
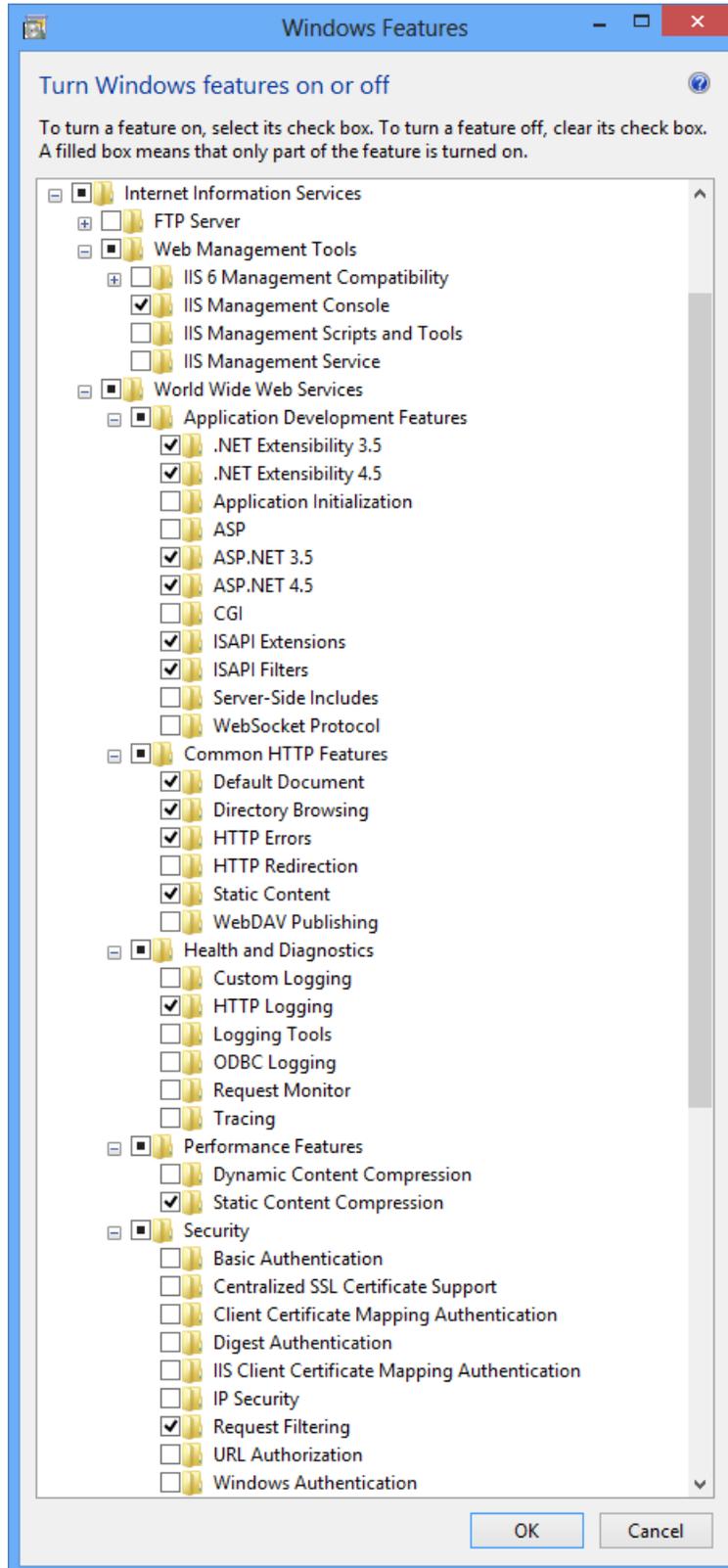
Once IIS has been installed, the next step is to install the Fencing Time web services. To do this, run the FT42WebServicesSetup.exe installation program on the server.

During the installation process, you will be prompted for the name of the computer where the database is installed. If the database is installed on the same computer (as recommended), you can set the server name as "localhost". If you installed the database on a different computer, enter that computer's name.

Next, you will be asked for the operator account password. Enter the password that you set when installing the database.

After the installation has finished, open your web browser and navigate to http://localhost/ftweb. If everything is set up properly, you should see a page showing the Fencing Time system status and installed database versions.

If you receive an error when browsing to the webpage, you can view error details in the log file, which is located in C:\ProgramData\Fencing Time v4.2 Web Services\Logs\FTWeb.log.

To verify that other computers can see the web services, navigate to http://<servername>/ftweb from another computer on the network, using the web server's computer name in the URL. If you are unable to access the page from a remote computer (but are able to access it from the browser on the web server PC), that usually indicates a firewall problem. Make sure that the standard http port (80) is open in all firewalls on the server. Many antivirus programs include a firewall, so be sure to open the port in its firewall if necessary. Refer to your antivirus program's help system on how to do this.

Chapter 4: Setting up the Fencing Time Clients

The next step is to install the Fencing Time client application. Normally, this will be done on the computers used at the bout committee, check in, etc. However, it is a good idea to also have a copy of the client application on the server to help troubleshoot any problems.

Installing the Fencing Time Client

To install the client, run the FT42ClientSetup.exe program. On the component selection screen, select the "Fencing Time application" option. You may de-select the other options as they are not required to run the client. Proceed through the installation, and once complete, launch the client application using the shortcut on the desktop or via the Windows Start menu.

Once installed, launch Fencing Time using the icon on the desktop or the link on the Start menu. If you see the Trial Version screen, this means that a Fencing Time Standard license is not installed for this client.

If you want to run this client in "operator" mode, you must install a Standard license.   If you are setting up a client to function as a check-in station, then you do not need to install a license. Without a license, the client will only be allowed to run in "check-in" mode.

If you intend to run this client in operator mode, proceed with the license installation by following the on-screen instructions.

When you reach the title screen, select "Connect to a Fencing Time server" and enter the name of the computer where your database is installed. Select either operator or check-in mode, and enter the corresponding password, then click "Login".

If your server does not yet have a license installed, you will receive an error notifying you of this, and Fencing Time will close.

If your server is properly configured, Fencing Time should start normally. You will now be logged into the server, and any tournaments and events you create will be stored on the database server.   These tournaments will be accessible by any Fencing Time client connected to your network.

Troubleshooting connection problems

If you have trouble connecting the Fencing Time client to the server, there a few steps you can take to identify the problem.

First, install the client application on the server directly if you haven't already done so. Launch the client on the server and log in using the either the operator or check-in account.   If you are able to connect when running on the server, but not from other computers, the issue is likely a firewall problem. Fencing Time requires two ports on the server be open for traffic: port 1433 for TCP traffic, and port 1434 for UDP traffic. Check your firewall settings to make sure these ports are open. Your server may have more than one firewall, so be sure to check each one. Most antivirus programs have a built-in firewall, so be sure to check those settings too.

If you still can't connect, try using the server's IP address as the server name, rather than the actual server name. To get the server's IP address, do the following steps on the server:
- Press ⊞-R then type "cmd" to open a command prompt window.
- Type the command "ipconfig" and press Enter.
- Find the section called "Ethernet adapter Local Area Connection" and look for the "IPv4 Address". This should be the IP address of your server. (IP addresses on a private network often start with "192.168.")
- Go to a client computer and enter the IP address (all four numbers including the dots separating them, with no spaces) for the server name.

If you are still unable to connect, try rebooting the server and repeat the process. If you're still unable to connect, verify the following:

- You are providing the proper server name. When running on the server itself, you can use "localhost" as the server name.
- You are using the correct password. Passwords are case-sensitive.
- Confirm that SQL Server is running. Press ⊞-R then type "services.msc". Find the "SQL Server" and "SQL Server Browser" items and verify that their status is "Started". If either is not started, double-click on the item, set the startup type to "Automatic", and then click "Start".

If you have verified the above and still are unable to connect from the Fencing Time client running on the server, contact Fencing Time, LLC for help.

Chapter 5: Setting up and Configuring Remote Monitors

The Fencing Time Remote Monitor program can be run on PCs that are controlling a screen or projector that displays the current tournament information at the venue. Usually, you will have one PC per screen/projector. However, if your PC has multiple video outputs, it is possible to control multiple screens from a single PC.
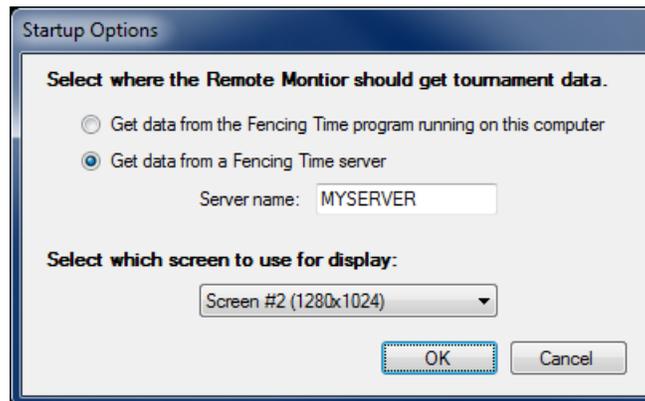
Installing the Remote Monitor

To install the Remote Monitor, run the FT42ClientSetup.exe program and select the "Fencing Time Remote Monitor" component. Unselect the other components, as they are not needed on computers that run the Remote Monitor.

To use the Fencing Time Remote Monitor, you must have the Fencing Time web services installed on your server. If you have not already done so, refer to Chapter 3 on how to install the web services.

Configuring the Remote Monitor

To run the Fencing Time Remote Monitor, start the program using the shortcut on the Windows Start menu. You will be presented with the Startup Options screen.

When running the remote monitor in the server system, you will want to select the second option, "Get data from a Fencing Time server". Enter the name of computer running the Fencing Time web services. This is usually the same server as the database server.

If you have multiple screens connected to your computer, you can select which one to use for displaying the tournament data. Make your selection and click "OK".

Once the Remote Monitor display has appeared, you can configure the display by clicking the blue bar at the top of the screen. From here, you can select the feed to display and set other options. Refer to the *Fencing Time User's Guide* for more information on setting up feeds and configuring the display.

Chapter 6: Managing Your Database Server

Fencing Time provides a tool for managing your database server call the Fencing Time Database Manager ("FTDBM"). This program is used to perform a variety of tasks on the Fencing Time database server, including:

- Installation of the server license
- Database upgrades
- Database resets
- Password changes
- Database backup and restore

Installing the Fencing Time Database Manager

The Database Manager tool can be installed on any PC on your network. Generally, it is installed on the server itself, or on the PC that is most often used to run tournaments.

To install the Database Manager tool, run the FT42ClientSetup.exe program and select the "Fencing Time Database Manager" component. Unselect the other components, as they are not needed for the Database Manager.

Running the Fencing Time Database Manager

When you run the FTDBM, you will see the login screen:
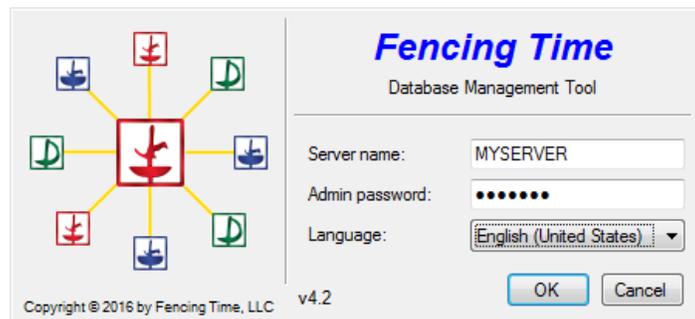
Enter the name of the database server and the administrator password that was chosen when you installed the database. Select your language, and click "OK" to login.

Database Upgrades

Periodically, updates will be released for Fencing Time. Some of these updates need make changes to the database, which is done by performing a database upgrade.

If a database upgrade is necessary, you will receive an error notifying you of this when you attempt to connect to the database using the Fencing Time client. You will not be able to use the client until the database has been upgraded.

Upgrades are designed to be done without erasing data, so you can run the upgrade safely on an existing database. It is recommended, however, that you backup the database prior to performing any upgrade.

To perform an upgrade, select the "Database" tab. You will see a list showing the history of database versions your server has used. The current version is shown in the lower-right corner of the window. Click the "Upgrade" button to start the upgrade, which should complete fairly quickly. When the upgrade completes, the upgrade list will be refreshed to reflect the latest version. You can now exit the FTDBM and launch the Fencing Time clients.

Database Resets

If, for some reason, you want to wipe out your database and start fresh, you can do so using the "Reset" button on the "Database" tab. This will delete all data in the database – all fencers, clubs, referees, tournaments, scores, results, etc. If you do not backup the database prior to doing a reset, the data will be lost forever.

Password Changes

On the "Users" tab there are three buttons describing each account type in Fencing Time along with a button which will allow you to change the password for each. You do not need the old password before resetting a password, so this is ideal if you forget your password. Of course, if you forget your admin password, you're in big trouble – you won't be able to run the FTDBM tool in the first place!

Database Backup and Restore

The "Backup" tab allows you to perform backups of your database, as well as restore the database from a backup. Performing a backup is fairly quick and lightweight, and should be done periodically. Restoring a backup will completely replace the current database with the contents of the backup, so if the database has added or changed data since the backup file was created, those changes will be lost when restoring from a backup file (unless you create a different backup with those changes.) Note that after restoring a backup, you may need to upgrade the restored database to bring it up to the latest database version.

Installing a Server License

The "License" tab is used install (or change) the installed server license. Without a license, your server will be unusable – clients will not be allowed to log in until a valid license is installed.

To install a license, click the "Change" button and follow the instructions on the screen to obtain and install the server license.