

# 9

## Spectrum Server

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# Using the Spectrum Server program

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Most of the Spectrum program documentation in this *Spectrum CIRC/CAT User Manual* is designed for the librarian using Spectrum client programs (such as Spectrum CIRC/CAT and Spectrum Patrons' Catalog). However, this chapter explains server program issues, as opposed to client program issues, and may be of special interest to the server administrator rather than the librarian.

*Note:* Most processes described in this chapter require that you have direct access to the server computer.

## Spectrum Server responsibilities

Some aspects of operating the Spectrum Server program are usually the responsibility of the server administrator. However, the responsibility for each of the following server-related duties depends on the policies, personnel, and physical setup of your institution.

- **Installing.** The Spectrum Server software must be installed on the server computer. Once installed, no further action may be required unless the server program must be reinstalled or moved to another location on the server computer.
- **Starting.** The Spectrum Server program can be started by anyone with access to the program file (ctsrvr.exe on Windows and ctsrvr.nlm on Novell). *Note:* The Spectrum Server administrator password is *not* required to start the program.
- **Shutting down.** Shutting down the Spectrum Server program is usually a job for the server administrator. *Note:* The Spectrum Server administrator password *is* required to stop the program.
- **Safeguarding.** Safeguarding the Spectrum Server program and its data physically and by use of a password is recommended.
- **Monitoring/troubleshooting.** Keeping track of server activity and addressing problems is usually the server administrator's responsibility because it requires direct access to the server computer.
- **Backing up/restoring.** Making backups of server-controlled data and restoring data from a backup are usually the server administrator's responsibility because they both require direct access to the server computer.

## Understanding server programs and files

When you use the Spectrum CIRC/CAT program, you may use numerous program and data files. Below is an overview of most of these files.

Program or file	Definition
Spectrum Server	The program that controls how Spectrum client programs access Spectrum database files. This program (also called the FairCom Server program) is installed on your server computer.
Spectrum database files	The data that your Spectrum Server and Spectrum client programs use, such as material records, setup options, and so on. These files are located on your server computer.
Configuration file (ctsvr.cfg)	A text file that contains settings for the Spectrum Server program.  <i>Important!</i> You must not move or remove this file. This file contains information that optimizes Spectrum Server.
Administrator program (ctadmn.exe)	A program that lets you administer and protect your Spectrum Server program.
Status file (ctstatus.fcs)	A log file of server activity. This file is created and maintained by the Spectrum Server program. You can use it to monitor server activity.
FairCom Administrative file (faircom.fcs)	A log file that records administrative information, including the Spectrum Server password.

<b>Program or file</b>	<b>Definition</b>
<b>Transaction management files</b>	<p>Files with an .fcs extension that manage transaction processes. The following are examples of these files:</p> <p>I0000000.fcs</p> <p>D0000000.fcs</p> <p>S0000000.fcs</p> <p>S0000001.fcs</p> <p><b><i>Important!</i></b> These files must not be deleted, unless directed by Sagebrush under special circumstances such as a restore.</p>

# About the Spectrum Server configuration file

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Your Spectrum Server program may not need any additional setup. As soon as you install it, Spectrum Server is ready to run. However, if you need to change the way your Spectrum Server program operates, you can do so by editing a text file (ctsrvr.cfg) that contains configuration settings for Spectrum Server.

Each time you start the Spectrum Server program, it immediately looks for its configuration file (ctsrvr.cfg), which is located in the same folder as your Spectrum Server program. This text file is installed on your server computer when you install the Spectrum Server program.



**Important!** You must not move or remove the ctsrvr.cfg file. This file contains information that optimizes Spectrum Server.

Your configuration file may contain information on memory management, the maximum number of files to have open at one time, and the number of users that can access the server. Some settings, such as supported communication protocols and any automated backup process, are entered in the configuration file when you install the Spectrum Server program.

## Configuration file settings

Below are descriptions of most settings that a Spectrum Server's configuration file (ctsrvr.cfg) may contain. Although these settings are listed in alphabetical order below, you can include them in the configuration file in any order. To modify the configuration file settings, see "Editing the configuration file".

Command	Description and valid value(s)
<b>COMM_PROTOCOL</b>	A valid communications protocol for this type of server. Some Spectrum Servers support several protocols at the same time. For example, for Novell servers, valid protocols can be F_TCPIP and FSPX. You need a separate COMM_PROTOCOL line in the configuration file for each communications protocol supported.
<b>CTSTATUS_SIZE</b>	Lets you control the maximum size of the log file (ctstatus.fcs). The value you enter is the approximate size in bytes for the ctstatus.fcs file. The default is 65536. Do not delete the minus sign in front of the number.
<b>DUMP</b>	The name of the script file that specifies when and what to include in a backup or restore process. If you use the DUMP command, be sure that the listed script file is in the same folder as the Spectrum Server program. Spectrum Server looks for this file only in its own folder. If it doesn't find it, the server immediately stops and displays error #12 ("File not found"). For more information about this command, see "Changing the scheduled backup".
<b>FILES</b>	The total number of files (data files and index files) that the server can open at one time. Before you change this setting, you must contact a Sagebrush Technical Support Specialist. The default is 255.
<b>PAGE_SIZE</b>	A "page" is a continuous block of memory locations. You can specify the size of this block of memory. Before you change this setting, you must contact a Sagebrush Technical Support Specialist.

Command	Description and valid value(s)
LOCAL_DIRECTORY	<p>The path to the folder where your Spectrum program and database files are located. This command is only used by Novell or Windows NT/2000 servers. The default location for Novell is sys:\Spectrum\ and for Windows NT/2000 is C:\Program Files\Winnebago\Spectrum Server. You would edit this path only if you move your server folder. Unless you have disk space limitations, Sagebrush recommends that you install Spectrum Server to the default location.</p>
SERVER_NAME	<p>The unique name that identifies your server. This name is assigned during installation. The default name is SERVER (all capital letters). The server name can contain up to 13 characters and cannot include spaces.</p> <p><b>Important!</b> If you have multiple Spectrum Servers on a Novell or Windows-based computer, you must make sure each server has a unique server name. Not only that, but the sum of the ASCII values of the server names cannot equal the same number. For more information on ensuring unique server names, see “Installing multiple Spectrum Servers on Windows” or “Installing multiple Spectrum Servers on Novell” in the <i>Server</i> chapter of the <i>Spectrum CIRC/CAT Installations Guide</i>.</p>
SYSLOG DYNAMIC_DUMP	<p>A command line necessary to run the Ctdump backup program.</p>
USERS	<p>The maximum number of simultaneous user connections to the Spectrum Server program. This number is set during installation by your CD Key license, but may be edited to be less than the number of locations allowed by your license. You may want to enter only the number of users you are using (even if you are allowed more) to help your server program use memory more efficiently. For example, if you have at most only 35 users at one time, you can enter 35 here. Then your server allocates only enough memory for 35 user connections. <i>Note:</i> If you use Web Catalog, you should not reduce the number of connections allowed, because Web Catalog may require many connections.</p>

## Editing the configuration file

You probably won't need to edit the Spectrum Server program's configuration file, and Sagebrush recommends that you don't change any of its settings unless you consult your network administrator or a Sagebrush Technical Support Specialist. Improper settings in your configuration file may have adverse effects on the operation of your Spectrum Server program. If you want to restore the configuration file to its default settings, you can delete the `ctsrvr.cfg` file and reinstall Spectrum Server.

*Note:* The most common reason to edit the configuration file is to change the name of your server (`SERVER_NAME`). You may also need to change your backup schedule (for example, from weekly to daily).

Before you edit the `ctsrvr.cfg` file, you must shut down your Spectrum Server program. When you restart Spectrum Server, the program reads and uses the new or changed settings in the edited configuration file. Keep in mind that before you connect your Spectrum client(s) to Spectrum Server for the first time, you must run Spectrum Communications Setup on each client. See "Using Spectrum Communications Setup" in the *Spectrum CIRC/CAT Installations Guide* for more information. After you change the server name, you must run the Spectrum Communications Setup program to change the server name on each client computer that connects to Spectrum Server.

## How to edit the configuration file

Let's say you want to change the server name from its default, `SERVER`, to `LINCOLN`. You must edit the configuration file (`ctsrvr.cfg`) so that it contains the new server name.

*Note:* Before you edit the configuration file, it's a good idea to copy the file into the Backup directory to make sure you have a backup of the original file.

### To edit the configuration file

- 1 Shut down all Spectrum client programs.
- 2 Shut down your Spectrum Server program.
- 3 Open the configuration file (`ctsrvr.cfg`) with a text editor such as WordPad or SimpleText. The `ctsrvr.cfg` file is located in the same folder as your Spectrum Server program.
- 4 In the `SERVER_NAME` command line, change `SERVER` to `LINCOLN`.

- 5 Save the edited text file, making sure that it has the same name (ctsrvr.cfg) and location as before. Make sure that you save it as a text-only file.

After you change the server name, you must run the Spectrum Communications Setup program to change the server name on each client computer that connects to Spectrum Server. See "Using Spectrum Communications Setup" in the *Spectrum CIRC/CAT Installations Guide* for more information.



**Important!** If you have multiple Spectrum Servers on a Novell or Windows-based computer, you must make sure each server has a unique server name. Not only that, but the sum of the ASCII values of the server names cannot equal the same number. For more information on ensuring unique server names, see "Installing multiple Spectrum Servers on Windows" or "Installing multiple Spectrum Servers on Novell" in the *Server* chapter of the *Spectrum CIRC/CAT Installations Guide*.

# Starting and shutting down Spectrum Server

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You must run the Spectrum Server program on your server computer in order to use the client/server version of Spectrum CIRC/CAT. Improper use of the Spectrum Server program may result in the loss of data.

Under normal operating conditions, you can keep Spectrum Server running indefinitely. You do not need to shut it down on a nightly basis. However, if you do need to shut it down, make sure you first shut down all Spectrum clients. Also, always shut down the Spectrum Server program *before* you shut off the server computer. This helps ensure that your data remains intact.

## Starting Spectrum Server

After you install the Spectrum Server program, you must start it to run Spectrum CIRC/CAT on your library's network. *Note:* After you start Spectrum Server, you may want to clear space on your server computer's desktop by minimizing any windows related to the Spectrum Server program.

You must keep your Spectrum Server program running whenever any Spectrum client is running. Your server program must be running as long as your client programs (such as Spectrum CIRC/CAT) need to access material data, generate reports, and so on.

*Note:* Before you connect a Spectrum client program to Spectrum Server for the first time, you must run the Spectrum Communications Setup program on each client computer to make sure the client is pointing to the correct server. You should start Spectrum Server before you run the Spectrum Communications Setup program. For detailed instructions on running the Spectrum Communications Setup program, see "Using Spectrum Communications Setup" in the *Spectrum CIRC/CAT Installations Guide*.

## To start Spectrum Server (Novell)

- 1 Access the Novell server computer's system console.
- 2 Type `load sys:\spectrum\ctsrvr.nlm ctsrvr_cfg sys:\spectrum\ctsrvr.cfg` and press **Enter**.

*Note:* If you moved or installed the Spectrum Server program file (ctsrvr.nlm) to another location than "sys:\spectrum\" you must enter the path for the new location when starting the program. Also, ctsrvr.nlm may have been given a different name during installation.

## To start Spectrum Server (Windows)

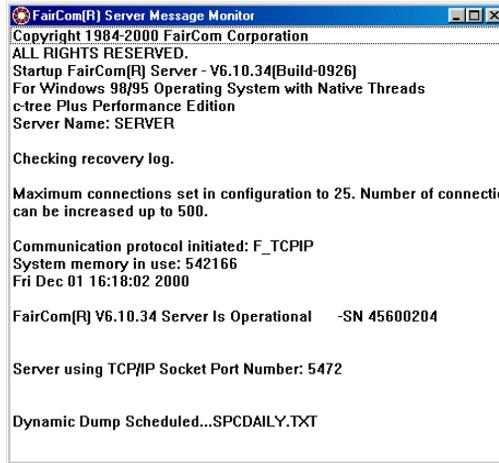
From the **Start** menu, choose **Programs > Winnebago Spectrum Server (SERVER) > Spectrum Server**.

When the server program loads, it opens the FairCom(R) Server window (that contains Control and About menus) and the FairCom(R) Server Message Monitor window. If you want, you can minimize these windows.



### FairCom Server window (Spectrum Server window)

You may want to clear space on your server computer's desktop by minimizing this window.

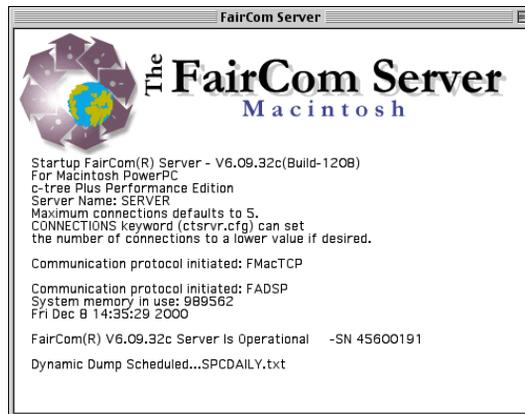


### FairCom Server Message Monitor window

This window displays any messages related to your Spectrum Server. It opens with the window above. You may want to minimize this window to clear space on your computer's desktop.

### To start Spectrum Server (Mac OS)

Double-click the icon for the program (`ctsrvr.ppc` in the Winnebago Spectrum Server folder) or its alias. When the server program loads, it opens the FairCom Server window.



### FairCom Server window—Macintosh

This window displays any messages related to your Spectrum Server. It opens with the window above. You may want to minimize this window to clear space on your computer's desktop.

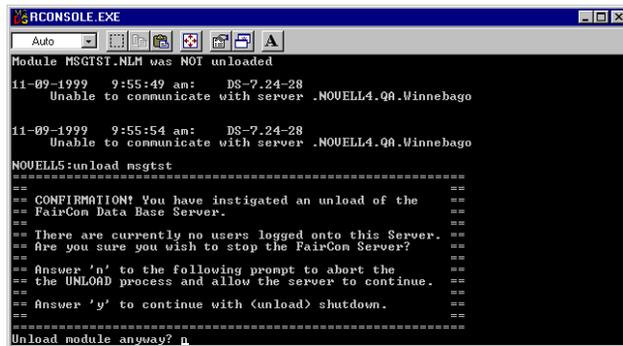
## Shutting down Spectrum Server

Remember to always shut down the Spectrum Server program *before* you shut off the server computer. Also, you must *always* shut down all Spectrum client programs before you shut down the Spectrum Server. If you don't, you may corrupt files and lose data.

### To shut down Spectrum Server (Novell)

- 1 Access the Novell server computer's system console.
- 2 Type `unload ctrsvr` (or the name of the .nlm file that was renamed if the default name `ctrsvr` was not entered during installation) and press **Enter**. *Note:* When you shut down Spectrum Server (unlike when you start it) you don't have to tell the computer the path of the program.

The program informs you how many users are currently logged on to the server and confirms that you want to shut down.



```
RCONSOLE.EXE
Auto
Module MSGTST.NLM was NOT unloaded
11-09-1999 9:55:49 am: DS-7.24-28
  Unable to communicate with server .NOVELL4.QA.Winnabago
11-09-1999 9:55:54 am: DS-7.24-28
  Unable to communicate with server .NOVELL4.QA.Winnabago
NOVELL5:unload msgtst
=====
== CONFIRMATION! You have instigated an unload of the ==
== FairCon Data Base Server. ==
==
== There are currently no users logged onto this Server. ==
== Are you sure you wish to stop the FairCon Server? ==
==
== Answer 'n' to the following prompt to abort the ==
== the UNLOAD process and allow the server to continue. ==
== Answer 'y' to continue with (unload) shutdown. ==
=====
Unload module anyway? n
```

**Confirmation**  
This window displays how many users are currently logged on and confirms that you want to shut down.

There should be no users logged on to the server. If the window indicates that client programs (users) are still connected, you should not shut down.

```

RCONSOLE.EXE
Auto
11-09-1999  9:53:43 am:  DS-7.24-28
Unable to communicate with server .NOUELL4.QA.Winnehago

NOUELL5:unload msjst
=====
== CONFIRMATION! You have instigated an unload of the ==
== FairCom Data Base Server. ==
== There are 1 users logged on to this Server. ==
== Because users are currently logged on, shutting down ==
== your server may cause data loss. ==
== Although it is possible to stop the server under this ==
== condition, it is best to be sure all users are logged ==
== off before shutting down the server. ==
== Are you sure you wish to stop the FairCom Server? ==
== Answer 'n' to the following prompt to abort the ==
== the UNLOAD process and allow the server to continue. ==
== Answer 'y' to continue with (unload) shutdown. ==
==
== Unload module anyway? n

```

**Confirmation**  
If any client programs are still logged in to the Spectrum Server, shut them down before you shut down the server.

*Note:* If you or your patrons used Web Catalog to perform searches, the server shutdown window may still indicate that users are connected. If you are certain that all clients programs are shut down, it is safe to shut down the server in this circumstance.

- 3 If there are no users connected, type *y* and press **Enter** to shut down. If there are any users still connected, type *n* and press **Enter**, shut down the client programs, and repeat steps 1-3.

### To shut down Spectrum Server (Windows and Macintosh)

- 1 From the FairCom(R) Server window, choose **Control > Shutdown** (Windows) or **File > Quit** (Macintosh). The FairCom Server Shutdown window opens and prompts for a user name and password.



**FairCom Server Shutdown window**  
Here you must enter the Admin user name and password in order to shut down Spectrum Server.

- 2 In the **Administrator User** box, enter *ADMIN*—in all capital letters.

3 In the **Password** box, enter the server's administrator password (the default password is *ADMIN*—in all capital letters). The program displays an asterisk for each letter of the password that you type.

*Note:* You should change the password so that only authorized people can access server administrative functions. For more information, see "Protection by a password" in this chapter.

4 Click **OK**.

A window informs you how many client programs (users) are currently logged on to your Spectrum Server program. This window also prompts you to confirm that you want to shut down.

The number of users logged on should be zero (0). If this window indicates that one or more client programs are still connected, you should not shut down at this time. You should make sure all Spectrum client programs are shut down and then shut down the Spectrum Server program again. If you shut down the server before shutting down any users logged into the server, you can lose or corrupt your data.

*Note:* If you or your patrons used Web Catalog to perform searches, the server shutdown window may still indicate that users are connected. If you are certain that all clients programs are shut down, it is safe to shut down the server in this circumstance.

5 If there are zero users connected to the server, click **OK** (Windows) or **Yes** (Macintosh) to shut down.



**Server Shutdown Confirmation window**  
Here you confirm that zero users are connected.

If there are one or more users connected to the server, click **Cancel** (Windows) or **No** (Macintosh), shut down all Spectrum client programs, then repeat steps 1 through 5.



**Server Shutdown Confirmation window**  
If any client programs are still logged in to the Spectrum Server, shut them down before you shut down the server.

When shutdown is complete, the FairCom(R) Server window closes.

## Shutting down Spectrum Server during backups

Depending on your backup method, you may or may not have to turn off your Spectrum Server program when you make a backup of your Spectrum data.

If you use a third-party program to make backups, you need to shut down the Spectrum Server program. If the Spectrum Server is running when a third-party program tries to make backups of Spectrum files, the backup process may skip some files (those being accessed by the Spectrum Server program), which would result in a bad backup.

If you use the Ctdump program, a backup program provided with Spectrum, Spectrum Server *must* be running when Ctdump is backing up your Spectrum database.

For information on starting Spectrum Server as a Windows Service, see "Starting Spectrum Server using Windows Service".

## Using Spectrum Server as a Windows Service

When you use the Spectrum Server program on a Windows NT or 2000 computer, you can install and use Spectrum Server as a Windows Service. While installing the Spectrum Server program on your Windows NT/2000 server computer, the installation program asks whether you want to install the Spectrum Server program as a Windows Service. When you answer yes, the installation continues with installing Spectrum Server while enabling it as a Windows Service.

Why use a Windows Service? Enabling the Spectrum Server program as a Windows Service provides you with extra protection and convenience.

- **Protection.** Using Spectrum Server as a Windows service, Spectrum clients can connect to the Spectrum Server program even though not actively logged on to the server computer. The server computer, for example, can be at the Ctrl-Alt-Delete screen (not accepting user input), and Spectrum clients can still access the functions of the Spectrum Server program.
- **Convenience.** Using Spectrum Server as a Windows Service, you can start up and shut down the Spectrum Server program from a client. When you can't access the server computer directly, it can be very useful to be able to access Spectrum Server functions remotely (from a client computer with administrative rights).

## Starting Spectrum Server using Windows Service

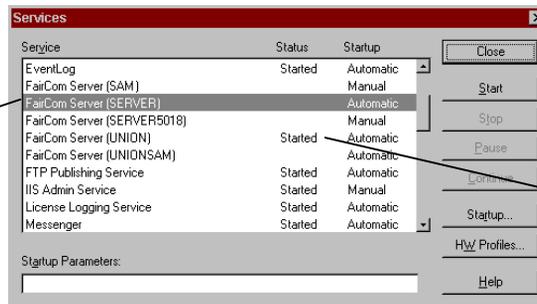
On Windows NT and Windows 2000, you can run Spectrum Server as a Windows Service. Although you register your Spectrum Server program as a Windows Service during installation, you still have to start Spectrum Server as a Windows Service before the protection and convenience of Windows Services can be used for your server program.

You start Spectrum Server through the Services Control Panel. If the Server program (listed as FairCom Server (SERVER), where SERVER is the server name you specified during installation) isn't listed in the Services window, you must reinstall the server program and choose to install it as a Windows Service (see "Spectrum Server as a Windows Service" in the *Spectrum CIRC/CAT Installations Guide*).

### To start Spectrum Server as a Windows Service

- 1 Click the **Start** menu and select **Settings > Control Panel**. (In Windows 2000, select **Programs > Admin Tools > Services**.)
- 2 In the Control Panel window, double-click the **Services** icon. The Services window opens.

*The default name of the Spectrum Server Windows Service is FairCom Server (SERVER).*



### Services

This window lists the available Windows Services on your computer and their statuses.

*A service that is currently running has a status of "Started."*

- 3 Select **FairCom Server (SERVER)** and click **Start**.

Windows Service tells you that it's trying to start the program.

When the Service Control window closes, you can exit Windows Service.

- 4 Click **Close**.

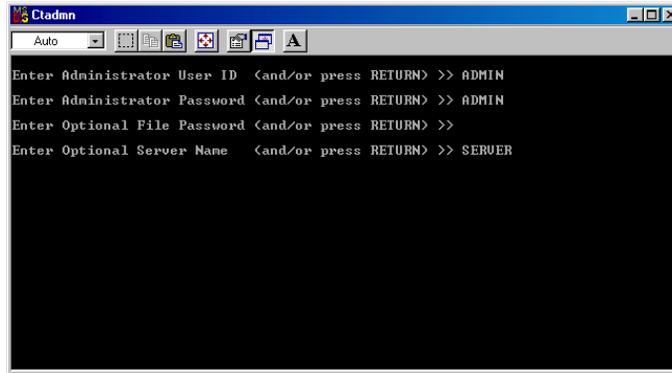
## Shutting down Spectrum Server using Windows Service

Sagebrush recommends that you never shut down the Spectrum Server program while users are connected. However, if your Spectrum Server program is on a computer with Windows NT or Windows 2000 and you are running Spectrum Server as a Windows Service, it can be difficult to tell if users are connected when using Windows Service. When you shut it down the usual way, such as accessing it at the server computer and selecting Control > Shutdown, the server program tells you how many users are currently connected and confirms you want to shut down. But when you stop the server program through Windows Service, you aren't told whether any users are connected.

Before you stop the server program through Windows Service, you should use the Ctadm program to check the number of users accessing it (use the option "List Attached Clients"). You can find the Ctadm program in the FairUtil folder on the server computer, which you can access from a client computer with administrative rights. You need to know the administrator user ID and password to check for users.

### To check for users accessing Spectrum Server

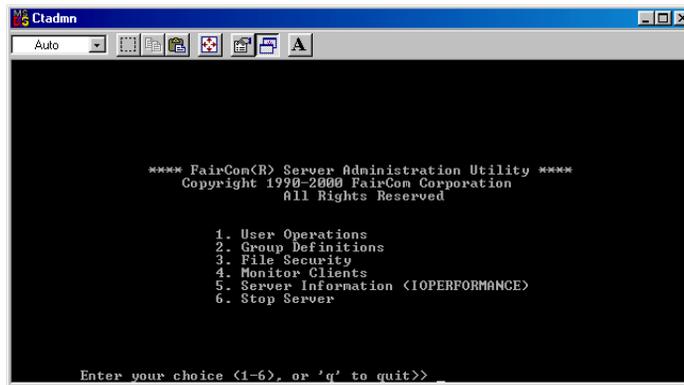
- 1 Make sure Spectrum Server is running.
- 2 Start the administrator program. You do this by double-clicking the **ctadm.exe** file, which is located in the c:\Program Files\Winnebago\Spectrum Server\FairUtil folder. (This is the default folder. Your location may be different if you changed the default location of your Spectrum Server program during installation.) When the Ctadm program starts, it prompts for your administrator user ID.
- 3 Type the administrator user ID (the default administrator ID is *ADMIN*—in all capital letters) and press **Enter**.
- 4 Type the administrator password (the default administrator password is *ADMIN*—in all capital letters) and press **Enter**.
- 5 At the **Optional File Password** prompt, type your optional password and press **Enter**. If you don't have an optional password set up, press **Enter**.



**Ctadm.exe**  
This window lets you access the FairCom Server Administration Utility program.

6 At the **Optional Server Name** prompt, type the name of your Spectrum Server and press **Enter** (the default server name is *SERVER*—in all capital letters).

If all information is entered correctly, the FairCom (R) Server Administration Utility window opens.



**Ctadm.exe**  
This window displays the main menu of the FairCom Server Administration Utility program.

7 From the Ctadm program's first menu, type **4 (Monitor Clients)** and press **Enter**.

8 From the **Monitor Clients** menu, type **1 (List Attached Clients)** and press **Enter**.

The client information is displayed, including how many users are accessing Spectrum Server. *Note:* A backup script (spcdaily.txt, spcwkly.txt, or spcnw.txt) may display as a client logged on to the server. You may shut down the server if one of these is the only client logged on.

- 9 After you're finished viewing the information on screen, press **Enter**.
- 10 Type **q** and press **Enter** to return to the previous menu(s), then type **q** and press **Enter** again to exit the Ctdmn program.

If there are no users connected to the server (other than a backup script), you can safely shut it down. If clients are connected, you must shut them down before you shut down Spectrum Server.

### To shut down Spectrum Server using Windows Service

- 1 Click the **Start** menu and select **Settings > Control Panel**. (In Windows 2000, select **Programs > Admin Tools > Services**.)
- 2 In the Control Panel window, double-click the **Services** icon. The Services window opens.
- 3 Select **FairCom Server (SERVER)** and click **Stop**.  
Windows Service verifies that you want to stop the service.
- 4 Click **Yes**.
- 5 Click **Close**.

For information on starting Spectrum Server as a Windows Service, see "Starting Spectrum Server using Windows Service".

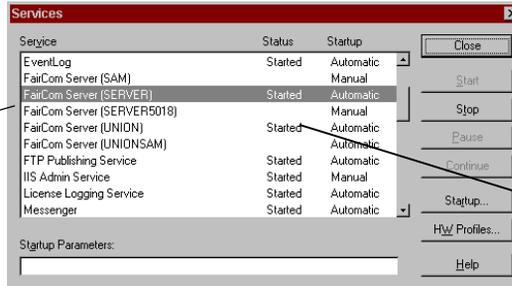
## Disabling Spectrum Server as a Windows Service

You disable Spectrum Server through the Services Control Panel.

### To disable Spectrum Server as a Windows Service

- 1 Click the **Start** menu and choose **Settings > Control Panel**.
- 2 In the Control Panel window, double-click the **Services** icon.  
The Services window opens. The Spectrum Server Windows Service is listed as FairCom Server followed by the server name. If you use the default server name, SERVER, the name of the Spectrum Server Windows Service is FairCom Server (SERVER).

The default name of the Spectrum Server Windows Service is FairCom Server (SERVER).



### Services

This window lists the available Windows Services on your computer and their statuses.

A service that is currently running has a status of "Started."

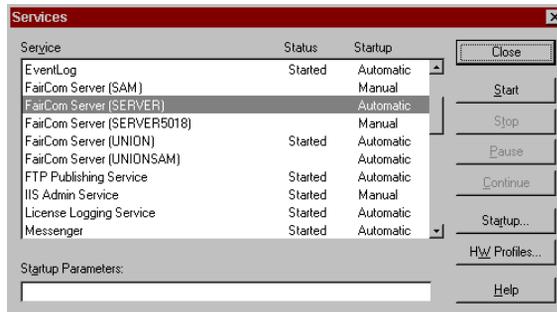
- 3 If the service is running, select **FairCom Server (SERVER)** (where SERVER is the server name you set up during installation) and click **Stop**.

A window opens to confirm you want to stop the Windows Service.

- 4 Click **Yes**. A Service Control windows opens to inform you that it's trying to stop the service.

- 5 After the Service Control window closes, click **Startup**.

The Service window opens.



### Service

In this window, you set the appropriate options for your Windows Service.

You disable the Windows Service by selecting the Disabled option.

- 6 Select **Disabled** and click **OK**.

The window closes, returning you to the Services window. In the **Startup** column, the service should be listed as "Disabled."

- 7 Click **Close**.

## Removing Spectrum Server as a Windows Service

The installation program installs a shortcut to remove the Windows Service.

### To remove Spectrum Server as a Windows Service

On your **Start** menu, select **Programs > Spectrum Server > Remove Service FairCom Server (SERVER)** (where SERVER is the server name you set up during installation). Spectrum Server is still installed on your server computer, but not as an Windows Service.

If you decide you want to begin using Spectrum Server as a Windows Service after you remove it, you must reinstall Spectrum Server.

# Safeguarding your Spectrum Server

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You should safeguard your Spectrum Server program and all your Spectrum data by restricting access to it. You can restrict access in two ways:

- Physically preventing others from accessing the server computer, and
- Using a password.

## Protection by physical location

Although Spectrum Server comes with built-in password protection, Sagebrush recommends that you implement some form of physical security (for example, keeping your server computer in a locked room). Often the best way to safeguard your computer *data* is to safeguard the *computer*. *Note:* A password is not required to start the Spectrum Server program.

## Protection by a password

When first installed, the Spectrum Server program recognizes only one user, a user that is intended to be the server administrator. This user has the unchangeable user ID name of ADMIN and the initial password of ADMIN. Anyone who knows the administrator user ID and password can perform powerful administrative functions.

Immediately after you install your Spectrum Server program (see your *Spectrum CIRC/CAT Installations Guide* for installation information), you should change this password and keep the new password secure. Changing the administrator password helps protect the Spectrum Server program from being accessed by unauthorized persons. Your changed password is maintained even if you reinstall Spectrum Server. (*Note:* If your Spectrum Server program is on a Novell computer and you're upgrading from Spectrum Server 3.x to Spectrum Server 5.0, your changed password reverts to ADMIN.)



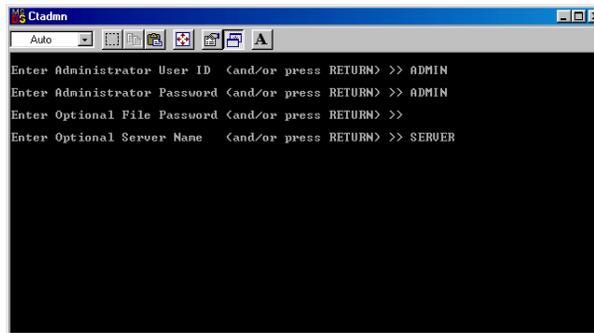
**Important!** Make sure you write down your new password. Sagebrush provides a place for you to write down your Spectrum Server administrator password on the Passwords level worksheet. You can find this worksheet in the "Setting up passwords" section of the *Setup* chapter in the *Spectrum CIRC/CAT User Manual*.

## How to change the Spectrum Server password

After you install Spectrum Server, you should immediately change the password so that only authorized people can access server administrative functions.

### To change the Spectrum Server password

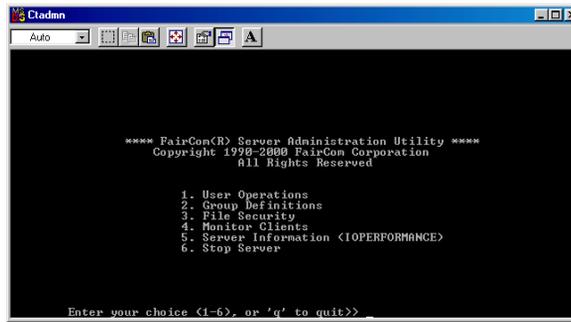
- 1 Make sure Spectrum Server is running.
- 2 Start the administrator program. You do this by double-clicking the Ctdmn.exe file, which is located in the c:\Program Files\Winnebago\Spectrum Server\FairUtil folder. (This is the default location. Your location may be different if you changed the default location of your Spectrum Server program during installation.) When the Ctdmn program starts, it prompts for your administrator user ID.
- 3 Type the administrator user ID (*ADMIN*—in all capital letters) and press **Enter**.
- 4 Type the administrator password (the default is *ADMIN*—in all capital letters) and press **Enter**.
- 5 At the **Optional File Password** prompt, type your optional password and press **Enter**. If you don't have an optional password set up, press **Enter**.
- 6 At the **Optional Server Name** prompt, type the name of your Spectrum Server and press **Enter** (the default server name is *SERVER*—in all capital letters).



#### Ctdmn window

Here you must enter the Admin user name and password to access the administrator program.

If all information is entered correctly, the FairCom (R) Server Administration Utility window opens.



### Ctadm— Faircom Server Administration Utility window

Here you choose the menu option for various functions in the Spectrum Server administrator program.

- 7 From the Ctadm program's first menu, choose **1 (User Operations)** and press **Enter**.
- 8 From the **User Operations** menu, choose **4 (Change User Password)** and press **Enter**.
- 9 When prompted to enter a user ID, type *ADMIN*. Then, type the new password and press **Enter**. Finally, type the new password again to confirm it and press **Enter**.
- 10 Type **q** and press **Enter** to return to the previous menu(s), then type **q** and press **Enter** again to exit the Ctadm program.
- 11 For Mac OS only, at the message prompt "Session Completed", choose **Quit** from the File menu. Choose **No** when it asks if you want to save the output.

Your changed password is maintained even if you reinstall Spectrum Server. *Note:* If your Spectrum Server program is on a Novell computer and you're upgrading from Spectrum Server 3.x to Spectrum Server 5.0, your changed password reverts to ADMIN.



**Important!** Make sure you write down your new password. Sagebrush provides a place for you to write down your Spectrum Server administrator password on the Passwords level worksheet. You can find this worksheet in the "Setting up passwords" section of the *Setup* chapter in the *Spectrum CIRC/CAT User Manual*.

# Monitoring server activity

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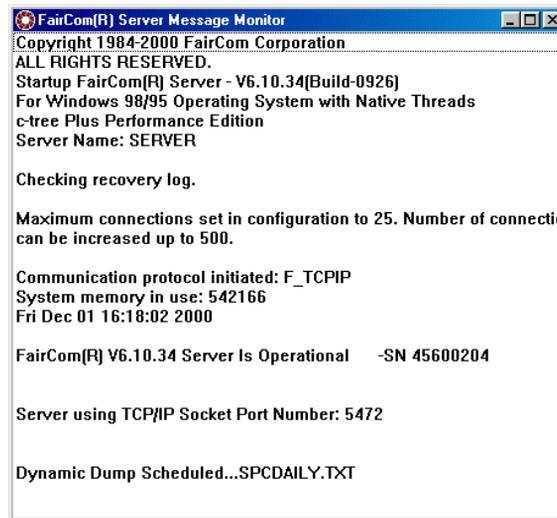
The Spectrum Server program lets you monitor server activity by recording its actions and their results in two ways:

- on screen, and
- in a status (or log) file.

When the Spectrum Server program starts on a Windows or Macintosh computer, it verifies the database integrity and the operation of its own components. If it detects any problems, the server displays error messages on the system console (the Message Monitor window) and places them in the status log. On Novell servers, the Message Monitor window is not displayed. Instead, a system status screen is displayed.

## Viewing activity on screen

The Spectrum Server program displays much of its activity in the FairCom(R) Server Message Monitor window.



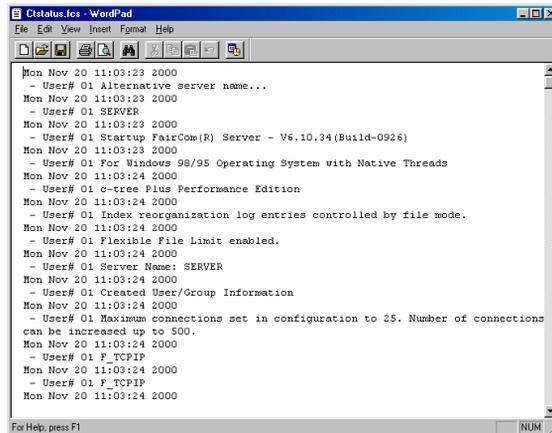
### FairCom Server Message Monitor window

This window displays any messages related to your Spectrum Server. You may want to minimize this window to clear space on your computer's desktop. *Note:* If you use Windows Service, the Message Monitor window is not displayed.

Remember, you can view FairCom Server Message Monitor window only on the server computer. On a Windows computer, the FairCom Server Message Monitor window may be automatically minimized when Spectrum Server is started. You may need to maximize the window and then scroll to view its messages. This window displays activity only from the current server session. If you need to see server activity from *before* Spectrum Server was restarted, you must refer to the ctstatus.fcs log file.

## Reading activity in the ctstatus.fcs log file

The Spectrum Server program keeps an ongoing record of server activity in a text file called ctstatus.fcs. This file resides on the server computer in the Spectrum Server folder. Below are the contents of the Spectrum Server's ctstatus.fcs file as displayed in WordPad or SimpleText.



```
Mon Nov 20 11:03:23 2000
- User# 01 Alternative server name...
Mon Nov 20 11:03:23 2000
- User# 01 SERVER
Mon Nov 20 11:03:23 2000
- User# 01 Startup FairCom(R) Server - V6.10.34 (Build-0926)
Mon Nov 20 11:03:23 2000
- User# 01 For Windows 98/95 Operating System with Native Threads
Mon Nov 20 11:03:24 2000
- User# 01 C-tree Plus Performance Edition
Mon Nov 20 11:03:24 2000
- User# 01 Index reorganization log entries controlled by file mode.
Mon Nov 20 11:03:24 2000
- User# 01 Flexible File Limit enabled.
Mon Nov 20 11:03:24 2000
- User# 01 Server Name: SERVER
Mon Nov 20 11:03:24 2000
- User# 01 Created User/Group Information
Mon Nov 20 11:03:24 2000
- User# 01 Maximum connections set in configuration to 25. Number of connections
can be increased up to 500.
Mon Nov 20 11:03:24 2000
- User# 01 F_TCPIP
Mon Nov 20 11:03:24 2000
- User# 01 F_TCPIP
Mon Nov 20 11:03:24 2000
```

**ctstatus.fcs log file**  
This log file displays any server activity related to your Spectrum Server.

As soon as the Spectrum Server program starts, it keeps track of critical data concerning the status of the server (such as when it started, any error conditions that have been detected, and if it was shut down properly). This data is saved in chronological order in the ctstatus.fcs file. If your Spectrum program encounters a problem that requires you to restore data, this log file may contain important information about the problem. *Note:* Oldest entries are overwritten once the file exceeds the CTSTATUS\_SIZE value in the ctsrvr.cfg file.

## Troubleshooting server error messages

If your Spectrum Server program displays an error message, you should contact Sagebrush's Technical Support Department. However, you may want to see if you can find out more about the error message on your own. For that reason, there is a text file called fh.txt (for "FairCom Help") installed on your server computer which lists error messages and some causes. Depending on the type of error, you may find something that provides a clue to your problem. To view the file, open Spectrum Server\FairUtil\fh.txt (default path) on your server computer.

*Note:* FairCom Help, or fh.txt, is not available on a Mac OS server.

