



SmartSoft

SmartFTP[®] User's Guide

Version 2.5
Part Number G025
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Table of Contents

ABOUT THIS GUIDE	7
Overview	7
Technical Support Resources	8
Technical Support by Email	9
Conventions Used in this Guide	9
1 INSTALLING AND UNINSTALLING SMARTFTP	11
Checking System Requirements	11
Downloading and Installing SmartFTP	11
Deciding Between 32- or 64-bit Versions	12
Deciding Between Typical, Custom, and Complete Versions	12
Deciding Between Licensed and Unlicensed Use	12
Uninstalling SmartFTP	13
2 UNDERSTANDING FTP CONCEPTS	15
Overview of File Transfer Processes	15
Understanding FTP Connections	15
Creating Secure FTP Connections	17
Making Anonymous FTP Connections	18
Verifying Data Integrity	18
Compressing Transmitted files	19

4 | Table of Contents
SmartFTP User Guide

Determining Data Format 19

Transferring Files from Server to Server 19

Setting File Permissions 20

3 UNDERSTANDING THE SMARTFTP DISPLAY 21

Main Menu and Toolbars 21

Main Menu 21

Standard Toolbar 23

History Toolbar 24

Login Toolbar 25

SmartFTP's Working Windows 25

4 USING SIMPLE METHODS TO UPLOAD FILES WITH SMARTFTP 27

Configuring SmartFTP's Basic Settings 27

Creating a Default Download Folder 27

Designating a File Viewer/Editor 28

Setting an Action for Double-Clicks 28

Setting Your Password for Anonymous Logins 28

Using Simple Methods of Uploading 29

Opening Local and Remote Browsers 29

Turning on the Quick Transfer Toolbar 30

Uploading Your Files 31

Setting File Permissions with SmartFTP 31

Using Browser Toolbars 32

5 USING TRANSFER QUEUES TO UPLOAD FILES WITH SMARTFTP 37

Functions Available with Transfer Queues 37

Using Transfer Queues to Upload Files 37

Opening Browsers and Queues for a Transfer 38

Setting SmartFTP to Automatically Resume Broken Uploads 39

Uploading Files to Multiple Servers 40

Making Multiple Connections to One Server 40

Scheduling Uploads for Specific Dates and Times 41

Scheduling Recurring Uploads 42

Checking the Integrity of an Uploaded File 42

Setting Files to Upload Whenever They Change 44

INDEX 47

6 | Table of Contents
SmartFTP User Guide

About this Guide

This is a guide to using SmartFTP, a versatile file transfer protocol (FTP) client for Microsoft Windows published by SmartSoft. Readers who are new to FTP software and processes will find basic FTP concepts and procedures explained early in the guide, while readers experienced using FTP will find detailed instructions for using SmartFTP's advanced features following the introductory material. SmartSoft developed SmartFTP to meet the needs of almost any user, and this guide presents essential instructions for adapting the program to meet your own requirements.

Overview

This user guide is divided into ten chapters:

- Chapter 1, "Installing and Uninstalling SmartFTP," explains how to install and uninstall SmartFTP.
- Chapter 2, "Understanding FTP Concepts," explains some basic FTP concepts.
- Chapter 3, "Understanding the SmartFTP Display," explains the main areas and functions of SmartFTP's user interface.
- Chapter 4, "Using Simple Methods to Upload Files with SmartFTP," describes quick, simple methods of uploading files and setting file permissions.
- Chapter 5, "Using Transfer Queues to Upload Files with SmartFTP," explains how to use transfer queues to configure advanced upload functions.
- Chapter 6, "Downloading Files with SmartFTP," explains methods of downloading files.

- Chapter 7, “Using Advanced Security Features of SmartFTP,” discusses advanced encryption protocols supported by SmartFTP.
- Chapter 8, “Managing Favorites and Backing Up SmartFTP,” explains how to manage and protect information stored by SmartFTP on your computer.
- Chapter 9, “Resolving Common Client and Server Errors,” describes common FTP problems, presents a comprehensive list of FTP error codes, and provides instructions for correcting common errors.
- Chapter 10, “Customizing SmartFTP,” explains how to use scripts to automate and customize SmartFTP.
- Chapter 11, “Configuring Firewalls for SmartFTP,” explains how to configure popular firewalls for use with SmartFTP.

Technical Support Resources

In addition to this guide, SmartSoft maintains additional technical support for SmartFTP at <http://smartftp.com>:

- SmartFTP Tutorials provide step-by-step instructions on connecting to an FTP server, transferring files by various methods, setting file permissions, and configuring firewalls for use with SmartFTP.
- SmartFTP Knowledge Base offers a searchable collection of articles on FTP terminology, error codes, advanced FTP functions, and specific problem resolutions.
- SmartFTP Technical Forums present posts and replies from SmartFTP users about technical issues and other problems. The SmartFTP development team posts replies to many of these queries.

Note: In many cases, SmartFTP directs you to the Knowledge Base article relevant to a client or server error. To access an article, watch the error messages appearing in the Log Panel during file transfers. This panel (located at the bottom of the Remote Browser) displays the commands going to and from SmartFTP. Some error messages are followed by Active Help messages with links to relevant Knowledge Base articles. Simply click a link to access an article.

Technical Support by Email

You can also send technical questions about SmartFTP to support@smartftp.com. Questions from licensed users are answered within 24 hours. Include your license key in your email. To find your license key, open SmartFTP and go to **Help** ⇒ **About** ⇒ **License**.

Conventions Used in this Guide

This guide uses typographical devices to improve readability:

- **Messages displayed to the user by SmartFTP or typed by the user in SmartFTP fields are in Courier New font.**
- **Options, commands, and icons** you click to activate are in this version of Arial font.
- Words defined in Chapter 2 and their respective page numbers in the Index are in **bold font**.
- The symbol ⇒ means “go to” wherever you select one menu option and then another.

Finally, the text following a **Note:** or **Caution:** label has a specific purpose depending on the label:

- **Note:** draws attention to a point. It does not alert you to the potential for loss or corruption of data or unintended action by the program.
- **Caution:** warns of the potential for loss or corruption of data or unintended action by the program.

1 Installing and Uninstalling SmartFTP

This chapter explains how to download and install SmartFTP on your computer, including the requirements your computer must meet to run SmartFTP. Directions for choosing from among technical options during installation follow, and instructions for uninstalling SmartFTP end the chapter.

Checking System Requirements

Before you download SmartFTP, be sure your computer satisfies these system requirements. SmartFTP is available for Microsoft Windows operating systems that meet these *minimum* requirements:

- Windows 2000 with Service Pack 4
- 500 MHz processor
- 256 MB of RAM
- 10 MB of free hard disk space
- Internet Explorer 5

Downloading and Installing SmartFTP

To download and install SmartFTP on your computer, go to <http://www.smartftp.com/>. In the directory on this page, go to **Client** ⇒ **Download** and follow the download and installation instructions that follow. You will be directed to CNETDownload.com to download the program. At points during installation, you are prompted to choose from among several options, which are discussed next.

Deciding Between 32- or 64-bit Versions

You may download either the 32- or 64-bit version of SmartFTP. Use these guidelines to decide which version to use:

- Use the 32-bit version for Windows 2000, Windows 2003, Windows XP Home and Professional, and Windows Vista.
- Use the 64-bit version for Windows Professional x64 Edition, Microsoft Server x64 Edition, and Windows Vista 64-bit Edition.
- Use the 32-bit version if you are unsure which Windows edition you are using.

Deciding Between Typical, Custom, and Complete Versions

You must also decide whether to install the typical, custom, or complete version of SmartFTP. If you decide later to install a different version, simply run the setup program, SmartFTP.exe, again. This is how the versions differ:

- Typical incorporates all main FTP functions and many advanced functions and is recommended for most users.
- Custom is recommended for advanced users who plan to use only a few SmartFTP features.
- Complete includes all functions supported by SmartFTP and also permits customizing the program with scripts. Complete requires the most disk space.

Deciding Between Licensed and Unlicensed Use

SmartFTP is free for personal, educational, and nonprofit users. Commercial users must pay for a license to use SmartFTP, which they

can do any time during SmartFTP's 30-day free trial period. To purchase a license, open SmartFTP and go to **Help** ⇒ **SmartFTP on the Web** ⇒ **Purchase**. Licenses are valid indefinitely and come with one year free maintenance and premium support.

Uninstalling SmartFTP

Finally, if you want to uninstall SmartFTP, SmartSoft recommends you use the program's uninstall utility. You can access the utility in Windows by going to **start** ⇒ **Programs** ⇒ **SmartFTP Client** ⇒ **Uninstall**.

2 Understanding FTP Concepts

Learning how to configure SmartFTP to meet your needs requires an understanding of basic FTP processes. This chapter briefly explains a few key concepts and terminology in the file transfer process.

Overview of File Transfer Processes

FTP means file transfer protocol. File transfer protocol is set of processes and rules comprising a standard way of transferring files on the Internet or an intranet. The Internet operates through one or another of hundreds of such protocols. FTP is an open standard incorporated into virtually all computer platforms, allowing remote file manipulation (uploading, downloading, renaming, deleting, etc.) between computers regardless of their operating systems.

The two computers between which files are transferred are the **FTP client** and the **FTP server**. The server is a specialized computer, a repository of files that processes requests for access to them coming through a network. An FTP client is a computer program on any type of computer that sends requests to a server to upload or download files. **Uploading** is transmitting a file or files from client to server; **downloading** is a transmitting from server to client.

FTP software permits fast and secure transfers of large or complex files and works with virtually any type of file. FTP is used by file-sharing networks and download sites to transfer software, music, and video files. Some businesses routinely use FTP to securely transfer files, and webmasters use FTP to maintain files on web servers.

Understanding FTP Connections

When a client contacts a server for access to its files, two “connections,” or data streams, are established between them, a

control connection and a **data connection**. The control connection sends commands to the server and initially the user's password, username, and other session parameters. The transfer of files happens on a separate data connection, during which time the control connection is usually silent.

Through the initial exchange of commands and responses over the control connection, the **ports** the client and server will use for the data connection are determined. A port is simply a number carried by packets of data transmitted between computers that designates the purpose of a data stream. For example, an FTP client's initial contact with a server is almost always through the server's port 21, the port the server listens to for new connection requests. Packets sent with these requests bear the port number 21. Other ports used during an FTP session are determined by the server and client after they establish a control connection.

Two methods of establishing data connections are available, an **active** method and a **passive** method. Whether the server or the client initiates a data connection is the important difference between active and passive connections. When a client requests an active connection to a server, the client specifies the port on which it will listen for the data connection, which the server then makes with the client. When a client requests a passive connection, the server specifies the port on which it will listen for the data connection, which the client makes with the server. Whether client or server makes the data connection is key, because network and computer **firewalls** typically block a server's attempt to connect with a client but not a client's attempt to connect with a server. A firewall is a computer program that monitors information going into or out from a computer to a network and blocks exchanges that may be harmful to the computer. Because computers almost always access networks through some kind of firewall, clients as a rule are configured to establish passive data connections.

Creating Secure FTP Connections

FTP control and data connections are not necessarily secure. Unless the information in the connections is encrypted, it can be intercepted and read by a third party. Two methods are commonly used to encrypt FTP connections and perform other security functions. One is secure shell (**SSH**) protocol and the other secure socket layer (**SSL**) protocol. Transport secure layer (**TSL**), an improved version of SSL, is widely replacing SSL.

SSH and SSL (TSL) were developed for different reasons and operate differently, yet both can be used to provide state-of-the-art encryption of FTP sessions. Whether a server supports one or both of these protocols depends on the needs of its users. For example, SSL, which is widely used to transmit financial information securely via Internet web pages, is required by HIPAA (Health Insurance Portability and Accountability Act) for securing FTP transmissions of health care information in the US. In general, SSL is more easily used from a technical standpoint than SSH and is more widely used than SSH.

Both SSH and SSL, configured properly, provide these security functions to FTP:

- Authentication of server and client
- Encryption of the client's username and password
- Encryption of control and data streams
- Verification of transmission integrity

SSL (TSL) can be either **explicit** or **implicit**. Explicit SSL, which is supported by most servers that support SSL, requires a client to issue commands requesting an SSL connection. The request is made through an unencrypted connection to port 21 and is followed by a response from the server indicating the ports to be used for the SSL connections. By default, implicit SSL is running with the first contact the client has with the server, which must be made through the server's port 990, the

port that listens for encrypted requests. Implicit SSL is not recognized as a standard protocol, however, and not as widely supported as explicit SSL.

Making Anonymous FTP Connections

Many servers support **anonymous connections**. Normally, when a user identifies himself (i.e., is not anonymous), the client must specify four things in order to establish a connection with a server:

- Internet address of the server
- Username of the client
- Password of the client
- Port number at the server

On the other hand, a server that allows anonymous connections—or allows them for some purposes—will establish an FTP connection without a username or password from the client.

Note: Many servers that support anonymous connections require a client to use **anonymous** as a username and the user's email address as a password.

Verifying Data Integrity

Most FTP servers can check the **integrity** of a file after it is transferred to see whether the file has been altered during transmission. In this procedure, the FTP client uses an algorithm to compute the **hash value** of the file before it is uploaded. The hash value is a number computed using every element of the file, is unique to the file, and changes if any element of the file changes. The FTP client transmits the file along with its hash value to the server, which then recomputes the file's hash value using the same algorithm and compares it to the original hash value. If two values are the same, the file has not changed; if they differ, it has changed. In practice, hash values are computed more than

twice and are compared at several points in the transfer process. Most servers support several common algorithms for computing hash values and several procedures for comparing them.

Compressing Transmitted files

FTP servers and clients typically **compress** files just before transmission. Compression is method of reducing the size of a file by identifying recurrent strings of data, which are then specially coded. The resulting file is significantly smaller than the original and transfers faster. Software at the receiving end of the transmission decodes the compressed file and reconstructs the original. The compression program **zlib**, also known as **Mode Z**, is widely used for compressing FTP files.

Determining Data Format

Data transferred via FTP is usually sent in either one of two formats, **ASCII mode** or **binary mode**. ASCII (American Standard Code for Information Interchange) format is a method of representing plain text characters, which the FTP client and server recognize as text and save in the plain-text format supported by their operating systems. Any other type of file, such as a graphic, HTML, or data file, is corrupted if it is transmitted using ASCII mode. On the other hand, binary mode transmits files unformatted, bit by bit. The appropriate format for a given transmission can be chosen by the sender or automatically chosen by the client or server.

Transferring Files from Server to Server

In many cases, servers allow transferring files directly from one server to another. This process, known as **FXP**, can be performed by many FTP clients.

Setting File Permissions

A set of **permissions** is associated with each file on a server. The permissions determine whether a user may read the file, write to the file, or execute the file. Each permission is set to either "yes" or "no" for three types of users: the owner of the file, members of a group with access to the file, and all others. The members of the group are designated by the owner of the FTP account from among users with accounts on the server. All others includes anyone, including anonymous users, who can access the server.

3 Understanding the SmartFTP Display

This chapter describes the main parts of the SmartFTP display, or user interface. It covers SmartFTP's main menu, its toolbars, and its working windows.

Main Menu and Toolbars

By default, SmartFTP opens displaying its main menu and three toolbars. The menu and toolbars occupy two horizontal bars spanning the top of the display.

Note: You can move a menu or toolbar anywhere on the display by clicking the dimples on its left edge and dragging it to a new location.

An overview of the functions you can access through the main menu and toolbars follows.

Main Menu

The main menu contains these commands: **F**ile, **V**iew, **T**ools, **C**ommands, **F**avorites, **W**indow, **H**elp. When clicked, each provides access to basic options, tools, and resources:





- **F**ile displays these commands:
 - **N**ew **R**emote **B**rowser opens a large window with a Windows Explorer-type presentation of the files and folders on the server.
 - **N**ew **L**ocal **B**rowser opens a large window in which Windows Explorer displays the files and folders on your computer.
 - **E**xit closes SmartFTP.

- **Commands** provides an alternate way to access the commands found on the Remote Browser, Local Browser and transfer queues. These browsers and queues are briefly described below (see “SmartFTP’s Working Windows” on page 25). Browser commands are discussed in detail in Chapter 4, “Using Simple Methods to Upload Files with SmartFTP,” on pages 27–36. Transfer queue commands are discussed in Chapter 5, “Using Transfer Queues to Upload Files with SmartFTP,” on pages 38–45.
- **View** accesses these commands:
 - **Toolbars** presents options for displaying and customizing SmartFTP’s toolbars.
 - **Other Windows** presents commands for displaying file transfer queues and graphic displays of active connections, transfer speeds, and transfer activity.
- **Tools** accesses these applications:
 - **URL Watcher** presents the option to connect to any FTP site whose Internet address is copied to your system’s clipboard.
 - **Update Check** enables automatic checking of SmartSoft’s web site for updated versions of SmartFTP.
 - **Edit Custom Commands** provides access to nonstandard FTP commands supported many popular servers.
 - **Settings** provides access to settings that regulate SmartFTP’s overall operations.

- **Favorites** presents:
 - Links to previously accessed FTP sites
 - **Edit Favorites** command that allows editing of preferences saved in an FTP site's Favorite dialog
- **Window** presents options for configuring the layout of SmartFTP's display.
- **Help** provides access to these functions:
 - **Contents** connects to SmartFTP's help files on the Internet.
 - **Read Me** lists the features of your version of SmartFTP.
 - **Change Log** opens an Internet connection to a history of changes in SmartFTP versions.
 - **SmartFTP on the Web** presents links to SmartFTP's home page and other pages related to SmartFTP.
 - **Enter License Key** links to the SmartSoft site on the Internet where you can license SmartFTP.
 - **About** presents facts about your license, the developers of SmartFTP, and your computer system's components.

Standard Toolbar

The standard toolbar contains a line of icons that serve as shortcuts to frequently used functions. It is located by default at the top of the display along with the main menu. The length of the standard toolbar depends on how many functions you add to it; unless you customize it, the standard toolbar offers four functions:

-  Open a new Remote Browser
-  Open a new Local Browser
-  Edit Favorites
-  Open the Transfer Queue

Note: To add an item to the standard toolbar, right-click the toolbar and go to **Customize** ⇒ **Commands**. On the **Commands** tab, select a category of commands from the Categories list. Then click and drag a command from the Commands list to the standard toolbar. To remove an item from the standard toolbar, go to the **Commands** tab. Then drag the item from the toolbar to the Commands list.

History Toolbar

By default, the History toolbar lies just below the main menu and standard toolbar. The word “Address” appears in the left side of the bar. This toolbar has two main functions:

- The **page** icon after “Address” activates a drop-down menu with three options for making an FTP connection:
 - **FTP** establishes an unencrypted connection.
 - **FTP over SSL (Explicit)** establishes an explicit SSL connection.
 - **FTP over SSL (Implicit)** establishes an implicit SSL connection.
- The field in the History toolbar contains either the Internet address of the FTP site you want to connect to or the name of an FTP site you have previously visited. By clicking the

down arrow at the right of the field, you can view previously visited sites from which you can select one to access.

Login Toolbar

The Login toolbar is used in conjunction with the History toolbar. It contains information you must enter, along with the address of an FTP site in the History toolbar, to connect with a server. The Login toolbar contains three fields:

- Login for your username
- Password for your password
- Port for the port number you wish to connect to

If you make an anonymous connection with the server, the fields are grayed, the word “Anonymous” at the end of the Login toolbar is highlighted, **anonymous** is set as your username, and your email address is set as your password. To add your email address to SmartFTP for this use, go to **Tools** ⇒ **Settings** ⇒ **Connection**. Enter your email address in the box labeled Anonymous Password in the FTP section. Click **OK**.

Note: To switch between a connection with username and an anonymous connection, click the **Anonymous** label.

SmartFTP's Working Windows

SmartFTP's main menu and toolbars provide access to the working windows of SmartFTP, each of which contains its own toolbar with icons for accessing the window's functions. The four working windows are:

- Local Browser, which shows the files and folders on your computer

- Remote Browser, which shows your files and folders on the server
- Transfer Queue, which holds files that have been assigned destinations on the server and configures their transfer options
- Temporary Queue, which holds files to be uploaded that have not yet been assigned a destination folder on the server

Using these working windows, you follow a few basic steps to select files or folders to upload, set upload parameters, and start uploading:

1. You open the Local Browser.
2. You open a Remote Browser.
3. You open the Transfer Queue.
4. You drag files or folders to be transferred from the Local browser to a destination folder in the Remote browser.
5. SmartFTP lists these files and folders in the Transfer Queue, where you choose transfer options and then start the transfer.

To download files, you move them from the Remote Browser to the Local Browser. Uploading is discussed in detail in Chapters 4 (page 27) and 5 (page 37), downloading in Chapter 6 (page 45).

4 Using Simple Methods to Upload Files With SmartFTP

This chapter explains how to configure SmartFTP's general operating settings and how to upload files in a few simple steps. The chapter ends with instructions for setting file permissions of files on a server and with tables identifying Local and Remote Browser icon functions.

Configuring SmartFTP's Basic Settings

Before you transfer files with SmartFTP, you should configure some of its general settings. The following section mainly covers settings that affect the basic uploading operations discussed in this chapter. Other settings, which you can leave in default mode for now, are discussed in chapters that follow.

Creating a Default Download Folder

To simplify downloading of files, you can create a default download folder where downloaded files are saved if you do not designate a folder. Open SmartFTP by clicking its desktop icon and then follow these steps to create a default download folder:

1. Go to **Tools** ⇒ **Settings** ⇒ **General**.
2. In the box labeled Default Download Folder, enter the path to the folder you want to use. You can also click the **folder** icon and select a folder from the ones on your computer.
3. Click **OK**.

Designating a File Viewer/Editor

SmartFTP can download files directly to a file editor for viewing or editing. You also use the **Settings** menu to designate this editor:

1. Go to **T**ools ⇒ **S**ettings ⇒ **G**eneral.
2. In the box labeled File Viewer/Editor, enter the path to application you want to use or select an application by clicking the **folder** icon.
3. Click **OK**.

Setting an Action for Double-Clicks

In Windows, by default you double-click a folder to see its contents. In SmartFTP, if you double-click a folder icon in the Remote Browser, the folder immediately downloads to your computer. To avoid inadvertently downloading folders, you can change the action produced by a double-click in SmartFTP:

1. Go to **T**ools ⇒ **S**ettings ⇒ **G**eneral ⇒ **N**avigation.
2. In the box labeled Double Click Action, click the drop-down menu and select one of the actions listed, or select **None**.
3. Click **OK**.

Setting Your Password for Anonymous Logins

Servers that permit anonymous logins usually accept **anonymous** as a username and an email address as a password from a user logging in anonymously. SmartFTP will enter **anonymous** and your email address in the Login toolbar for anonymous logins if you give it your email address using the **Settings** menu:

1. Go to **T**ools ⇒ **S**ettings ⇒ **C**onnection.

2. In the FTP section, Enter your email address in the box labeled Anonymous Password.
3. Click **OK**.

Using Simple Methods of Uploading

You can upload a file with SmartFTP in a few steps. These simple methods of uploading are described below. You have more options for uploading files, however, if you use transfer queues as described in Chapter 5 (page 37).

Opening Local and Remote Browsers

After you open SmartFTP and an Internet connection, and after you configure its basic settings, the next step in uploading a file is to open the Local Browser to display the files on your computer and a Remote Browser to display your files on the server:

- To open the Local Browser, go to **File ⇒ New Local Browser**, or click the **new local browser** icon on the standard toolbar.
- To open a Remote Browser for a site previously visited by SmartFTP, open the dropdown menu in the Address field of the History toolbar and click the site you wish to visit. A Remote Browser then opens and automatically connects with the server.
- To open a Remote Browser for a site you have not previously visited, do the following:
 1. Type the address of the FTP site in the Address field of the History toolbar.
 2. Type your username on the server in the Login field of the Login toolbar.

3. Type your password on the server in the Password field of the Login toolbar.

Note: To open a Remote Browser for an anonymous connection, skip steps 2 and 3 and click the **Anonymous** button until it is highlighted.

4. Type the port number you wish to connect to in the Port field of the Login toolbar.

Note: You will use port 21 for most transfers unless you encrypt the transfers using implicit SSL, in which case you use port 990.

5. Now click the **Page** icon after the word “Address” in the History toolbar. A dropdown menu with three options appears: **FTP** (unencrypted), **FTP over SSL (Explicit)**, and **FTP over SSL (Implicit)**. From this menu, choose the kind of connection you want to make.
6. Now click the green **Go** arrow at the right end of the History toolbar. A Remote Browser opens and automatically connects with the server.

Note: In both Local and Remote Browsers, you open a folder with a single click.

Turning on the Quick Transfer Toolbar

To upload files using simple methods, you must turn on the Quick Transfer toolbar, a vertical toolbar in the space between the Local and Remote Browsers. To turn on the Quick Transfer toolbar, go to **View** ⇒ **Toolbars** ⇒ **Quick Transfer**.

Uploading Your Files

There are three simple methods of uploading files or folders with SmartFTP:

Note: To use these simple methods of uploading files, the Transfer Queue must be turned off. To turn the queue off, click the large **Q** icon in the Quick Transfer toolbar until the icon is grayed rather than highlighted.

- To upload a file in one step, click and drag the file from the Local Browser to a folder in the Remote Browser. The transfer takes place immediately after you release the mouse button.
- To upload a file in three steps, click the file in the Local Browser. Then click a destination folder in the Remote Browser. Click the **right-pointing arrow** in the Quick Transfer toolbar, and the transfer takes place.
- To upload a file without opening a Local Browser, simply open Windows Explorer and then open a Remote Browser in SmartFTP. Drag and drop a file from Windows Explorer to a folder in the Remote Browser. The file immediately uploads.

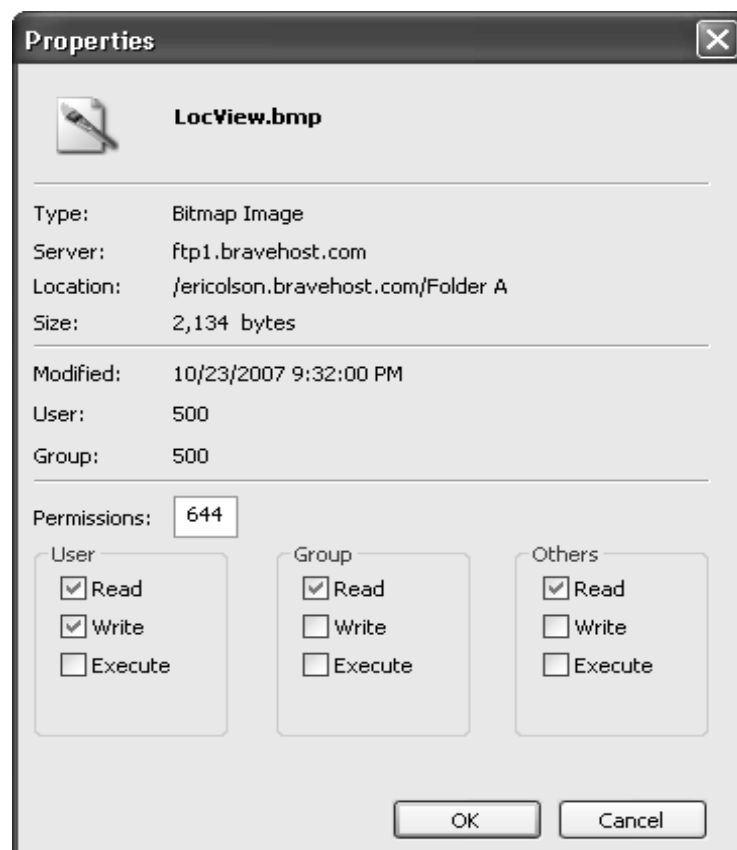
Setting File Permissions with SmartFTP

Once you have uploaded a file to a server, you can set the file's permissions. The permissions control who may read, write to, or execute the file. By default, SmartFTP sets the permissions for an uploaded file to 644, which means the owner of the file may read and write to it, while all others may only read it. SmartFTP's Properties dialog box lets you set permissions without knowing their numerical codes. To access the Properties dialog box and set permissions, do the following:

1. In the Remote Browser, select the file you want to modify.
2. In the main menu, go to **Commands** ⇒ **Properties/CHMOD** or click the **Properties/CHMOD**












icon in the Remote Browser toolbar. The Properties dialog box opens.










3. Check the permissions you want and then click **OK**.










Using Browser Toolbars








The Remote and Local Browsers have their own toolbars with icons for manipulating their respective files and folders. This chapter ends here with tables showing the functions of Local and Remote toolbar icons.

Local Browser Toolbar Functions		
Icon	Name	Function
	Refresh	Reloads the contents of the folder
	View	Opens the file in the designated editor
	Open	Opens the file with the appropriate program
	Rename	Renames the file or folder
	Delete	Deletes the file or folder
	Quick Folder	Shows recently used folders
	New Folder	Creates a new folder
	Properties	Displays Windows Properties dialog
	Cut	Cuts the file or folder

Local Browser Toolbar Functions, <i>Continued</i>		
Icon	Name	Function
	Copy	Copies the file or folder
	Paste	Pastes the file or folder
	Views	Shows display layout options

Remote Browser Toolbar Functions		
Icon	Name	Function
	Connect/ Disconnect	Connects or disconnects with the server
	Reconnect	Reconnects with the server
	Refresh	Reloads the contents of the folder
	Abort	Aborts the current operation

Remote Browser Toolbar Functions, <i>Continued</i>		
Icon	Name	Function
	View	Opens the file in the designated editor
	Open	Opens the file with the appropriate program
	Edit	Opens the file in the designated editor
	Rename	Renames the file or folder
	Delete	Deletes the file or folder
	New Folder	Creates a new folder
	Properties/ CHMOD	Opens the permissions editor
	Cut	Cuts the file or folder
	Copy	Copies the file or folder

Remote Browser Toolbar Functions, <i>Continued</i>		
Icon	Name	Function
	Paste	Pastes the file or folder
	ASCII Transfer	Establishes ASCII transfer
	Binary Transfer	Establishes binary transfer
	Auto Transfer	Enables automatic determination of transfer type
	Passive	Selects an active or passive connection
	Favorite Properties	Opens a settings editor for this favorite
	Views	Shows display layout options

5 Using Transfer Queues to Upload Files With SmartFTP

This chapter explains how to use transfer queues to upload files with SmartFTP. Using transfer queues has many advantages over using the simple methods of uploading files discussed in Chapter 4 (page 27). This chapter explains how to use these advanced FTP functions.

Functions Available with Transfer Queues

When you use SmartFTP's transfer queues, you can enhance uploading in several ways:

- You can set SmartFTP to resume interrupted transfers to servers that support resumption.
- You can make transfers to multiple servers at the same time.
- You can make multiple connections simultaneously to the same server, speeding uploads.
- You can schedule transfers for specific dates and times.
- You can schedule recurring transfers.
- You can check the integrity of your files before and after transferring them to servers that support integrity checks.
- You can have SmartFTP monitor files or folders on your computer and uploaded them when they change.

Using Transfer Queues to Upload Files

When you configure SmartFTP to upload files using transfer queues, you will use one or both of two queues, the Transfer Queue and the

Temporary Queue. SmartFTP automatically puts files into the Transfer Queue after you drag and drop them into a folder, or destination, in a Remote Browser. If, on the other hand, you want to select files and folders for uploading before you know their destinations on the server, you can drag them to the Temporary Queue first and later drag them to destination folders, at which time SmartFTP puts them into the Transfer Queue. If you attempt to drag a file directly from the Local Browser to the Transfer Queue, SmartFTP will move it to the Temporary Queue instead, since the file does not have a destination. Once files or folders are in the Transfer Queue, you set preferences for uploading them using the Transfer Queue toolbar and then start the transfer. Specific instructions for using transfer queues follow.

Opening Browsers and Queues for a Transfer

To upload files using transfer queues, first open or enable the following browsers, queues, and functions. Follow these steps:

- Open a Local Browser by going to **File** ⇒ **New Local Browser**.
- Open a Remote Browser by choosing an FTP site from the drop-down list in the History toolbar or by completing the fields in the History and Login toolbars. Then click the green **Go** button in the History toolbar.
- Open the Transfer Queue by going to **View** ⇒ **Other Windows** ⇒ **Transfer Queue**.
- Open the Temporary Queue by going to **View** ⇒ **Other Windows** ⇒ **Temporary Queue**.
- If the vertical Quick Transfer toolbar is open between browsers, make sure the **Q** button is highlighted, not grayed.

Setting SmartFTP to Automatically Resume Broken Uploads

By default, SmartFTP attempts to resume interrupted uploads of files in the Transfer Queue until they are finished. You can also configure SmartFTP to dial your internet service provider and reconnect to your server if your modem connection is broken. Here are the steps you take to upload files using the Transfer Queue to enable these features:

1. Make sure transfers from the Transfer Queue are stopped, *even if the queue is empty*, by clicking the red **Stop** button in the Transfer Queue toolbar until it is grayed.



2. Drag and drop the files you want to upload to their destinations in the Remote Browser. SmartFTP then moves these files to the Transfer Queue.
3. Click the blue **Start** button in the Transfer Queue toolbar. The transfers start.



When the transfers finish, the Status columns for the transferred files display **finished** and the files are removed from the Transfer Queue.

4. If SmartFTP is resuming an interrupted upload, the interrupted file remains in the Transfer Queue, and the Status column for the file displays **resuming**.

To configure SmartFTP to dial your internet service provider and reconnect to your server, follow these steps:

1. Go to **Tools** ⇒ **Settings** ⇒ **Autodialer**.

2. Check **Enable Autodialer**. The box labeled **Dial-Up Connection** shows the name of your default internet service provider in Windows.
3. Click **OK**.

You can also enable and disable Autodial by clicking the **Enable/Disable Autodial** icon in the Transfer Queue toolbar.



Uploading Files to Multiple Servers

SmartFTP allows you to transfer files to multiple servers simultaneously. After setting up SmartFTP to upload to one server using transfer queues as explained above, follow these steps to upload to multiple servers:

1. Open one or more additional Remote Browsers for the additional FTP sites you want to access.
2. Drag and drop folders or files you want to upload from the Local Browser to their destination folders in any of the Remote Browsers. All these local files will appear in the Transfer Queue with their respective destination folders shown.
3. Start the transfers by clicking the blue **Start** button in the Transfer Queue toolbar.

Making Multiple Connections to One Server

The speed of uploading two or more files to a server increases dramatically if you configure SmartFTP to make multiple connections to the server. Follow these steps:

1. Move the files you want to transfer to the Transfer Queue by first moving them to a destination folder as explained above.
2. In the box labeled Workers, set the number of connections you want to make.
3. In the box labeled KBps/Worker, set the maximum kilobytes-per-second transfer rate per connection. If you set this rate above your computer's or network's capabilities, SmartFTP will attempt to connect at their highest operating rate.
4. Start the transfers by clicking the blue **Start** button in the Transfer Queue toolbar.

Scheduling Uploads for Specific Dates and Times

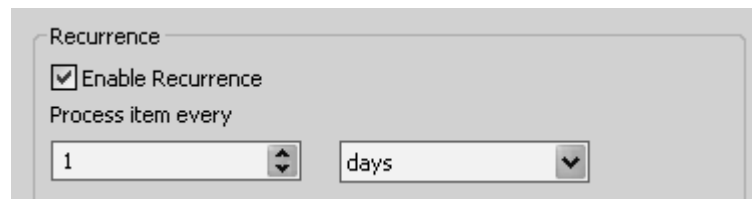
Using the Transfer Queue, you can schedule uploads for specific dates and times. Follow these steps:

1. Move the files or folders you want to upload to the Transfer Queue by first moving them to a destination folder as explained above.
2. Select the files or folders you want to schedule, then right-click your selection. From the options displayed, click **Schedule**. The Queue Item Schedule dialog opens.
3. In the section labeled Schedule, check Enable Schedule.
4. Set the date and time you want the transfer to occur in the boxes formatted for a date and a time, respectively.
5. Click **OK**.
6. Enable Autodial by clicking the **Enable/Disable Autodial** icon in the Transfer Queue toolbar until it is highlighted. The upload will now happen on the date and time you specified.

Scheduling Recurring Uploads

To schedule an upload to recur at a specified interval, do this:

1. Move the files or folders you want to upload to the Transfer Queue by first moving them to a destination folder as explained above.
2. Select the files or folders you want to schedule, then right-click your selection. From the options displayed, click **Schedule**. The Queue Item Schedule dialog opens.
3. In the box labeled Recurrence, check Enable Recurrence.
4. In the boxes below the label Process item every, set the interval number in the first box and the interval units in the second box.



5. Click **OK**.

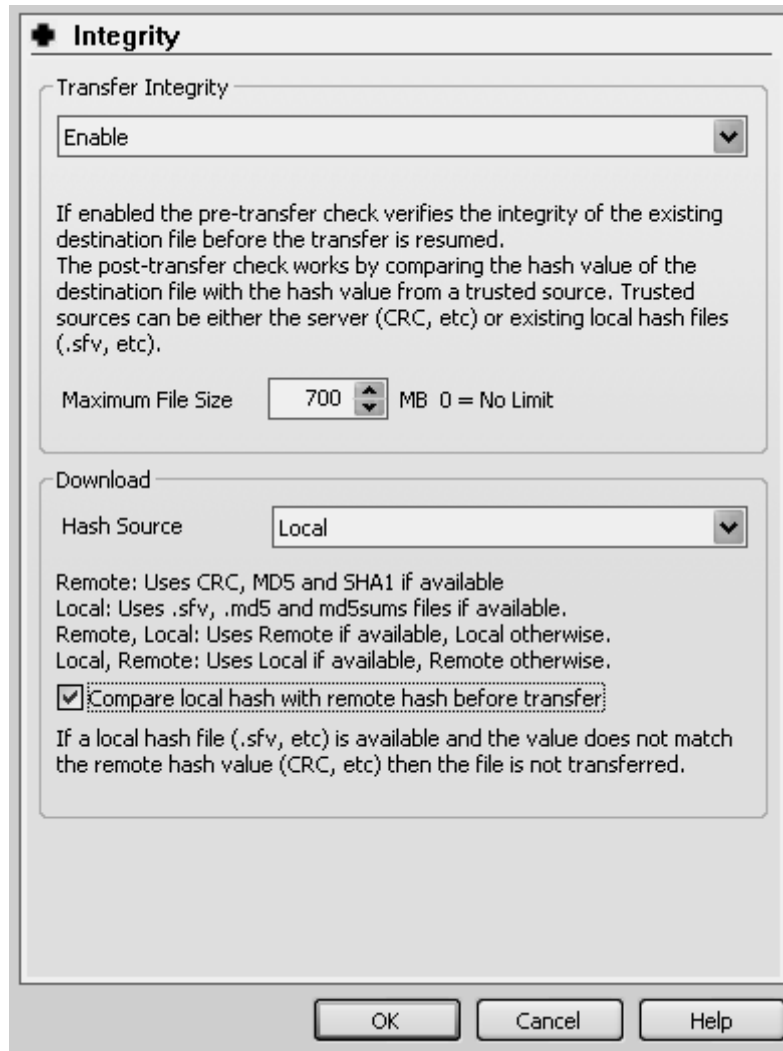
Checking the Integrity of an Uploaded File

SmartFTP supports the integrity checks supported by most servers. To enable integrity checks with a given server, you modify the settings you use for uploading to that server. Those settings are shown in the server's Favorite Properties dialog, which you access through the Remote Browser toolbar. The integrity check options you select in a server's Favorite Properties dialog remain in effect until you change them. Follow these steps to enable integrity checks for transfers to an FTP site:

1. Open a Remote Browser for the FTP site as explained above.



2. Click the favorite's **Properties** icon in the Remote Browser toolbar. The Properties dialog opens.
3. Click **Integrity**. The Integrity dialog opens.



4. In the box below the section labeled Transfer Integrity, select Enable.
5. In the box labeled Maximum File Size, set the maximum size, in megabytes, you want for files downloaded to your computer.

6. In the Download section of the Integrity dialog, find the box labeled Hash Source and select the hash source you want to use. Each hash source designates which hash algorithms are used and whether the server or the client computes them. These hash-source options are described below the Hash Source selection box.
7. To have the integrity of files in the Transfer Queue checked on your own computer *before* they upload, check Compare local hash with remote hash before transfer.
8. Click **OK**.
9. If any integrity check fails, SmartFTP prompts you with options for correcting the failure.

Setting Files to Upload Whenever They Change

You can have SmartFTP monitor files or folders on your computer and upload them whenever they change. SmartFTP monitors both file size and time of modification. Follow these steps to enable automatic monitoring and uploading:

1. Move the files or folders you want to monitor to the Transfer Queue by first moving them to a destination folder as described above.
2. Select the files or folders you want SmartFTP to monitor, then right-click your selection. From the options displayed, click **Schedule**. The Queue Item Schedule dialog opens.
3. In the Recurrence section, check Monitor Local File/Folder.
4. Click **OK**.
5. Enable Autodial by clicking the **Enable/Disable Autodial** icon in the Transfer Queue toolbar until it is highlighted.

If SmartFTP does not run regularly on your computer, you can use Windows Task Scheduler to run it on a regular schedule to check for changes in files and folders.

Index

Bold page numbers indicate definitions of terms.

3

32-bit version of SmartFTP 12

6

64-bit version of SmartFTP 12

A

active connection **16**

Active Help messages 9

address

 email 25

 FTP 29

advanced upload functions *See*

 upload functions, advanced

anonymous connection **18**, 25, 28–29,
30

anonymous login *See* anonymous
connection

ASCII (American Standard Code for
Information Interchange) mode **19**

Autodial 39–40, 41, 44

B

basic settings *See* settings,
 configuring basic

binary mode **19**

C

Caution label 10

change log 23

checking the integrity of uploaded
files 42–44

client **15**

CNETDownload.com 11

commands, custom 22

complete version of SmartFTP 12

compression, file **19**

concepts defined, FTP 15–20

 active connection **16**

 anonymous connection **18**

 ASCII (American Standard Code for
 Information Interchange) mode
 19

 binary mode **19**

 client **15**

 compression, file **19**

 connections **18**

 control connection **16**

 data connection **16**

 downloading **15**

 encryption **17–18**

 explicit SSL (secure socket layer)
 17

 firewall **16**

 format, data **19**

 FTP (file transfer protocol) **15**

 FXP transfers **19**

 hash value **18**

- implicit SSL (secure socket layer)
 - 17
- integrity, data 18
- Mode Z 19
- passive connection 16
- permissions 20
- port 16
- port 21 16
- secure connections 17–18
- server 15
- SSH (secure shell) protocol 17
- SSL (secure socket layer) protocol 17
- TSL (transport secure layer) protocol 17
- uploading 15
- zlib 19
- connection
 - active 16
 - anonymous 18, 30
 - control 16
 - data 16
 - encrypted 18
 - passive 16
 - secure 18, 24
- connections
 - active and passive 16
 - FTP 15–18
- contact information, SmartSoft 2
- control connection 16
- conventions, typographical 9
- custom commands 22
- custom version of SmartFTP 12
- customizing Smart FTP with scripts 12

D

- data connection 16
- definitions *See* concepts defined, FTP
- destination folder 37–38
- display, SmartFTP 21–26
- double-click in SmartFTP 28
- downloading 15, 26
 - SmartFTP 11

E

- editor, default *See* viewer/editor, default
- email
 - address 25
 - technical support by 9
- encryption 17–18
- explicit SSL (secure socket layer) 17, 30

F

- favorites, FTP site 23
 - editing 24
- firewall 16
- folder
 - default download 27
 - destination 37–38
- folders, opening Remote Browser 28
- format, data 19
- FTP 15
- FTP concepts *See* concepts defined, FTP
- FTP terminology *See* concepts defined, FTP
- FXP transfers 19

H

- hash value 18, 44
- help files 23
- HIPAA (Health Insurance Portability and Accountability Act) 17
- History toolbar 24–25, 29–30

I

- icons
 - Local Browser 33–34
 - Remote Browser 34–36
- implicit SSL (secure socket layer) 17, 30
- installing SmartFTP 11–13
- integrity, data 18, *See also* checking the integrity of uploaded files
- interface, user *See* Display, SmartFTP

K

- key, license 9, 23
- Knowledge Base, SmartFTP 9

L

- license key 9, 23
- licensed and unlicensed use of SmartFTP 12–13
- licensing SmartFTP 12–13
- Local Browser 25–26
 - opening 23–24, 29–30, 38
 - using 31
- Log Panel 9
- log, change 23
- Login toolbar 25, 29–30
- login, anonymous *See* anonymous connection

M

- main menu 21–23
- menu and toolbars, default 21–25
- menu, main 21–23
- Mode Z 19
- monitor files *See* upload files
 - whenever they change
- multiple connections to one server 40–41

N

- Note label 10

O

- overview, SmartFTP User Guide 7–8

P

- passive connection 16
- password 18, 25, 28–29, 30
- permissions 20, 31–32
- port 16, 25
- port 21 16, 30
- purchasing SmartFTP 12–13

Q

- queues
 - advantages of 37
 - Temporary 26, 37–38
 - Temporary and Transfer compared 37–38
 - Transfer 31, 37–45
 - transfer (Transfer and Temporary) 25–26
 - Transfer and Temporary compared 37–38
 - uploading with 37–45

queues, using transfer (Transfer and Temporary) 29

Quick Transfer toolbar 30, 31

R

recurring uploads *See* scheduling, recurring uploads

Remote Browser 25–26

opening 23–24, 29–30, 38

using 31

requirements, SmartFTP system 11

resources, technical support 8–9

resuming broken uploads 39–40

S

scheduling

recurring uploads 41–42

uploads 41

scripts, customizing SmartFTP with 12

secure connections 17–18, 24

server 15

server-to-server transfers *See* FXP transfers

settings, configuring basic 27–29

smartftp.com 8

SmartSoft 7, 8

contact information 2

SSH (secure shell) and SSL (secure socket layer) protocols compared 17

SSH (secure shell) protocol 17

SSL (secure socket layer) and SSH (secure shell) protocols compared 17

SSL (secure socket layer) protocol 17, 24

standard toolbar 23–24

Status column, Transfer Queue 39

support, technical

Active Help messages 9

email support 9

help files 23

Knowledge Base, SmartFTP 9

smartftp.com 8

support@smartftp.com 9

Technical Forums, SmartFTP 8

Tutorials, SmartFTP 8

support@smartftp.com 9

system requirements, SmartFTP 11

T

Task Scheduler, Windows 45

Technical Forums, SmartFTP 8

technical support *See* support, technical

technical support by email 9

technical support resources 8–9

Temporary Queue 26

opening 38

terminology, FTP *See* concepts defined, FTP

toobars and menu, default 21–25

toolbars

customizing 24

History 24–25, 29–30

Login 25, 29–30

Quick Transfer 30, 31, 38

standard 23–24

Transfer Queue 25–26, 31

opening 24, 38

TSL (transport secure layer) protocol
17

Tutorials, SmartFTP 8

typical version of SmartFTP 12

typographical conventions 9

U

uninstalling SmartFTP 13

unlicensed and licensed use of
SmartFTP 12–13

Update Check 22

upload functions, advanced 39–45
checking the integrity of uploaded
files 42–44

multiple connections to one server
40–41

resuming broken uploads 39–40

scheduling recurring uploads 41–
42

scheduling uploads 41

uploading files whenever they
change 44–45

uploading to multiple servers 40

uploading 15

advanced methods 37–45

files whenever they change 44–45

simple methods 29–31

to multiple servers 40

URL Watcher 22

user interface *See* display, SmartFTP

username 18, 25, 28–29, 29

uses, FTP 15

V

versions of SmartFTP

32-bit 12

64-bit 12

complete 12

custom 12

typical 12

viewer/editor, default 28

W

windows

working 25–26

Windows, Microsoft 7

2000 12

2003 12

Explorer as local browser 31

Professional x64 Edition 12

Server x64 Edition 12

Task Scheduler 45

Vista 12

Vista 64-bit Edition 12

XP Home and Professional 12

workers 40–41

working windows 25–26

Z

zlib 19



G025

SmartSoft