



**WebDrive**

**WebDrive<sup>®</sup> for Mac User's Guide V.2**

March 2010

## Notices

Copyright 2010 South River Technologies, Inc. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement, OEM, or reseller agreement. The software may be used or copied only in accordance with the terms of those agreements. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or any means electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of South River Technologies, Inc.

South River Technologies®, GroupDrive Collaboration Server®, Cornerstone MFT™, Titan FTP Server®, DMZedge Server™, and WebDrive® are trademarks of South River Technologies, Inc. in the U.S. and other countries. Macintosh, Mac, and Apple are registered trademarks of Apple Inc. The names of other actual companies and products mentioned herein may be the trademarks of their respective owners. Any information in this document about compatible products or services should not be construed in any way to suggest SRT endorsement of that product or service.

### Contact Information

South River Technologies, Inc.  
2635 Riva Road  
Suite 100  
Annapolis, Maryland 21401  
USA

**Telephone:** 410-266-0667

**Fax:** 410-266-1191

**Sales Office e-mail:** [sales@southrivertech.com](mailto:sales@southrivertech.com)

**Online Support:** <http://www.srthelpdesk.com>

**Support e-mail:** [support@southrivertech.com](mailto:support@southrivertech.com)

**Corporate Web site:** [www.southrivertech.com](http://www.southrivertech.com)

**Office Hours:** 8:30 A.M. to 5:30 P.M. Eastern Time, GMT-5:00

## Table of Contents

Getting Started.....	3
System Requirements .....	3
Installation Notes .....	3
Terminology .....	4
Tips & Troubleshooting .....	6
Frequently Asked Questions .....	6
Installing Updates .....	9
License & Registration.....	10
Removing WebDrive .....	10
Reporting Problems .....	10
Run at Startup .....	11
Working with the Site Manager .....	12
Site Manager Interface.....	12
Configuring a New FTP Site Profile .....	13
Configuring a New FTP/S Site Profile .....	14
Configuring a New SFTP Site Profile .....	16
Configure a WebDAV Site Profile.....	17
Configure a GroupDrive Site Profile .....	18
Mounting a Drive.....	19
Unmounting a Drive.....	20
Edit a Site Profile.....	21
Configuration Features & Options .....	22
Additional FTP Configuration Options.....	22
Additional FTP/S Configuration Options.....	25
Additional SFTP Configuration Options .....	28
Additional WebDAV Configuration Options .....	30
Additional GroupDrive Configuration Options .....	33
Working with the WebDrive Menu .....	36
WebDrive Menu Options .....	36
WebDrive Preferences Menu.....	37
Run at Startup .....	38
License & Registration.....	39
Installing Updates .....	40
Logging .....	41
Advanced Topics .....	42
Encryption/Security .....	42
Index .....	43

## Getting Started

### System Requirements

The following outlines the minimum system requirements for WebDrive:

- **Operating System:** OS X v10.5 (Leopard) or later
- **Processor:** Intel or PowerPC processor based Mac
- **Disk Space:** Minimum 40MB free disk space (for product and caching space)
- **Internet Connection:** A direct or wireless Internet connection
- **MacFUSE:** V.2.0 or later. WebDrive will attempt to download MacFUSE, or to download MacFUSE go to:  
<http://code.google.com/p/macfuse/>

### Installation Notes

Before installing WebDrive, run **Mac Software Updates**.

#### See Also

[License & Registration Information](#)

[Removing WebDrive](#)

[System Requirements](#)

## Terminology

**Active Mode** - In Active Mode, WebDrive will send the IP address and port number to the server and an outbound connection from the server will be established. (See also **PASV**.)

**Auth SSL/TLS (Explicit SSL)** - When using Explicit SSL or TLS, the server allows SSL connections on the standard FTP port (port 21). This port will be used for both FTP connections and FTP/S connections. In order to enter into a secure SSL session, WebDrive must issue either the AUTH SSL or AUTH TLS command prior to establishing the secure connection. This command tells the server to secure the data transfer.

**Cache** - A temporary storage area on your computer where frequently accessed data can be stored for rapid access. The most recently accessed data from the disk (as well as adjacent sectors) is stored in a memory buffer. When a program needs to access data from the disk, it first checks the disk cache to see if the data is there. Disk caching can dramatically improve the performance of applications, because accessing a byte of data in RAM can be thousands of times faster than accessing a byte on a hard disk.

**FTP** - File Transfer Protocol - the protocol used on the Internet for exchanging files. FTP uses the Internet's TCP/IP protocol suite to enable data transfer. FTP is most commonly used to download a file from a server using the Internet or to upload a file to a server (for example, uploading a Web page file to a server). FTP uses two separate channels, the **Command Channel** and the **Data Channel**. The **Command Channel** establishes the initial connection and is used for sending commands and receiving responses from the server. The **Data Channel** is used to transfer the data, such as a file or directory listing. The Data Channel can be established by using either Active mode or Passive (PASV) mode.

**FTP/S** - FTP (File Transfer Protocol) over SSL.

**GroupDrive** - the WebDAV server with custom extensions developed by [South River Technologies](#).

**HTTP** - Abbreviation for **HyperText Transfer Protocol**, the underlying protocol used by the World Wide Web. HTTP defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.

**HTTPS** - HTTP over SSL (**Secure Sockets Layer**; a cryptographic protocol).

**Implicit SSL/TLS** - When using Implicit SSL or TLS, a secure connection is made immediately on port 990.

**PASV** - The default mode in WebDrive for establishing the data channel. An FTP command indicating **Passive Mode**, which is a secure mode in FTP, where the client initiates the data connection using the **PASV** command. The **PASV** command requests the server to open a data port (which is not the default data port) and to wait for a connection rather than initiate one upon receipt of a transfer command. The server's response to this command (if positive) includes the host and port address on which this server is listening. Some FTP servers do not support PASV transfers.

**plist file (Property List file)** - Property List files are used to store user settings and application data.

**SFTP** - Secure File Transfer Protocol - the SSH protocol used to provide secure data transfer over the Internet.

**SSL** - Abbreviation for Secure Sockets Layer, a secure protocol developed by Netscape, for transmitting private documents over the Internet. SSL works by using a private key to encrypt data that is transferred over the SSL connection.

**TLS** - Abbreviation for Transport Layer Security, a protocol that ensures privacy between communicating applications and users on the Internet. TLS ensures that no third party may eavesdrop or tamper with any message. TLS is the successor to SSL.

**URL** - Uniform Resource Locator - the global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP (Internet Protocol) address or the domain name where the resource is located.

**WebDAV** - Web-Based Distributed Authoring and Versioning Protocol - An extension to the HTTP protocol that many servers now support on the Internet.

## Tips & Troubleshooting

### Frequently Asked Questions

**Q. - Where are .plist (Property List) files located?**

**A. -** In Finder, go to `~/Library/Application Support/South River Technologies/Webdrive/SiteProfiles/`

**Q. - Where are log files located?**

**A. -** Log files are located in `~/Library/Logs/South River Technologies/`

**Q. - How do I uninstall MacFUSE?**

**A. -** To uninstall MacFUSE V.2.0 or later, launch the Mac OS X **System Preferences** application and go to the **MacFUSE preference** pane. Click **Remove MacFUSE**. This will uninstall all MacFUSE components except the preference pane itself. **NOTE:** Uninstalling MacFuse will prevent WebDrive from running; do not remove MacFUSE until you have first uninstalled WebDrive.

You can keep the MacFUSE preference pane should you decide to install MacFUSE again in the future. If you want to remove it, in **System Preferences**, control-click (right-click) the **MacFUSE icon** and you will see **Remove** as an action.

**NOTE:** If you had the **Show Beta Versions** button selected in the **MacFUSE prepane**, you'll have a property list (plist) file remaining: `/Library/Preferences/com.google.macfuse.plist`. To remove it, clear the check box before you remove the prepane as described above.

For more information, see the MacFUSE wiki at <http://code.google.com/p/macfuse/wiki/FAQ>

**Q. - Why do I get the error message when trying to connect: "MacFUSE Runtime Version Mismatch"?**

**A. -** What has happened is that you have upgraded MacFUSE while a MacFUSE volume is mounted. To correct this issue, simply **Restart/Reboot** the computer.

**Q. - Can I use my SSH private key instead of a password for login?**

**A. -** WebDrive currently supports Password authentication; we hope to have SSH Public Key support added in a future release.

**Q. - How do .DS\_Store files work?**

**A. -** WebDrive does not create new .DS\_Store files on the remote server. When Finder requests creation of a new .DS\_Store file, WebDrive honors that request. When the drive is disconnected, these files and their contents are dropped. However, if an existing .DS\_Store file is found on the remote server, reads and writes on that file are performed normally.

**Q. - How can I prevent DS\_Store files from being created over network connections?**

**A. -** To configure a Mac OS X user account so that .DS\_Store files are not created when interacting with a remote file server using the Finder, follow the steps below.

**Note:** This will affect the user's interactions with SMB/CIFS, AFP, NFS, and WebDAV servers.

1. Open the Terminal.
2. Type: **defaults write com.apple.desktopservices DSDontWriteNetworkStores true**
3. Press **Return**.
4. Restart the computer.

For more information, see <http://support.apple.com/kb/HT1629>

**Q. - Can multiple different users connect to the same drive at the same time?**

**A. -** Yes.

**Q. - Can I setup WebDrive to require root password authentication on my local machine before connecting to a remote machine?**

**A. -** If you open up KeyChain Access, you'll see where the passwords are stored. you can click on them individually and modify their access control so they will need to be unlocked each time they are used.

**Q. - When using explicit SSL/TLS, is the authentication ALWAYS secure (encrypted) between the server and the client? - No matter what settings you select on the server, and no matter what ftp commands are sent from the client?**

**A. -** When you are using WebDrive for Mac, the answer is yes. WebDrive for Mac will always

**Tips on FTP:**

- Back up files on your FTP server - FTP is not always a 100% reliable method of transferring files, especially when dial-up or Internet connections are involved. You should always have a backup of the files that reside on your FTP server.
- No Locking mechanism - FTP does not provide a mechanism for locking files. For example, when one user opens a file for download, another user could open the same file for upload and corruption could occur.

**See Also**

[System Requirements](#)

[Using the Site Manager](#)

## Installing Updates

South River Technologies periodically releases updates to your computer's software. Your computer is set to check for updates automatically as the default setting. If you want to check for software updates manually, use the instructions below. You must be connected to the Internet to update your software.

To view updates history or change **Check for Updates** settings: from the **WebDrive** menu, click **Preferences**, and then click the **Updates** tab. You can also use the **Updates** tab to check for updates.



### Configuring Automatic Updates Settings:

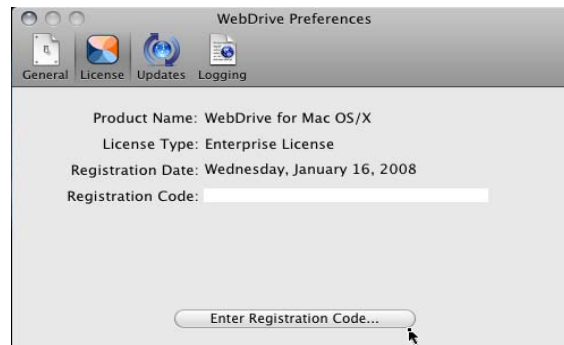
1. From the WebDrive menu, click **Preferences**. The Preferences dialog will launch.
2. Click the **Updates** tab.
3. Use the arrow keys to change settings. You can configure WebDrive to check for updates Daily, Weekly, or Monthly.

### Updating your WebDrive Software:

1. Launch WebDrive, and then click **File > Check for Update**.
2. The installer will launch, or you will receive a message that your software is up to date.

## License & Registration

You can enter your registration code or view your license type, registration date, and registration code information from the **WebDrive>Preferences** menu.



### Entering your Registration Code:

1. From the WebDrive menu, click **Preferences**. The Preferences dialog will appear.
2. Click the **License** tab.
3. Click **Enter Registration Code**. After you type your registration code, click **Activate**.

## Removing WebDrive

### To Remove WebDrive:

1. Delete WebDrive from the **/Applications** folder.
2. In Finder, under your **Home** folder, go to **~/Library/Application Support/South River Technologies** and delete the WebDrive folder. This will delete your Site Profiles.

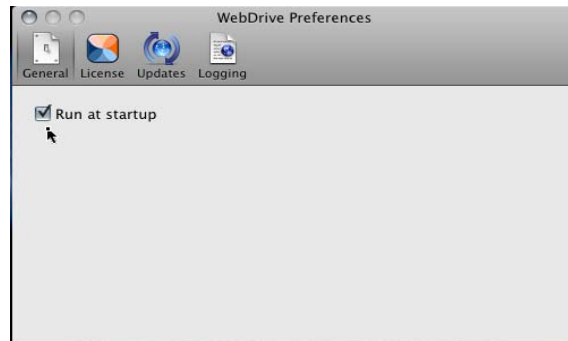
## Reporting Problems

To report a problem, visit the WebDrive support site at [www.srthelpdesk.com](http://www.srthelpdesk.com).

So that we may better assist you, set your logging level to **debugging**, try to recreate the problem, and then attach your log file to the support ticket. To set your Logging to debugging, on the menu bar, click **WebDrive>Preferences>Logging**. Use the drop-down arrow to set the logging level. Log files are located in **~/Library/Logs/South River Technologies/**

## Run at Startup

You can configure WebDrive to start automatically when your operating system starts.



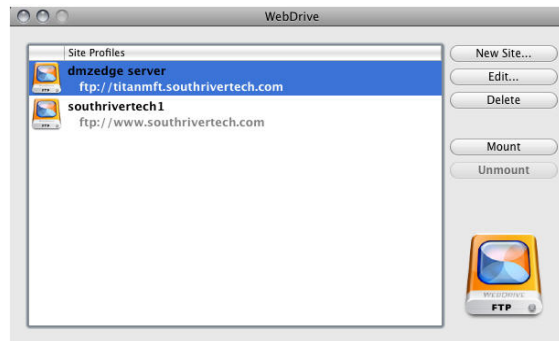
### Configuring WebDrive to run at startup

1. On the WebDrive menu, click **Preferences**. The Preferences dialog will appear.
2. Select the **General** tab.
3. Select the **Run at Startup** check box.

## Working with the Site Manager

### Site Manager Interface

Use WebDrive's **Site Manager** to define your site profiles, add or edit site information, and to mount your servers as a virtual drive.



**New Site** - Click **New Site** to create new site profiles.

**Edit** - Select the site profile that you would like to edit, and then click **Edit**.

**Delete** - Select one or more sites, and then click **Delete**.

**Mount** - To connect to the server, select the site profile, and then click **Mount**. To view the mounted drive, in Finder, select **Go>Computer**.

**Unmount** - To disconnect from the server, select the site profile, and then click **Unmount**.

### See Also

[Configuring a New FTP Site](#)

[Configuring a New FTP/S Site](#)

[Configuring a New SFTP Site](#)

## Configuring a New FTP Site Profile

The *Site Wizard* guides you through the process of configuring a new site profile. You will be prompted by the Site Wizard to enter site-specific information such as the host name or IP address, server type, and the user credentials required to access the server. To access the Site Wizard, launch the Site Manager, and then click **New Site**.

### Configuring a New FTP Site Profile

1. Launch the WebDrive Site Manager, and then click **New Site**.
2. Type the **Site Profile Name**, and then click **Next**. Use only letters and numbers; do not use any special characters.
3. Use the drop-down arrow to select your server type: **FTP**. Click **Next**.
4. Type the **Host name** or **IP Address**. Do not add the protocol prefix (such as **ftp://**); for example, **ftp.yoursite.net**
5. The default port for FTP is port 21. We recommend that you use the default port; however, if you would like to change the port, clear the check box and type the port number.
6. Type the location of your Initial Remote Directory. Click **Next**.
7. Select the check box if you would like to enable **Anonymous/Public logon**.
8. Type your **Username**. Clear the **Save Password** check box if you do not want WebDrive to store your password.
9. Type your **Password** and then click **Next**. Passwords are case sensitive.
10. Click **Test Connection**. When the "Success" message box appears, click **OK**, and then click **Finish**. The WebDrive icon light will turn green and Finder will display the directory for this site profile.
11. Now that you have initially configured your Site Profile, you may want to fine-tune the configuration. To configure additional options, click the **Site Profile** and then click **Edit**. For more information about additional configuration options, see the [Edit a Site Profile](#) topic.

### See Also

[Encryption/Security](#)

[Terminology](#)

[Mounting a Drive](#)

## Configuring a New FTP/S Site Profile

The *Site Wizard* guides you through the process of creating a new site profile. You will be prompted by the Site Wizard to enter site specific information such as the host name or IP address, server type, and the user credentials required to access the server. To access the Site Wizard, launch the Site Manager and then click **New Site**.

### Configuring a New FTP/S Site Profile

1. Launch the WebDrive Site Manager, and then click **New Site**.
2. Type the **Site Profile Name**, and then click **Next**. Use only letters and numbers; do not use any special characters.
3. Use the drop-down arrow to select your server type: **FTPS**.
4. Use the drop-down arrow to select your [Encryption Method](#). Your encryption method must be allowed by the server to which you are connecting.
5. **Encrypt Data Channel (Prot P)** - When enabled, this option secures the data connection with SSL in addition to the control connection.
6. **Use Passive Mode for data transfers (PASV)** is enabled by default. Clear the check box if you would like to use Active (Port) mode. Click **Next**.
7. Type the **Host name** or **IP Address**. Do not add the protocol prefix (such as **ftp://**); for example, **ftp.yoursite.net**
8. Clear the check box if you would like to change the default port, and type in the port number. We recommend that you use the default port number.
9. Type the location of your **Initial Remote Directory**. Click **Next**.
10. Select the check box if you would like to enable **Anonymous/Public logon**. The Username and Password fields will become unavailable.
11. Type your **Username**. Clear the **Save Password** check box if you do not want WebDrive to store your password.
12. Type your **Password**, and then click **Next**. Passwords are case sensitive.
13. Click **Test Connection**. When the "Success" message box appears, click **OK**, and then click **Finish**. The WebDrive icon light will turn green and Finder will display the directory for this site profile.
14. Now that you have initially configured your Site Profile, you may want to fine-tune the configuration. To configure additional options, click the **Site Profile** and then click **Edit**. For more information about additional configuration options, see the [Edit a Site Profile](#) topic.

**See Also**

[Encryption/Security](#)

[Terminology](#)

[Mounting a Drive](#)

## Configuring a New SFTP Site Profile

The *Site Wizard* guides you through the process of creating a new site profile. You will be prompted by the Site Wizard to enter site specific information such as the host name or IP address, server type, and the user credentials required to access the server. To access the Site Wizard, launch the Site Manager and then click **New Site**.

### Configuring a New SFTP Site Profile

1. Launch the WebDrive Site Manager, and then click **New Site**.
2. Type the **Site Profile Name**, and then click **Next**. Use only letters and numbers; do not use any special characters.
3. Use the drop-down arrow to select your server type: **SFTP**. Click **Next**.
4. Type the **Host name** or **IP Address**. Do not add the protocol prefix (such as **ftp://**); for example, **ftp.yoursite.net**
5. The default port for SFTP is port 22. If you would like to change the port, clear the check box and type the port number.
6. Type the location of your **Initial Remote Directory**. Click **Next**.
7. Type your **Username**. Clear the **Save Password** check box if you do not want WebDrive to store your password.
8. Type your **Password** and then click **Next**. Passwords are case sensitive.
9. Click **Test Connection**. When you receive the "Success" message, click **OK**, and then click **Finish**. The WebDrive icon light will turn green and Finder will display the directory for this site profile.
10. Now that you have initially configured your Site Profile, you may want to fine-tune the configuration. To configure additional options, click the **Site Profile** and then click **Edit**. For more information about additional configuration options, see the [Edit a Site Profile](#) topic.

### See Also:

[Encryption/Security](#)

[Terminology](#)

[Mounting a Drive](#)

## Configure a WebDAV Site Profile

The *Site Wizard* guides you through the process of configuring a new site profile. You will be prompted by the Site Wizard to enter site-specific information such as the host name or IP address, server type, and the user credentials required to access the server. To access the Site Wizard, launch the Site Manager, and then click **New Site**.

### Configuring a New WebDAV Site Profile

1. Launch the WebDrive Site Manager, and then click **New Site**.
2. Type the **Site Profile Name**, and then click **Next**. Use only letters and numbers; do not use any special characters.
3. Use the drop-down arrow to select your server type: **WebDAV**. If you would like to connect securely using HTTPS, select the check box. Click **Next**.
4. Type the **Host name** or **IP Address**. Do not add the protocol prefix (such as **http://**); for example, **webdav.yoursite.net**
5. The default port for HTTP is port 80; for HTTPS, the default port is 443. We recommend that you use the default port; however, if you would like to change the port, clear the check box and type the port number. Type the location of your **Initial Remote Directory**, and then click **Next**.
7. Select the check box if you would like to enable **Anonymous/Public login**; otherwise, type your **Username**. Clear the **Save Password** check box if you do not want WebDrive to store your password. Type your **Password** and then click **Next**. Passwords are case sensitive.
8. Click **Test Connection**. When the "Success" message box appears, click **OK**, and then click **Finish**. The WebDrive icon light will turn green and Finder will display the directory for this site profile.
9. Now that you have initially configured your Site Profile, you may want to fine-tune the configuration. To configure additional options, click the **Site Profile** and then click **Edit**. For more information about additional configuration options, see the [Edit a Site Profile](#) topic.

### See Also

[Terminology](#)

[Mounting a Drive](#)

## Configure a GroupDrive Site Profile

The *Site Wizard* guides you through the process of configuring a new site profile. You will be prompted by the Site Wizard to enter site-specific information such as the host name or IP address, server type, and the user credentials required to access the server. To access the Site Wizard, launch the Site Manager, and then click **New Site**.

### Configuring a New GroupDrive Site Profile

1. Launch the WebDrive Site Manager, and then click **New Site**.
2. Type the **Site Profile Name**, and then click **Next**. Use only letters and numbers; do not use any special characters.
3. Use the drop-down arrow to select your server type: GroupDrive. If you would like to connect securely using HTTPS, select the check box. Click **Next**.
4. Type the **Host name** or **IP Address**. Do not add the protocol prefix (such as **http://**); for example, **webdav.yoursite.net**
5. The default port for HTTP is port 80; for HTTPS, the default port is 443. We recommend that you use the default port; however, if you would like to change the port, clear the check box and type the port number. Click **Next**.
7. Type your **Username**. Clear the **Save Password** check box if you do not want WebDrive to store your password.
8. Type your **Password** and then click **Next**. Passwords are case sensitive.
9. Click **Test Connection**. When the "Success" message box appears, click **OK**, and then click **Finish**. The WebDrive icon light will turn green and Finder will display the directory for this site profile.
10. Now that you have initially configured your Site Profile, you may want to fine-tune the configuration. To configure additional options, click the **Site Profile** and then click **Edit**. For more information about additional configuration options, see the [Edit a Site Profile](#) topic.

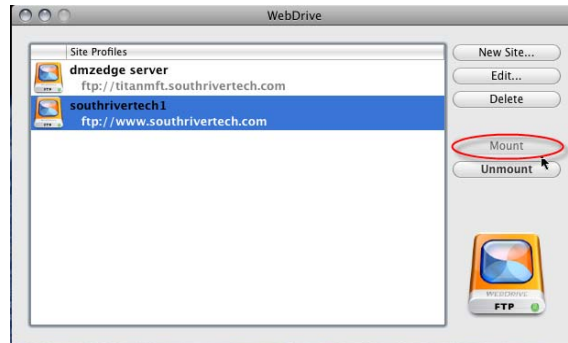
### See Also

[Terminology](#)

[Mounting a Drive](#)

## Mounting a Drive

After you have configured your site profile, you can use the **Mount** button to connect to the server. When you have successfully connected to the server, you will receive a success message and the WebDrive icon light will turn green.



### Mounting a Drive

1. Click the site that you would like to connect to your server.
2. Click **Mount**.
3. The site profile icon light will turn green and the site directory will be displayed.

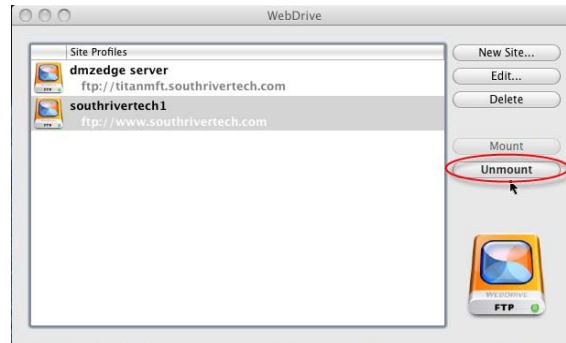
### See Also

[Unmounting a Drive](#)

[Using the Site Manager](#)

## Unmounting a Drive

Use the **Unmount** button to disconnect your site from the server.



### Unmounting a Drive

1. Click the site that you would like to disconnect from the server.
2. Click **Unmount**. The site icon green light will no longer be illuminated.
3. Your site is now disconnected from the server.

### See Also

[Using the Site Manager](#)

[Mounting a Drive](#)

## Edit a Site Profile

You can use the Site Manager to edit a Site Profile. There are additional options available here once you have initially configured your site using the New Site wizard.

### Editing a Site Profile

1. Click the **Site Profile** that you would like to change.
2. Click **Edit**. Select the tab for the option that you would like to edit. The options that are available depend on the Server Type.
3. When you are finished editing the Site Profile, click **Save**.

For more information about additional configuration options, click the topic below that matches your Server Type:

[Additional FTP Configuration Options](#)

[Additional FTP/S Configuration Options](#)

[Additional SFTP Configuration Options](#)

[Additional WebDAV Configuration Options](#)

[Additional GroupDrive Configuration Options](#)

## Configuration Features & Options

### Additional FTP Configuration Options

Once you have initially configured your Site Profile using the Site Wizard, you can fine-tune your configuration. Simply click your **Site Profile** and then click **Edit**. You can also change any settings for your Site Profiles at any time by clicking **Edit**.

#### General

**Server Type** - Use the drop-down arrow to change your server type. WebDrive for Mac supports FTP, FTP/S, SFTP, WebDAV, and GroupDrive. When you change your Site Profile protocol, WebDrive automatically updates your ports and provides additional configuration options depending on the protocol that you choose.

**Site Name** - Use only letters and numbers; do not use any special characters.

**Host Name or IP Address** - Do not add the protocol prefix (such as **ftp://**); for example, **ftp.yoursite.net**

**Port** - The default port for FTP is port 21. We recommend that you use the default port; however, this port may be changed.

**Login as Anonymous** - Select this check box to enable Anonymous Login.

**Username** - Type your Username.

**Save Password** - Select this check box to save your password.

**Password** - Type your Password. Passwords are case sensitive.

**Initial Remote Directory** - Type your Initial Remote Directory

#### FTP

**Use Passive Mode for data transfers (PASV)** - Select this check box to use Passive mode (PASV) for data transfers. In passive (PASV) mode the FTP server specifies the data port that WebDrive will connect on and waits for WebDrive to connect. WebDrive will ask the server for the server's IP address and port number by issuing the PASV command to the FTP server. If your server is behind a firewall/router, you may need to enable Passive mode. Some FTP clients and servers do not support PASV transfers; check with your Server Administrator.

**Use MLST for retrieving directory and file attributes** - Use the MLST command to return machine readable file information. Not all FTP servers support this command; check with your Server Administrator.

## MacFUSE

**MacFUSE Timeout** - MacFUSE is the FUSE kernel extension for Macintosh that allows the Mac to mount WebDrive. The default timeout is 120 seconds. If you are going to be transferring many large files, you may want to increase the timeout. If MacFUSE times out before your Mac successfully communicates with the server, then WebDrive will unmount the drive.

**NOTE:** If you adjust the MacFUSE timeout, you must check your Internet settings to be sure that the sum total of your Internet settings does not exceed the MacFUSE timeout.

**Mount as a Local device** - When you mount as a local device, your Mac will place hidden files on the server called **Appledouble** files and WebDrive may also run slower. The default setting is not enabled. If you would like to enable this setting, select the check box.

**Allow others to access device** - When you enable this option, others will be allowed to connect to this Site Profile; permission checks will apply.

**Other MacFUSE mounting options** - Use this text box to specify other MacFUSE mounting options; for example, **noappledouble**. You must use a comma to separate the options. For more information about MacFUSE mounting options, see <http://code.google.com/p/macfuse/wiki/OPTIONS>

## Internet

**Number of times to retry command** - The default setting is 3 times\*.

**Command timeout (seconds)** - The default setting is 30 seconds\*.

**\*NOTE:** If you change these settings, you must be sure that the sum total of the multiplication of these settings does not exceed the MacFUSE timeout.

For example, using the default settings:

**3** (number of times to retry command) x **30 seconds** (command timeout) = **90 seconds**.

The default setting for MacFUSE timeout is 120 seconds. Because 90 seconds does not exceed the MacFUSE timeout of 120 seconds, these setting are suitable.

## Cache

**Folder cache timeout (in seconds)** - The default folder cache timeout is 600 seconds (ten minutes).

**File cache timeout (in seconds)** - The default file cache timeout is 600 seconds (ten minutes).

**Object 'not found' cache timeout (in seconds)** - The default object not found cache timeout is 600 seconds (ten minutes).

**Purge cache before device is mounted** - Select this option to purge the cache before you mount your Site Profile.

**Purge cache after device is unmounted** - Select this option to purge the cache when you unmount your Site Profile.

## See Also

[Encryption/Security](#)

[Terminology](#)

## Additional FTP/S Configuration Options

Once you have initially configured your Site Profile using the Site Wizard, you can fine-tune your configuration. Simply click your **Site Profile** and then click **Edit**. You can also change any settings for your Site Profiles at any time by clicking **Edit**.

### General

**Server Type** - Use the drop-down arrow to change your server type. WebDrive for Mac supports FTP, FTP/S, SFTP, WebDAV, and GroupDrive. When you change your Site Profile protocol, WebDrive automatically updates your ports and provides additional configuration options depending on the protocol that you choose.

**Site Name** - Use only letters and numbers; do not use any special characters.

**Host Name or IP Address** - Do not add the protocol prefix (such as **ftp://**); for example, **ftp.yoursite.net**

**Port** - The default port for FTP is port 21. We recommend that you use the default port; however, this port may be changed.

**Login as Anonymous** - Select this check box to enable Anonymous Login.

**Username** - Type your username.

**Save Password** - Select this check box to save your password.

**Password** - Type your Password. Passwords are case sensitive.

**Initial Remote Directory** - Type your Initial Remote Directory

### FTP

**Use Passive Mode for data transfers (PASV)** - Select this check box to use Passive mode (PASV) for data transfers. In passive (PASV) mode the FTP server specifies the data port that WebDrive will connect on and waits for WebDrive to connect. WebDrive will ask the server for the server's IP address and port number by issuing the PASV command to the FTP server. If your server is behind a firewall/router, you may need to enable Passive mode. Some FTP clients and servers do not support PASV transfers; check with your Server Administrator.

**Use MLST for retrieving directory and file attributes** - Use the MLST command to return machine readable file information. Not all FTP servers support this command; check with your Server Administrator.

## FTPS

**Encryption Method** - Use the drop-down arrow to change your encryption method. For more information about Encryption Methods, see the [Encryption/Security](#) topic.

**Encrypt Data Channel (Prot P)** - When enabled, this option secures the data connection with SSL in addition to the control connection.

## MacFUSE

**MacFUSE Timeout** - MacFUSE is the FUSE kernel extension for Macintosh that allows the Mac to mount WebDrive. The default timeout is 120 seconds. If you are going to be transferring many large files, you may want to increase the timeout. If MacFUSE times out before your Mac successfully communicates with the server, then WebDrive will unmount the drive.

**NOTE:** If you adjust the MacFUSE timeout, you must check your Internet settings to be sure that the sum total of your Internet settings does not exceed the MacFUSE timeout.

**Mount as a Local device** - When you mount as a local device, your Mac will place hidden files on the server called **Appledouble** files and WebDrive may also run slower. The default setting is not enabled. If you would like to enable this setting, select the check box.

**Allow others to access device** - When you enable this option, others will be allowed to connect to this Site Profile; permission checks will apply.

**Other MacFUSE mounting options** - Use this text box to specify other MacFUSE mounting options; for example, **noappledouble**. You must use a comma to separate the options. For more information about MacFUSE mounting options, see <http://code.google.com/p/macfuse/wiki/OPTIONS>

## Internet

**Number of times to retry command** - The default setting is 3 times\*.

**Command timeout (seconds)** - The default setting is 30 seconds\*.

**\*NOTE:** If you change these settings, you must be sure that the sum total of the multiplication of these settings does not exceed the MacFUSE timeout.

For example, using the default settings:

**3** (number of times to retry command) x **30 seconds** (command timeout) = **90 seconds**.

The default setting for MacFUSE timeout is 120 seconds. Because 90 seconds does not exceed the MacFUSE timeout of 120 seconds, these setting are suitable.

## Cache

**Folder cache timeout (in seconds)** - Set the folder cache timeout. The default folder cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**File cache timeout (in seconds)** - Set the file cache timeout. The default file cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**Object 'not found' cache timeout (in seconds)** - The default object not found cache timeout is 600 seconds (ten minutes).

**Purge cache before device is mounted** - Select this option to purge the cache before you mount your Site Profile.

**Purge cache after device is unmounted** - Select this option to purge the cache when you unmount your Site Profile.

## See Also

[Encryption/Security](#)

[Terminology](#)

## Additional SFTP Configuration Options

Once you have initially configured your Site Profile using the Site Wizard, you can fine-tune your configuration. Simply click your **Site Profile** and then click **Edit**. You can also change any settings for your Site Profiles at any time by clicking **Edit**.

### General

**Server Type** - Use the drop-down arrow to change your server type. WebDrive for Mac supports FTP, FTP/S, SFTP, WebDAV, and GroupDrive. When you change your Site Profile protocol, WebDrive automatically updates your ports and provides additional configuration options depending on the protocol that you choose.

**Site Name** - Use only letters and numbers; do not use any special characters.

**Host Name or IP Address** - Do not add the protocol prefix (such as **ftp://**); for example, **ftp.yoursite.net**

**Port** - The default port for FTP is port 21. We recommend that you use the default port; however, this port may be changed.

**Login as Anonymous** - Select this check box to enable Anonymous Login.

**Username** - Type your username.

**Save Password** - Select this check box to save your password.

**Password** - Type your Password. Passwords are case sensitive.

**Initial Remote Directory** - Type your Initial Remote Directory

### MacFUSE

**MacFUSE Timeout** - MacFUSE is the FUSE kernel extension for Macintosh that allows the Mac to mount WebDrive. The default timeout is 120 seconds. If you are going to be transferring many large files, you may want to increase the timeout. If MacFUSE times out before your Mac successfully communicates with the server, then WebDrive will unmount the drive.

**NOTE:** If you adjust the MacFUSE timeout, you must check your Internet settings to be sure that the sum total of your Internet settings does not exceed the MacFUSE timeout.

**Mount as a Local device** - When you mount as a local device, your Mac will place hidden files on the server called **Appledouble** files and WebDrive may also run slower. The default setting is not enabled. If you would like to enable this setting, select the check box.

**Allow others to access device** - When you enable this option, others will be allowed to connect to this Site Profile; permission checks will apply.

**Other MacFUSE mounting options** - Use this text box to specify other MacFUSE mounting options; for example, **noappledouble**. You must use a comma to separate the options. For more information about MacFUSE mounting options, see <http://code.google.com/p/macfuse/wiki/OPTIONS>

## Internet

**Number of times to retry command** - The default setting is 3 times\*.

**Command timeout (seconds)** - The default setting is 30 seconds\*.

**\*NOTE:** If you change these settings, you must be sure that the sum total of the multiplication of these settings does not exceed the MacFUSE timeout.

For example, using the default settings:

**3** (number of times to retry command) x **30 seconds** (command timeout) = **90 seconds**.

The default setting for MacFUSE timeout is 120 seconds. Because 90 seconds does not exceed the MacFUSE timeout of 120 seconds, these setting are suitable.

## Cache

**Folder cache timeout (in seconds)** - Set the folder cache timeout. The default folder cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**File cache timeout (in seconds)** - Set the file cache timeout. The default file cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**Object 'not found' cache timeout (in seconds)** - The default object not found cache timeout is 600 seconds (ten minutes).

**Purge cache before device is mounted** - Select this option to purge the cache before you mount your Site Profile.

**Purge cache after device is unmounted** - Select this option to purge the cache when you unmount your Site Profile.

## See Also

[Terminology](#)

## Additional WebDAV Configuration Options

### General

**Server Type** - Use the drop-down arrow to change your server type. WebDrive for Mac supports FTP, FTP/S, SFTP, WebDAV, and GroupDrive. When you change your Site Profile protocol, WebDrive automatically updates your ports and provides additional configuration options depending on the protocol that you choose.

**Site Name** - Use only letters and numbers; do not use any special characters.

**Host Name or IP Address** - Do not add the protocol prefix (such as **http://**); for example, **webdav.yoursite.net**

**Port** - The default port for FTP is port 21. We recommend that you use the default port; however, this port may be changed.

**Login as Anonymous** - Select this check box to enable Anonymous Login.

**Username** - Type your username.

**Save Password** - Select this check box to save your password.

**Password** - Type your Password. Passwords are case sensitive.

**Initial Remote Directory** - Type your Initial Remote Directory

### WebDAV

**Use HTTP Keep-Alives** - Select this option to enable persistent connections. The default setting is enabled. Enabling this setting increases performance significantly.

**Authentication Scheme** - Select your method of access control:

- **Basic** - When enabled, WebDrive will use Basic Authentication when the server supports multiple types of authentication. Normally when the server supports multiple authentication types such as Digest or NTLM (NT LAN Manager), WebDrive will choose the most secure authentication method supported by the server. Basic Authentication is faster but less secure because credentials are passed in plaintext.
- **Digest** - Digest is a challenge/response protocol similar to NTLM, that uses cryptographic hashing.
- **NTLM** - NTLM is a challenge/response protocol that uses hashing algorithms and encryption to authenticate the client.
- **Negotiate** - Negotiate authentication automatically selects between the Kerberos protocol and NTLM. When this option is enabled, WebDrive will use the Kerberos protocol if it is available. Kerberos authentication significantly improves upon NTLM; Kerberos authentication is faster and allows mutual authentication and delegation of credentials to remote machines.

**Use Secure HTTPS** - Select this check box to connect securely using HTTPS, which is HTTP over SSL (Secure Sockets Layer; a cryptographic protocol).

## MacFUSE

**MacFUSE Timeout** - MacFUSE is the FUSE kernel extension for Macintosh that allows the Mac to mount WebDrive. The default timeout is 120 seconds. If you are going to be transferring many large files, you may want to increase the timeout. If MacFUSE times out before your Mac successfully communicates with the server, then WebDrive will unmount the drive.

**NOTE:** If you adjust the MacFUSE timeout, you must check your Internet settings to be sure that the sum total of your Internet settings does not exceed the MacFUSE timeout.

**Mount as a Local device** - When you mount as a local device, your Mac will place hidden files on the server called **Appledouble** files and WebDrive may also run slower. The default setting is not enabled. If you would like to enable this setting, select the check box.

**Allow others to access device** - When you enable this option, others will be allowed to connect to this Site Profile; permission checks will apply.

**Other MacFUSE mounting options** - Use this text box to specify other MacFUSE mounting options; for example, **noappledouble**. You must use a comma to separate the options. For more information about MacFUSE mounting options, see <http://code.google.com/p/macfuse/wiki/OPTIONS>

## Internet

**Number of times to retry command** - The default setting is 3 times\*.

**Command timeout (seconds)** - The default setting is 30 seconds\*.

**\*NOTE:** If you change these settings, you must be sure that the sum total of the multiplication of these settings does not exceed the MacFUSE timeout.

For example, using the default settings:

**3** (number of times to retry command) **x 30 seconds** (command timeout) = **90 seconds**.

The default setting for MacFUSE timeout is 120 seconds. Because 90 seconds does not exceed the MacFUSE timeout of 120 seconds, these settings are suitable.

## Cache

**Folder cache timeout (in seconds)** - Set the folder cache timeout. The default folder cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**File cache timeout (in seconds)** - Set the file cache timeout. The default file cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**Object 'not found' cache timeout (in seconds)** - The default object not found cache timeout is 600 seconds (ten minutes).

**Purge cache before device is mounted** - Select this option to purge the cache before you mount your Site Profile.

**Purge cache after device is unmounted** - Select this option to purge the cache when you unmount your Site Profile.

## See Also

[Terminology](#)

## Additional GroupDrive Configuration Options

### General

**Server Type** - Use the drop-down arrow to change your server type. WebDrive for Mac supports FTP, FTP/S, SFTP, WebDAV, and GroupDrive. When you change your Site Profile protocol, WebDrive automatically updates your ports and provides additional configuration options depending on the protocol that you choose.

**Site Name** - Use only letters and numbers; do not use any special characters.

**Host Name or IP Address** - Do not add the protocol prefix (such as **http://**); for example, **yoursite.net**

**Port** - The default port for FTP is port 21. We recommend that you use the default port; however, this port may be changed.

**Login as Anonymous** - Select this check box to enable Anonymous Login.

**Username** - Type your username.

**Save Password** - Select this check box to save your password.

**Password** - Type your Password. Passwords are case sensitive.

**Initial Remote Directory** - Type your Initial Remote Directory

### WebDAV

**Use HTTP Keep-Alives** - Select this option to enable persistent connections. The default setting is enabled. Enabling this setting increases performance significantly.

**Authentication Scheme** - Select your method of access control:

- **Basic** - When enabled, WebDrive will use Basic Authentication when the server supports multiple types of authentication. Normally when the server supports multiple authentication types such as Digest or NTLM (NT LAN Manager), WebDrive will choose the most secure authentication method supported by the server. Basic Authentication is faster but less secure because credentials are passed in plaintext.
- **Digest** - Digest is a challenge/response protocol similar to NTLM, that uses cryptographic hashing.
- **NTLM** - NTLM is a challenge/response protocol which uses hashing algorithms and encryption to authenticate the client.
- **Negotiate** - Negotiate authentication automatically selects between the Kerberos protocol and NTLM. When this option is enabled, WebDrive will use the Kerberos protocol if it is available. Kerberos authentication significantly improves upon NTLM; Kerberos authentication is faster and allows mutual authentication and delegation of credentials to remote machines.

**Use Secure HTTPS** - Select this check box to connect securely using HTTPS, which is HTTP over SSL (Secure Sockets Layer; a cryptographic protocol).

## MacFUSE

**MacFUSE Timeout** - MacFUSE is the FUSE kernel extension for Macintosh that allows the Mac to mount WebDrive. The default timeout is 120 seconds. If you are going to be transferring many large files, you may want to increase the timeout. If MacFUSE times out before your Mac successfully communicates with the server, then WebDrive will unmount the drive.

**NOTE:** If you adjust the MacFUSE timeout, you must check your Internet settings to be sure that the sum total of your Internet settings does not exceed the MacFUSE timeout.

**Mount as a Local device** - When you mount as a local device, your Mac will place hidden files on the server called **Appledouble** files and WebDrive may also run slower. The default setting is not enabled. If you would like to enable this setting, select the check box.

**Allow others to access device** - When you enable this option, others will be allowed to connect to this Site Profile; permission checks will apply.

**Other MacFUSE mounting options** - Use this text box to specify other MacFUSE mounting options; for example, **noappledouble**. You must use a comma to separate the options. For more information about MacFUSE mounting options, see <http://code.google.com/p/macfuse/wiki/OPTIONS>

## Internet

**Number of times to retry command** - The default setting is 3 times\*.

**Command timeout (seconds)** - The default setting is 30 seconds\*.

**\*NOTE:** If you change these settings, you must be sure that the sum total of the multiplication of these settings does not exceed the MacFUSE timeout.

For example, using the default settings:

**3** (number of times to retry command) **x 30 seconds** (command timeout) = **90 seconds**.

The default setting for MacFUSE timeout is 120 seconds. Because 90 seconds does not exceed the MacFUSE timeout of 120 seconds, these settings are suitable.

## Cache

**Folder cache timeout (in seconds)** - Set the folder cache timeout. The default folder cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**File cache timeout (in seconds)** - Set the file cache timeout. The default file cache timeout is 600 seconds (ten minutes). If you are collaborating on files, you may want to set the cache to expire more often.

**Object 'not found' cache timeout (in seconds)** - The default object not found cache timeout is 600 seconds (ten minutes).

**Purge cache before device is mounted** - Select this option to purge the cache before you mount your Site Profile.

**Purge cache after device is unmounted** - Select this option to purge the cache when you unmount your Site Profile.

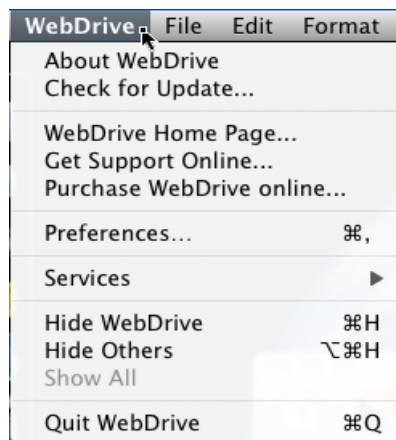
## See Also

[Terminology](#)

## Working with the WebDrive Menu

### WebDrive Menu Options

- **About WebDrive** - View the WebDrive version and build number. This will be helpful if you need to contact technical support.
- **Check for Update** - Use this utility to check for program updates and to download new versions.
- **WebDrive Home page** - Click to visit the WebDrive/South River Technologies, Inc. Home page
- **Get Support Online** - Click to see the WebDrive Support page, which contains online help and links to the technical support desk and knowledge base.
- **Purchase WebDrive online** - Click to see the WebDrive Purchase page and online shopping cart.
- **Preferences** - Allows you to configure application-wide options.



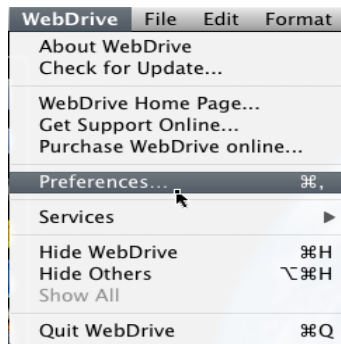
### See Also

[Setting Preferences](#)

## WebDrive Preferences Menu

You can use the WebDrive Preferences menu to:

- Set WebDrive to run at startup
- View your registration information or enter a registration code
- Set **Check for Updates** preferences
- Enable Logging and view the logfile



### See Also

[Installing Updates](#)

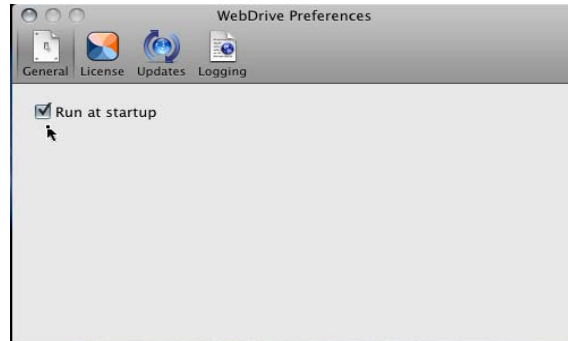
[License & Registration Information](#)

[Logging](#)

[Run at Startup](#)

## Run at Startup

You can configure WebDrive to start automatically when your operating system starts.

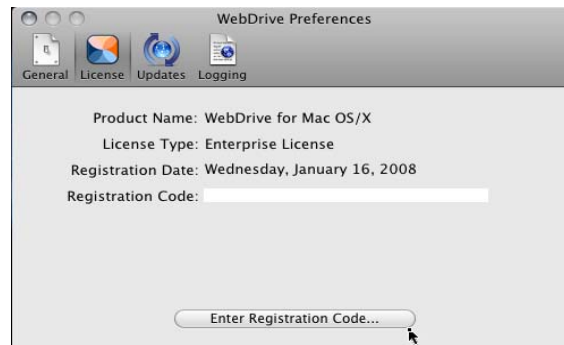


### Configuring WebDrive to run at startup

1. On the WebDrive menu, click **Preferences**. The Preferences dialog will appear.
2. Select the **General** tab.
3. Select the **Run at Startup** check box.

## License & Registration

You can enter your registration code or view your license type, registration date, and registration code information from the **WebDrive>Preferences** menu.



### Entering your Registration Code

1. From the WebDrive menu, click **Preferences**. The Preferences dialog will appear.
2. Click the **License** tab.
3. Click **Enter Registration Code**. After you type your registration code, click **Activate**.

## Installing Updates

South River Technologies periodically releases updates to your computer's software. Your computer is set to check for updates automatically as the default setting. If you want to check for software updates manually, use the instructions below. You must be connected to the Internet to update your software.

To view updates history or change **Check for Updates** settings: from the **WebDrive** menu, click **Preferences**, and then click the **Updates** tab. You can also use the **Updates** tab to check for updates.



### Configuring Automatic Updates Settings:

1. From the WebDrive menu, click **Preferences**. The Preferences dialog will launch.
2. Click the **Updates** tab.
3. Use the arrow keys to change settings. You can configure WebDrive to check for updates Daily, Weekly, or Monthly.

### Updating your WebDrive Software:

1. Launch WebDrive, and then click **File > Check for Update**.
2. The installer will launch, or you will receive a message that your software is up to date.

## Logging

You can enable logging or view the logfile from the **WebDrive>Preferences** menu, **Logging** tab. Use the arrow keys to select your logging level:

- **Standard** - When enabled, will log significant non-error events where no user action is required.
- **Verbose** - When enabled, detailed information including the type of message, text of the message, the cause of the condition leading to the message, and any recommended action will be logged. You can enable verbose logging to help troubleshoot technical problems.
- **Debugging** - When enabled, the debug log file contains status and error messages useful for diagnosing errors and debugging.

**Note:** For best performance, logging is turned off by default. If you require logging, we recommend that you use the **Standard** logging level unless you are instructed to change it by an SRT Technical Support Engineer. If you are submitting a help ticket, please set your logging level to **Debugging** and attach a copy of the logfile to your ticket.



### Enabling Logging

1. From the **WebDrive>Preferences** menu, click the **Logging** tab.
2. Select the check box to enable logging.
3. Use the arrow keys to select your logging level.

## Advanced Topics

### Encryption/Security

**Active Mode** - (See also **Passive Mode/ PASV**.) In Active Mode, WebDrive will send the IP address and port number to the server and an outbound connection from the server will be established.

**Auth SSL/TLS (Explicit SSL)** - When using Explicit SSL, the server allows SSL connections on the standard FTP port (port 21). This port will be used for both FTP connections and FTP/S connections. In order to enter into a secure SSL session, WebDrive must issue either the AUTH SSL or AUTH TLS command prior to establishing the secure connection.

**Encrypt data channel by default** - will force encryption of the data channel by default.

**Implicit SSL/TLS** - When using Implicit SSL or TLS, a secure connection is made immediately on port 990.

**Passive Mode (PASV)** - The default mode in WebDrive for establishing the data channel. In passive (PASV) mode the FTP server specifies the data port that WebDrive will connect on and waits for WebDrive to connect. WebDrive will ask the server for the server's IP address and port number by issuing the PASV command to the FTP server.

**Protocol Version TLS v. 1.0 (SSL v3.1)** - has security enhancements that are not found in SSL v3.0.

**SSL** - Abbreviation for Secure Sockets Layer, a secure protocol developed by Netscape, for transmitting private documents over the Internet. SSL works by using a private key to encrypt data that is transferred over the SSL connection.

**TLS** - Abbreviation for Transport Layer Security, a protocol that ensures privacy between communicating applications and users on the Internet. TLS ensures that no third party may eavesdrop or tamper with any message. TLS is the successor to SSL.

#### See Also

[Terminology](#)

[FAQ](#)

## Index

<b>A</b>	
Active Mode .....	4
Allow others to access device..	22, 25, 28, 30, 33
Appledouble .....	22, 25, 28, 30, 33
AUTH SSL .....	25
Auth SSL/TLS .....	4
AUTH TLS .....	25
Authentication .....	30, 33
<b>B</b>	
Basic Authentication .....	30, 33
<b>C</b>	
Cache.....	4, 22, 25, 28, 30, 33
Command Channel.....	4
Command timeout ..	22, 25, 28, 30, 33
<b>D</b>	
Data Channel .....	4
Digest Authentication .....	30, 33
Disconnect .....	20
<b>E</b>	
Encryption/Security .....	25
Explicit SSL/TLS.....	4
<b>F</b>	
FTP .....	3, 4
FTP Configuration Options .....	22
FTP/S Configuration Options .....	4, 25
FTPS .....	3
<b>G</b>	
GroupDrive .....	3, 4
GroupDrive Configuration Options ...	33
<b>H</b>	
HTTP .....	4
HTTP Keep-Alives .....	33
HTTPS .....	30, 33
<b>I</b>	
Implicit SSL.....	4, 25
Implicit SSL/TLS .....	4
Implicit TLS.....	25
<b>M</b>	
MacFUSE mounting options	22, 25, 28, 30, 33
MacFUSE Timeout ...	22, 25, 28, 30, 33
MLST.....	22, 25
Mount as a Local device	22, 25, 28, 30, 33
<b>N</b>	
NTLM Authentication.....	30, 33
<b>P</b>	
Passive Mode (PASV) .....	4, 22, 25
<b>R</b>	
Retry command .....	22, 25, 28, 30, 33
Run at Startup.....	38
<b>S</b>	
SFTP Configuration Options ....	3, 4, 28
SSL.....	4
Start automatically.....	38
<b>T</b>	
TLS .....	4
<b>U</b>	
Unmount .....	20
URL.....	4
<b>W</b>	
WebDAV Configuration Options ...	3, 4, 30