

TANDBERG FieldView

Enterprise Suite

The FieldView Enterprise Suite (FES) allows administrators to activate and manage floating licensing of the FieldView Application (FA) in a corporate environment. In this scenario, customers may have several FieldView Device (FD) units, but could have hundreds or even thousands of FAs. The floating license model allows all of these FAs to be used with any of the FDs, only consuming a license for the duration of a call. The FES system consists of two main components, License Server and License Manager.



**TANDBERG FieldView
FES User Manual****March 2008**

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FieldView Enterprise Suite Overview

The FieldView Enterprise Suite (FES) allows administrators to activate and manage floating licensing of the FieldView Application (FA) in a corporate environment. In this scenario, customers may have several FieldView Device (FD) units, but could have hundreds or even thousands of FAs. The floating license model allows all of these FAs to be used with any of the FDs, only consuming a license for the duration of a call. The FES system consists of two main components, License Server and License Manager.

FES License Server

The FES License Server is an ASP.NET Web Service. As such, it is a background process without a user interface. The server just responds to requests from the FES License Manager or the FA. Once installed, there is no direct user interaction with the FES License Server; all configuration and access is done via the FES License Manager.

FES License Manager

The FES License Manager is an ASP.NET Web Application. It provides the user interface to the FES License Server using a Web browser interface.

System Requirements

Both the FES License Server and License Manager are ASP.NET programs and have the following requirements:

- Windows XP Professional, SP2 or Windows Server 2003
- Internet Information Services (IIS) 5.1 or later
- Microsoft ASP.NET 2.0 Ajax Extensions 1.0

The IIS is not installed by default, so check if the IIS is installed on your machine by selecting **Start>Control Panel>Administrative Tools**. If you do not have a shortcut icon for Internet Information Services, you should add this Windows component by selecting **Start>Control Panel>Add or Remove Programs>Add/Remove Windows Components**.

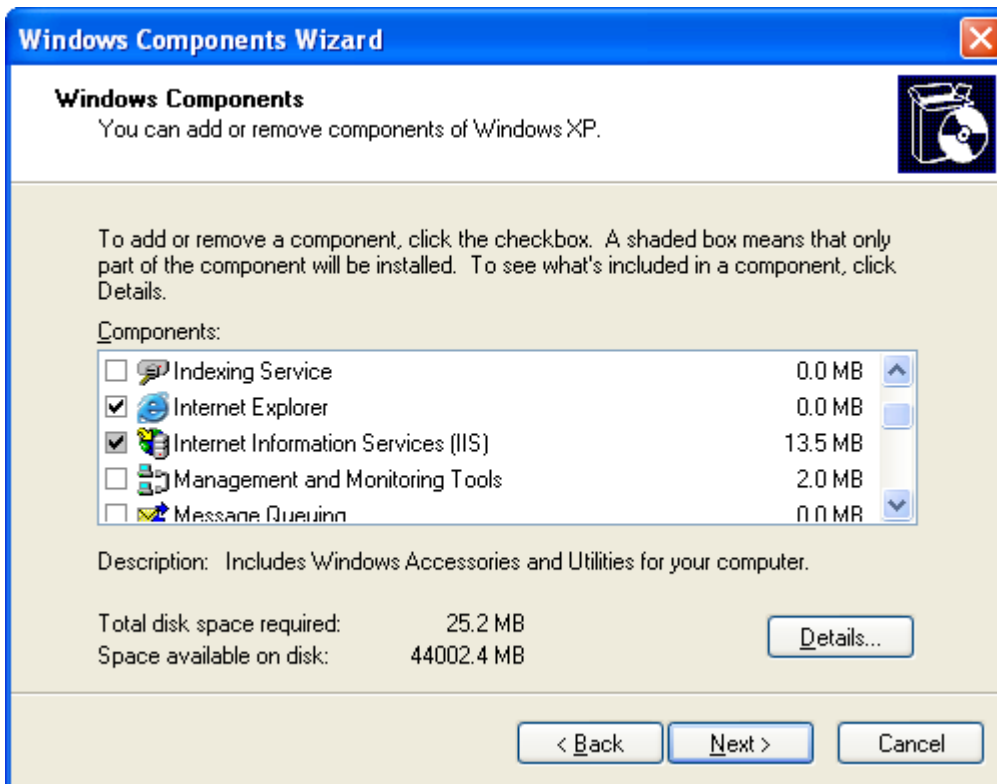


Figure 1 Windows Components Wizard

Follow the instructions of the **Windows Components Wizard** shown in Figure 1 to add the IIS. The wizard may prompt you to insert the Windows Installation CD.

Quick Starting the FES

- 1) Install the FES software (License Server and License Manager).
- 2) Create a shared installation directory and copy the FA installer to it.
- 3) Open the License Manager and log in.
- 4) Go to the [Password](#) page and change the administrator password.
- 5) Go to the [Connection Settings](#) page and set the server address. It's **VERY IMPORTANT** that the administrator changes the "localhost" in the server address to the name of the server machine itself because this name will be used by the FAs to communicate with the server.
- 6) Go to the [Encryption Key](#) page and change the key.
- 7) Optionally, go to the [License Timeout](#) page and change the timeout value.
- 8) Go to the [Server Activation](#) page and activate the server.
- 9) Go to the [User/Call License Activation](#) page and add the user/call license packages.
- 10) Go back to the [Connection Settings](#) page and export the settings to a file in the FA shared installation directory.
- 11) Log out of the License Manager.

Installation

To install the FES, put the installation CD into your CD drive. The installation program should automatically launch when the CD is inserted. If it doesn't, open Windows Explorer (right-click on the **Start** button and select **Explore**), locate the **FES** directory on the CD, and run the **Setup.exe** program (eg. if the CD drive letter is D: then run **D:\FES\Setup.exe**). The installation program will present you with the following information and choices:

- The end user license agreement (EULA)
- A list of shortcuts to install (desktop and/or quick launch)
- The install location (site and virtual directory)
- The *readme* file

The installation program has several pre-requisites and may prompt you to install any or all of the following before installing the FES itself:

- Visual C++ Runtime
- Microsoft Windows Installer 3.1
- Microsoft .NET Framework 2.0

A key step in the installation of the FES itself is in choosing the site and virtual directory name. The defaults are to choose the **Default Web Site** and to use virtual directories named **TandbergLicenseServer** and **TandbergLicenseManager**. In most cases you should leave the defaults in place, but feel free to change them according to your IT policies.

Shortcuts

Once the FES system is installed, there will be several shortcuts installed on the server machine which will take you to the main License Manager page. These shortcuts will be on the Programs menu, and optionally on the desktop and in the quick launch. Each shortcut is the same and, depending on where you installed the server to, will be a shortcut to a web address like the following:

<http://localhost/TandbergLicenseServer/LicenseServer.asmx>

Note:

This shortcut will only work from the server machine itself. For other computers, replace **localhost** with the name of the server machine that is hosting the FES License Server.

Creating a Configuration File

In order for an FA to communicate with the FES License Server, you must create a configuration file that will be used to create a **Custom FA Installer**. The configuration file is an encrypted file that specifies the server address and encryption key to be used to communicate with the FES License Server. This file is then put alongside the standard FA installation files in order to configure the FA install for License Server access.

To create a configuration file, select the **Settings>Connection Settings** menu item and click the **Export** button. You will be prompted to open/download the resulting file. Choose download and save the file for later use in creating the Custom FA Installer.

Creating a Custom FA Installer

In order for the FA program to communicate with the FES License Server and use the floating license support it provides, the FA install must be customized to know about the FES License Server. The first step is to create a configuration file as described in the previous section. Once this is done, there are two approaches that you can take to create a Custom FA Installer.

The first approach is to create a shared network directory from which the users of client computers will install the FA. This involves the following steps:

- 1) Create a shared installation directory on a server from which the workstations can install the FA.
- 2) Copy the contents of the FA subdirectory from a standard FA installation CD to the shared installation directory.
- 3) Copy the configuration file that was created in the previous section to the shared installation directory.

Once this is done, users can install the FA on client computers by running the Setup.exe program from the shared installation directory.

The second approach is to create a custom installation CD from which users of client computers will install the FA. This involves the following steps:

- 1) Create a temporary installation directory.
- 2) Copy the entire file system tree from a standard FA installation CD to the temporary installation directory.
- 3) Copy the FA configuration file that was created in the previous section to the FA subdirectory within the temporary installation directory.
- 4) Use a tool like ISORecorder (<http://isorecorder.alexfeinman.com/isorecorder.htm>) to create an ISO file from the contents of the temporary installation directory.
- 5) Use a tool like ISORecorder to burn the ISO file to a CD.
- 6) Delete the temporary installation directory.

Once this is done, install the FA by inserting the custom installation CD and running the Setup.exe program from the FA subdirectory. On most client computers this will happen automatically when the CD is inserted into the CD drive.

Starting the FES

FES License Manager
Version 1.0.5

TANDBERG

Not Activated

http://localhost/TandbergLicenseServer/LicenseServer.asmx

Call Licenses User Licenses Settings Activation Logout

Please Log In

User Name:

Password:

Log In

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Figure 2 Log In to FES License Manager

Logging In

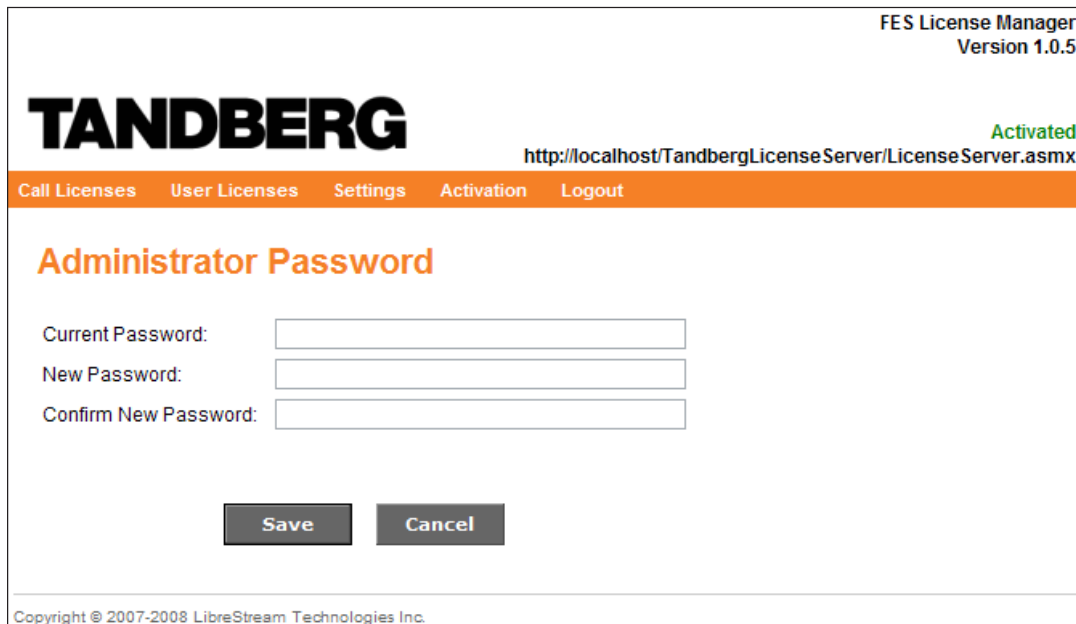
To login to the FES License Manager, select **Start>All Programs>TANDBERG FES>FES License Manager** or double-click the **FES License Manager** icon on the desktop and in the quick launch. This will start the FES user interface in your default browser and the screen in Figure 2 will be displayed. This page prompts you for the user name and password of a valid FES License Manager administrator. To log in for the first time, enter default user name and password below:

User Name: **admin**
Password: **admin**

In order to protect the FES License Server from unauthorized access, change this password (as described in the next section) immediately after the first time you log in.

Changing the Password

To change the administrator password, select the **Settings>Password** menu item. This prompts you with the screen in Figure 3 for a new password:



The screenshot shows the FES License Manager interface. At the top right, it says "FES License Manager Version 1.0.5". The TANDBERG logo is on the left. The URL "http://localhost/TandbergLicenseServer/LicenseServer.aspx" is in the center, with "Activated" in green text to its right. Below the URL is a navigation bar with "Call Licenses", "User Licenses", "Settings", "Activation", and "Logout". The main heading is "Administrator Password". There are three input fields: "Current Password:", "New Password:", and "Confirm New Password:". Below these are "Save" and "Cancel" buttons. At the bottom left, it says "Copyright © 2007-2008 LibreStream Technologies Inc."

Figure 3 Administrator Password

You must first enter the current admin password followed by the new password twice (for confirmation purposes), then click the **Save** button. If you have entered the information correctly, the password will be changed and a success message will be displayed. Otherwise, the password will not be changed and an appropriate error message will be displayed.

Logging Out

When you are finished using the FES License Manager log out by selecting the **Logout** menu item. This helps prevent unauthorized access to the FES License Server and Manager.

Activating Server and Call/User Licenses

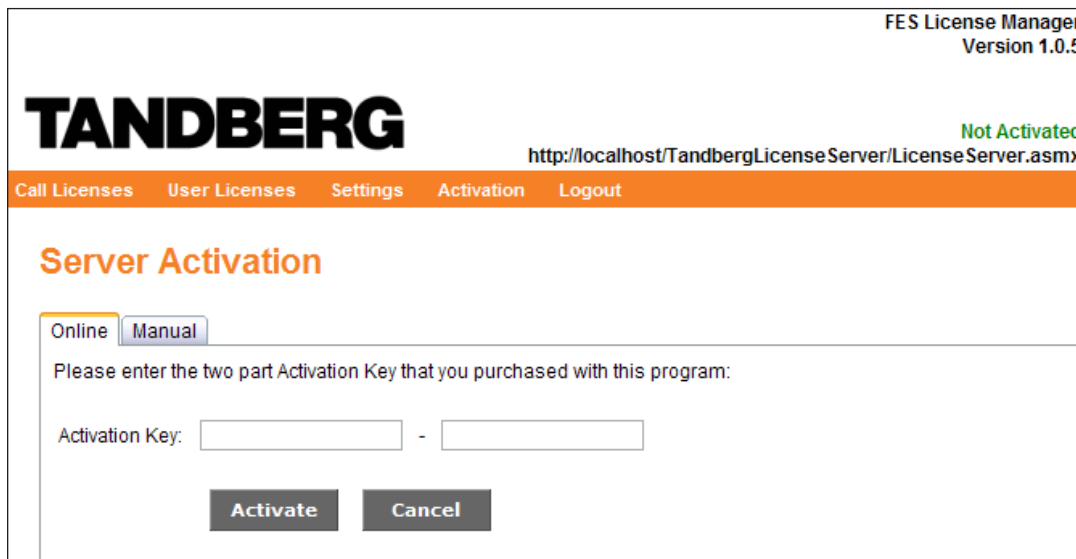
Before you can do anything with the FES, you must first activate the server and then add licenses to it. Both of these actions are activation steps, which can be done in one of two ways, online or manually. The online method is by far the more convenient, but it requires that the FES License Server machine has access to the Internet. If this is not the case, then manual activation is required.

Regardless of which method you choose, you will need the two part **Activation Key** that you received when you purchased the FES to activate the server. You will also need to acquire one or more **Activation Keys** to add floating call/user licenses to the server.

Note: More licenses can be added to the server at any time by acquiring more call/user **Activation Keys** and following this same procedure at that time.

Online Server Activation

To activate the FES License Server online, select the **Activation>Server** menu item, which prompts you with the screen in Figure 4.



The screenshot shows the 'FES License Manager Version 1.0.5' interface. The 'TANDBERG' logo is prominent on the left. The status 'Not Activated' is displayed in green text. The URL 'http://localhost/TandbergLicenseServer/LicenseServer.asmx' is shown. A navigation bar includes 'Call Licenses', 'User Licenses', 'Settings', 'Activation', and 'Logout'. The 'Server Activation' section has two tabs: 'Online' (selected) and 'Manual'. Below the tabs, a text prompt asks for the 'two part Activation Key'. There are two input fields separated by a hyphen, followed by 'Activate' and 'Cancel' buttons.

Figure 4 Online Server Activation

Enter the two part **Activation Key**, click the **Activate** button, and wait for a response from the LibreStream activation host. This may take up to a minute, so please be patient. Once the server is activated, you can add floating call/user licenses to it (See [Online](#) or [Manual Call/User Licenses Activation](#)).

Manual Server Activation

To activate the FES License Server manually, select the **Activation>Server** menu item and then select the **Manual** tab, which will prompt you with the screen in Figure 5.

FES License Manager
Version 1.0.5

TANDBERG Activated
http://localhost/TandbergLicenseServer/LicenseServer.aspx

Call Licenses User Licenses Settings Activation Logout

Server Activation

Online Manual

Step 1

In order to do manual activation you must provide the following information to a support representative.

1. This generated key code: **227777660**
2. This generated computer ID: **114034335**
3. The two part activation key that you purchased along with this program.

Step 2

Once you have the above information, please contact a support representative to get a two part Activation Code.

Americas: 1-866-826-3237 EMEA: contact your TANDBERG reseller

Step 3

Once you have a two part Activation Code, enter it below along with the two part Activation Key that you purchased with this program, then press the Activate button.

Activation Code: -

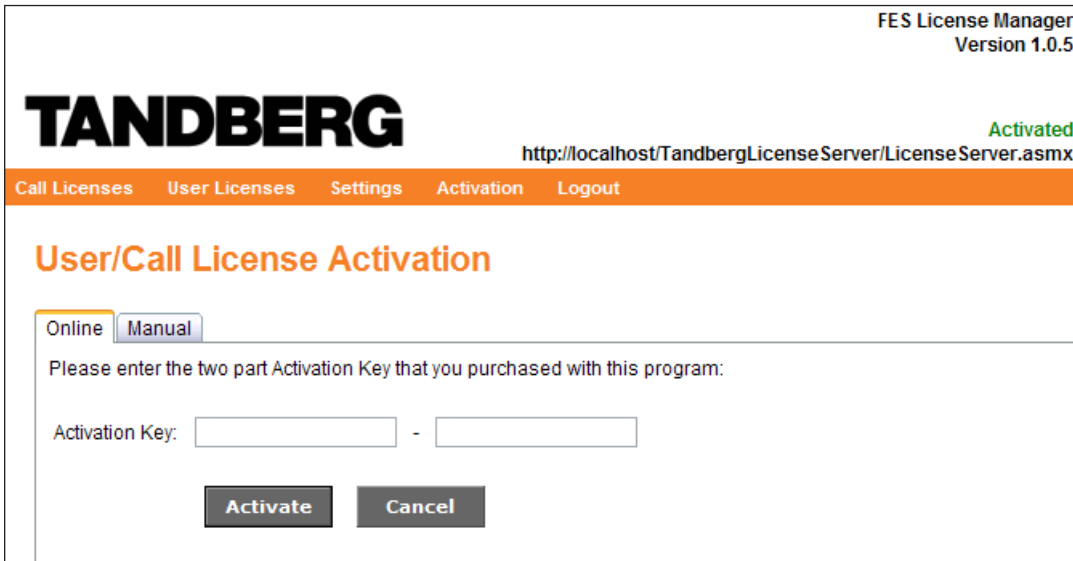
Activation Key: -

Figure 5 Manual Server Activation

As described for online activation, you should activate the server first, and then add floating call/user licenses to the server. Each of these steps requires that you give a two part **Activation key** along with the generated key code (examples are shown above, but your numbers will be different) to the LibreStream service representative. The service representative will provide you with a two part **Activation Code** needed for this screen. Enter the **Activation Code** and **Activation Key** into the boxes provided and click the **Activate** button. If everything is OK, then a success message will be displayed. If there is a problem then an appropriate error message will be displayed and you can take corrective action with the help of the service representative.

Online User/Call Licenses Activation

To activate user/call licenses online, select the **Activation>User/Call Licenses** menu item, which will prompt you with the screen in Figure 6.



The screenshot displays the FES License Manager web interface. At the top right, it says "FES License Manager Version 1.0.5". The URL is "http://localhost/TandbergLicenseServer/LicenseServer.aspx". The page title is "User/Call License Activation". There are two tabs: "Online" (selected) and "Manual". Below the tabs, it says "Please enter the two part Activation Key that you purchased with this program:". There are two input fields for the activation key, separated by a hyphen. Below the input fields are two buttons: "Activate" and "Cancel". The page also features a navigation menu with "Call Licenses", "User Licenses", "Settings", "Activation", and "Logout". The Tandberg logo is visible on the left side.

Figure 6 Online User/Call License Activation

You will have received a two part **Activation Key** for each block of floating licenses you purchased for use with your FAs. For each **Activation Key** you have, enter the two part key and click the **Activate** button. This can take up to a minute, so please be patient. After each activation, the appropriate number of call/user licenses will be added to your License Server. You can verify the number of activated call/user licenses by selecting the **Activation>Status** menu item.

Manual User/Call Licenses Activation

To activate user/call licenses manually, select the **Activation>User/Call Licenses** menu item and then select the **Manual** tab. This will prompt you with the screen in Figure 7.

FES License Manager
Version 1.0.5

TANDBERG Activated

<http://localhost/TandbergLicenseServer/LicenseServer.aspx>

Call Licenses User Licenses Settings Activation Logout

User/Call License Activation

Online Manual

Step 1

In order to do manual activation you must provide the following information to a support representative.

1. This generated key code: **227777660**
2. This generated computer ID: **114034335**
3. The two part activation key that you purchased along with this program.

Step 2

Once you have the above information, please contact a support representative to get a two part Activation Code.

Americas: 1-866-826-3237 EMEA: contact your TANDBERG reseller

Step 3

Once you have a two part Activation Code, enter it below along with the two part Activation Key that you purchased with this program, then press the Activate button.

Activation Code: -

Activation Key: -

Activate **Cancel**

Figure 7 Manual User/Call License Activation

The procedure is quite similar to manual server activation. Enter the **Activation Code** that the service representative provides to you along with the **Activation Key** you have, and click the **Activate** button. If everything is OK then a success message will be displayed. If there is a problem then an appropriate error message will be displayed and you can take corrective action with the help of the service representative.

Activation Status

To view the list of activated licenses and their current status, select the **Activation>Status** menu item, which will prompt you with the screen in Figure 8.

FES License Manager
Version 1.0.5

Activated

<http://localhost/TandbergLicenseServer/LicenseServer.aspx>

Call Licenses
User Licenses
Settings
Activation
Logout

Activation Status

Status: Activated

Server ID: ba33fd44-8cb7-4b8e-8917-02413606d65a

Support Years: 1

Expiration Date: 28/02/2009

Supported Version: 1.0.5

User Licenses: 50

User Upgrades: 0

Call Licenses: 10

Activation Time ▲	Online	Operation	Activation Key	Support Years	Expiration Date	Call Licenses	User Licenses
2/20/2008 1:53:35 PM	Yes	Activate Server	[REDACTED] - [REDACTED]	1	2/20/2009	0	0
2/20/2008 4:10:23 PM	Yes	Add Licenses	[REDACTED] - [REDACTED]	1	2/20/2009	10	50

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Figure 8 Activation Status

A summary of license activation is shown in the upper section. Below that is a table containing one row of status for each activation. The columns contain the following information:

Table 1 Activation Status Details

Activation Time	The time at which each license was activated
Online	Activation method – Yes=online No-manual
Operation	The type of activation (server or user/call license)
Activation Key	The unique activation key entered when activating
Support Years	The duration of product support (i.e. software updates)
Expiration Date	The date on which the license will expire (eg. 1 year from the activation date)
Call Licenses	The number of activated call licenses (It is zero for server activation.)
User Licenses	The number of activated user licenses (It is zero for server activation.)

Settings

Connection Settings

The connection settings are the settings that allow communication with the FES License Server. They consist of the address of the server and the encryption key used to encrypt all communication with the server. To access the connection settings, select the **Settings>Connection Settings** menu item, which will prompt you with the screen in Figure 9.

FES License Manager
Version 1.0.5

TANDBERG Activated

http://localhost/TandbergLicenseServer/LicenseServer.asmx

Call Licenses User Licenses Settings Activation Logout

Connection Settings

Manager Address:

Encryption Key:

Status: Activated

Save Cancel Export Test

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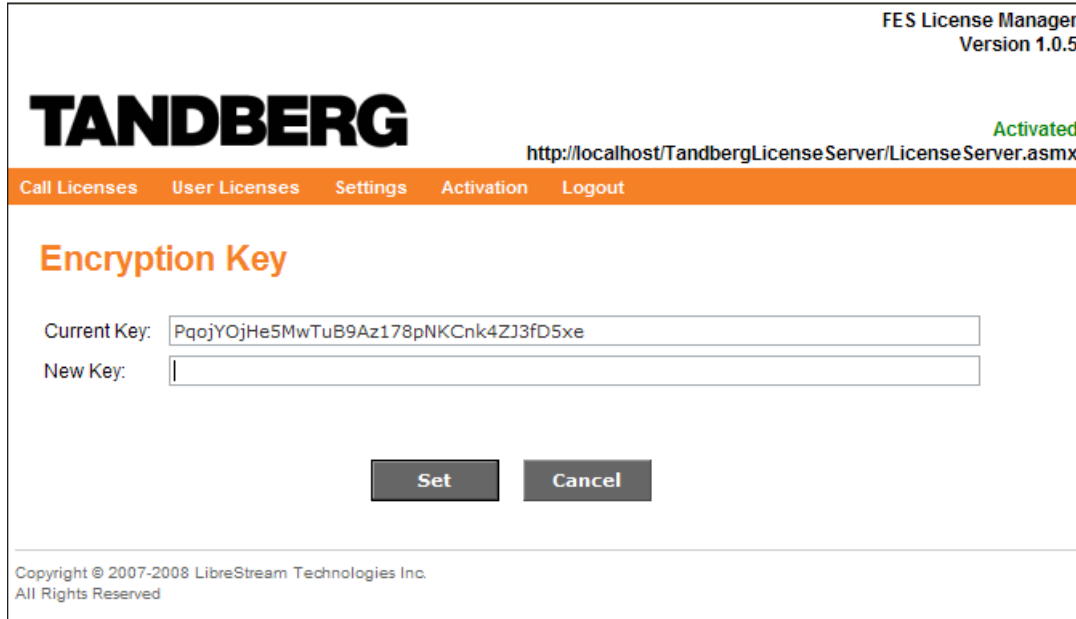
Figure 9 Connection Settings

The default for the server address is to assume that the FES License Server is installed on the same machine as the FES License Manager (**localhost**) and that it is using the default virtual directory name (**TandbergLicenseServer**). If either of these assumptions is not true, you will have to change the server address accordingly.

The default for the encryption key is the default value that is installed with the FES License Server, which is **PqojYOjHe5MwTuB9Az178pNKcnk4ZJ3fD5xe**. You should not need to change this value in order to get initial communications with the server working. However, once this initial communication is established, change the encryption key to ensure secure access to the FES License Server, as described in the Encryption Key section below.

Encryption Key

Once the connection settings are configured and the License Server has been activated, but **before** you create the Custom FA Installer, change the encryption key to ensure the security of your server. To do this, select the **Settings>Encryption Key** menu item, which will prompt you with the screen in Figure 10.



The screenshot shows the FES License Manager interface. At the top right, it says "FES License Manager Version 1.0.5". The TANDBERG logo is on the left. The URL "http://localhost/TandbergLicenseServer/LicenseServer.aspx" is displayed, with "Activated" in green text to its right. A navigation bar contains "Call Licenses", "User Licenses", "Settings", "Activation", and "Logout". The main heading is "Encryption Key". There are two input fields: "Current Key:" with the value "PqojYOjHe5MwTuB9Az178pNKcnk4ZJ3fD5xe" and "New Key:" which is empty. Below the fields are "Set" and "Cancel" buttons. At the bottom, it says "Copyright © 2007-2008 LibreStream Technologies Inc. All Rights Reserved".

Figure 10 Encryption Key

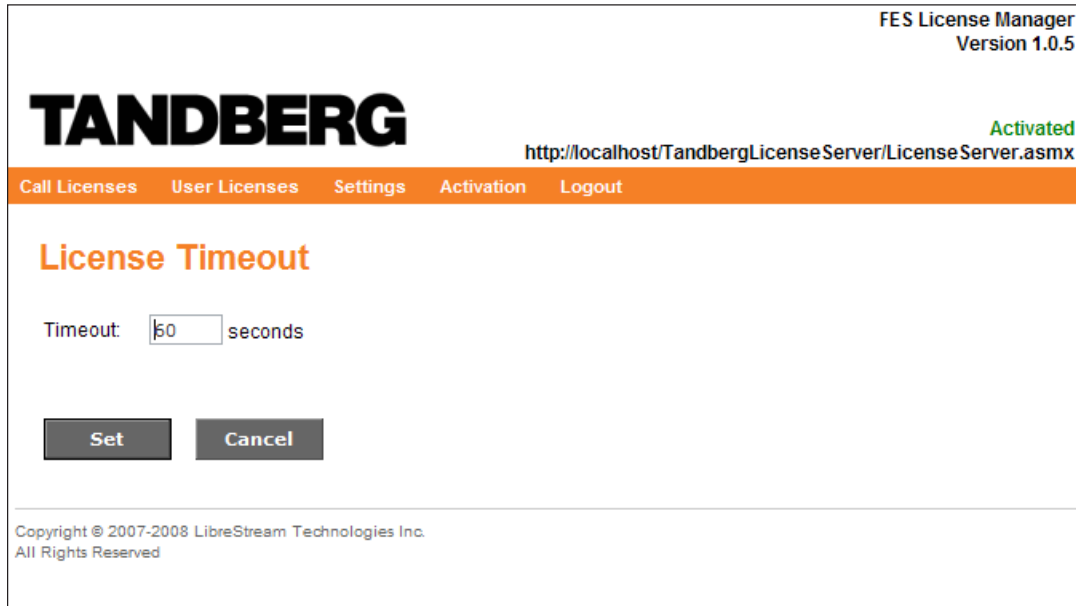
To change the encryption key, enter the new value and click the **Set** button. If everything is OK then a success message will be displayed. If there is a problem then an appropriate error message will be displayed.

Warning: Changing the encryption key after one or more FAs have been installed with the previous encryption key will mean that all of those FAs will have to be updated with the new encryption key.

License Timeout

When an FA uses floating licensing, it acquires a license each time it makes a call. During the call or playback, the FA must notify the License Server on a regular basis that it is still using the license, otherwise the license will be returned to the pool of available licenses. This prevents a hung FA (or otherwise hung machine) from consuming a license and never returning it to the pool of available licenses.

The time period in which the FA must notify the License Server is called the **license timeout** and it is period of seconds between 30 and 999 inclusive. To set the license timeout, select the **Settings>License Timeout** menu item. This will prompt you with the screen in Figure 11.



The screenshot shows the FES License Manager web interface. At the top right, it says "FES License Manager Version 1.0.5". The TANDBERG logo is on the left. The URL "http://localhost/TandbergLicenseServer/LicenseServer.aspx" is in the center. A green "Activated" status is on the right. A navigation bar contains "Call Licenses", "User Licenses", "Settings", "Activation", and "Logout". The main heading is "License Timeout". Below it, "Timeout: 50 seconds" is displayed with a text input field containing "50". There are "Set" and "Cancel" buttons. At the bottom, it says "Copyright © 2007-2008 LibreStream Technologies Inc. All Rights Reserved".

Figure 11 License Timeout

To change the license timeout, enter the new value and click the **Set** button. If everything is OK then a success message will be displayed as shown above. If there is a problem then an appropriate error message will be displayed.

Call Licenses

Current Usage

To view the list of current call licenses and their details, select the **Call Licenses>Current Usage** menu item. This will prompt you with the screen in Figure 12.

FES License Manager
Version 1.0.5

Activated
<http://localhost/TandbergLicenseServer/LicenseServer.aspx>

Call Licenses
User Licenses
Settings
Activation
Logout

Call License Usage

Total number of licenses: 10 Number of floating licenses: 1
 Number of available licenses: 9 Number of locked licenses: 0

Action	State ▲	Acquire Time	Update Time	Call License	User License	Client
Free	Floating	2/22/2008 10:12:35 AM	2/22/2008 10:12:35 AM	77980635-8478-4624-8ad3-bd07fb784c1	ca39cc50-a67d-4469-b22e-eceb3803e758-1	MCA 3.1.3; 51184874; The Administrator; bender.local; 00:90:4B:1C:0F:34; 192.168.1.35; 00:90:4B:1C:0F:34; 192.168.1.35
Free				94105d70-c472-4b36-8b20-ed7b442a1ed5		
Free				5da9e7ae-bcfc-4bd4-be72-e914b441d4ec		
Free				944a014f-ef25-413a-81b9-af9b123ddc2b		
Free				97bd6fd4-a727-4059-8b27-e2a057935c6e		
Free				3db55f18-e11c-4963-9acd-6dd14bda48d2		
Free				4fe9bf1d-1cd7-4b00-a7fa-aa42a7a44f1d		
Free				3bd36d39-438a-45b4-aa5b-147bcea77949		
Free				76f8f441-7189-4e6b-933d-bf1e3deaec38		
Free				9ddbffe-cb76-4182-b68e-21fe7de0bccda		

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Figure 12 Call License Usage

A summary of the number of license in each category, floating, locked and free, is shown at the top of the page. Below that is a table containing one row for each license on the server. The columns contain the following information:

Table 2 Call License Usage Details

Action	A Free button indicates that call license is currently in use. The field is empty for all other (free) licenses.
State	The current status of the license (i.e. floating, locked, or free)
Acquire Time	The time at which the license was first acquired.
Update Time	The last time at which the license was updated (i.e. the last time at which the FA notified the FES License Server that it was still using the license)
Call License	The unique call license code
User License	The unique user license code
Client	The computer/FA that is using the license

Clicking a **Free** button will free the corresponding license, returning it to the pool of available licenses. This ability is primarily intended for freeing a license that a user can't free due to an unresponsive computer. While it can be used to make a license available for some specific use, this is not recommended as it takes a license away from an FA that is using it and terminates that FA's current call.

Note:

Lines in red (not shown above) indicate licenses that have not been updated within the timeout period. These licenses are technically free and will be used for other clients if no free licenses are available. However, all licenses marked as free will be used before any timed out license will be used.

Note:

You can sort the table on a specific column by clicking on the column header. Click on the same column header a second time to reverse the sort order.

Usage History

To view call license usage over a period of time, select the **Call Licenses>Usage History** menu item. This will prompt you with the screen in Figure 13.

FES License Manager
Version 1.0.5

TANDBERG

Activated
http://localhost/TandbergLicenseServer/LicenseServer.aspx

Call Licenses User Licenses Settings Activation Logout

Call License Usage History

To view call license usage over a period of time, enter a valid start and end date then click on the "Display" button.

Start Date: 02/29/2008 Size: Medium **Display**

End Date: 02/29/2008
MM/DD/YYYY

Figure 13 Call License Usage History

From this screen you can either enter the dates manually in the format described (MM/DD/YYYY), or click the button beside the date fields to select a date from a calendar. The calendar looks like the screen in Figure 14.

FES License Manager
Version 1.0.5

TANDBERG

Activated
http://localhost/TandbergLicenseServer/LicenseServer.aspx

Call Licenses User Licenses Settings Activation Logout

Call License Usage History

To view call license usage over a period of time, enter a valid start and end date then click on the "Display" button.

Start Date: 02/29/2008 Size: Medium **Display**

End Date: 02/29/2008
MM/DD/YYYY

February 2008						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	1
2	3	4	5	6	7	8

Figure 14 Calendar

Once you have chosen the dates and the size of license usage graph, click the **Display** button to create a graph showing the license usage over the chosen time period. The graph will look like the screen in Figure 15.

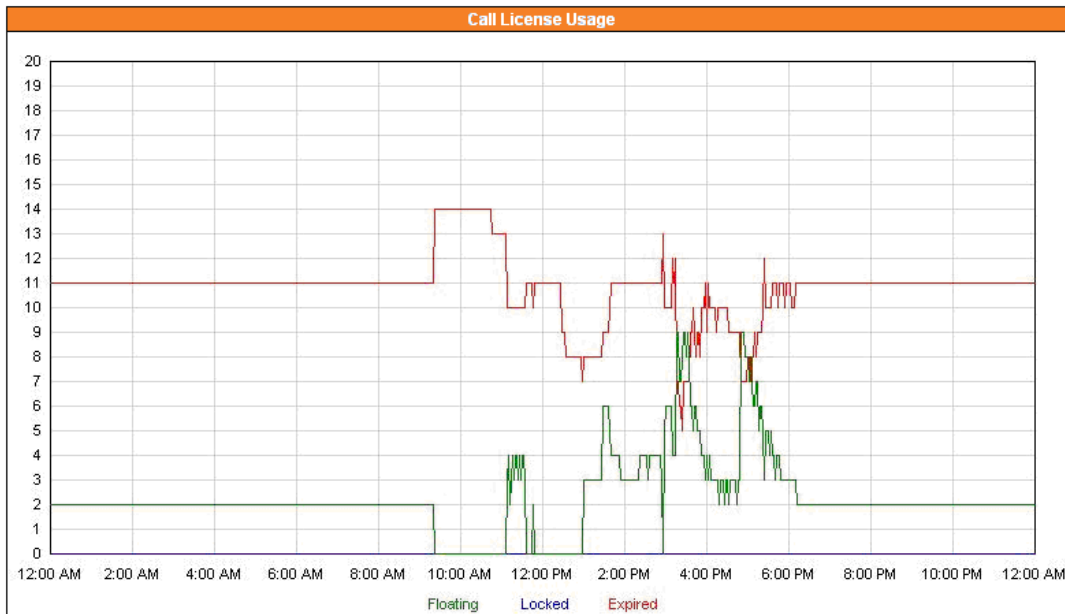


Figure 15 Call License Usage Graph

Three call license types, floating, locked, or expired, are displayed on the chart in different colors. The horizontal axis is the time over which license was used, and vertical axis is the frequency of call license use.

User Licenses

License Usage

To view user license usage, select the **User Licenses>License Usage** menu item. This will prompt you with the screen in Figure 16.

FES License Manager
Version 1.0.5

Activated

<http://localhost/TandbergLicenseServer/LicenseServer.aspx>

Call Licenses
User Licenses
Settings
Activation
Logout

User License Usage

Total number of licenses: 50	Total number of upgrades: 0
Number of used licenses: 1	Number of used upgrades: 0
Number of available licenses: 49	Number of available licenses: 0

License Key	Support Years	Expiration Date	Activation Time ▼	User License	Client
[Redacted]	1	2/20/2009	2/22/2008 10:07:05 AM	ca39cc50-a67d-4469-b22e-eceb3803e758-1	MCA 3.1.3; 51184874; The Administrator; bender.local; 00:90:4B:1C:0F:34, 192.168.1.35; 00:90:4B:1C:0F:34, 192.168.1.

Figure 16 User License Usage

A summary of the number of license and upgrade in each category, total, used and available, is shown at the top of the page. Below that is a table containing one row for each user license presently allocated to a client computer. The columns contain the following information:

Table 3 User License Usage Details


License Key	The unique license key entered when activating
Support Years	The number of years of product support (i.e. software updates)
Expiration Date	The date on which the license will expire
Activation Time	The time at which each license was activated
User License	The unique user license code
Client	The computer/FA that is using the license

Maintenance

We recommend that administrators perform regular backups of the FES to protect it from accidental data loss. To backup or restore the database and license file, follow the procedure described below.

Backup

To backup the database and license file,

- 1) Stop Internet Information Services (IIS) by selecting **Control Panel>Administrative Tools>Services**, clicking on the service named **IIS Admin**, and clicking the **Stop Service** button  or the **Stop the service** link as shown in Figure 17.

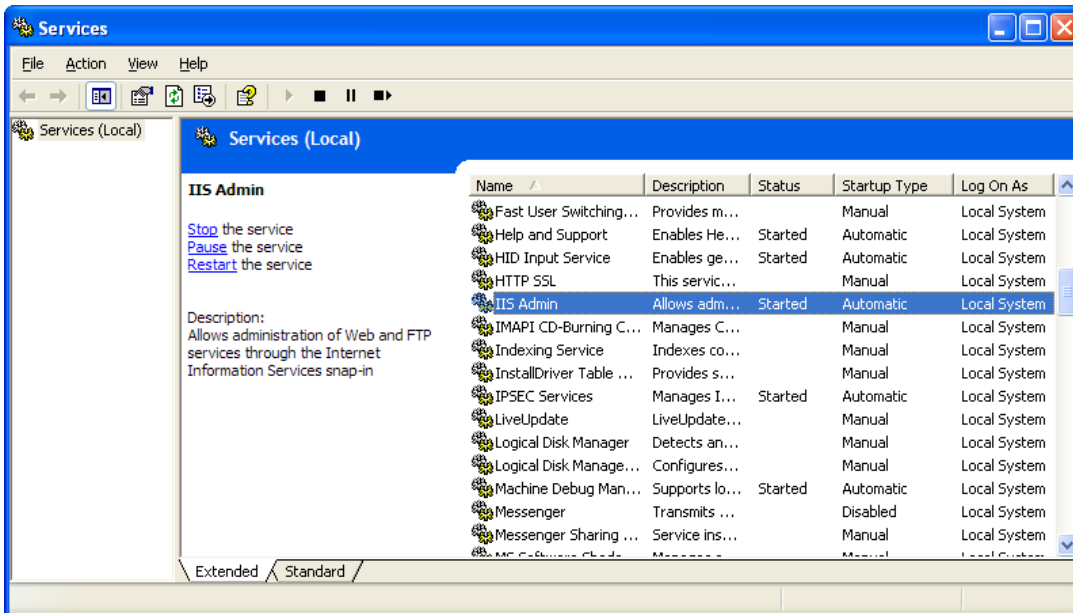





Figure 17 Administrative Tools > Services

- 2) Backup the **database (elm.db)** and the **license file (elm.lf)** from
 - Windows XP - C:\Documents and Settings\All Users\Application Data\MCA
 - Windows Vista - C:\Program Data\MCA
- 3) Restart Internet Information Services (IIS) by selecting **Control Panel>Administrative Tools>Services**, clicking on the service named **IIS Admin**, and clicking the **Restart Service** button  or the **Restart the service** link as shown in Figure 17.

Restore

To restore the database and license file,

- 1) Stop Internet Information Services (IIS) by selecting **Control Panel>Administrative Tools>Services**, clicking on the service named **IIS Admin**, and clicking the **Stop Service** button  or the **Stop the service** link as shown in Figure 17.
- 2) Restore the **database (elm.db)** and **license file (elm.lf)** to
 - Windows XP - C:\Documents and Settings\All Users\Application Data\MCA
 - Windows Vista - C:\Program Data\MCA
- 3) Set the file permission for the database and license file to **Everyone: Full Control**.
- 4) Restart Internet Information Services (IIS) by selecting **Control Panel>Administrative Tools>Services**, clicking on the service named **IIS Admin**, and clicking the **Restart Service** button  or the **Restart the service** link as shown in Figure 17.

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