

Registration Information - correct as of 11/1/1999

Order forms must accompany all registrations.

Order forms can be reached from the bottom of this page. Please read the entire page before proceeding to the order forms. If you are ordering through a purchasing department, ensure that they pass the order form on with the payment. Many purchasing departments simply throw the order form away, and send on just the purchase order / payment. *This page is not an order form.*

Our "bounced check" fee is \$25.

NO exceptions. Payment for bounced checks must be sent as a money order or bank draft. Bounced checks may be sent to collection agencies or local prosecutors, as we see fit.

Payment must be made in US dollars, or British Pounds (also known as "Sterling").

I am only able to accept payments in these two currencies. **No VAT is due.**

We accept payment by credit card, checks, cash, or Postal Money Orders.

Company purchase orders are accepted by mail or fax (see below for details), and must be accompanied by the relevant order forms, and final payment must be made in terms given here. Credit card orders are charged at the same price as purchase orders - both are forms of credit, and have both risk of non-payment and handling charges; for this reason, there is a discount for prepaid orders. Credit card orders can be accepted online - visit our web site at <http://www.wftpd.com> to find out how. You can fax order forms for credit cards and purchase orders to (512) 378 3246. Credit cards are not accepted as payment for invoices - all purchase orders sent to WFTPD, Inc must be backed by checks, cash or money orders as the final form of payment.

Unpaid purchase orders.

Payment on purchase orders is due as soon as we send you the software. Purchase orders unpaid by over 60 days lose their first year's free maintenance, and purchase orders unpaid over 90 days may be considered a "loss", and you will be required to remove the software from your machines and any backup storage. We will not take further purchase orders from any company that carries outstanding purchase orders.

Checks in US \$ must be drawn on US bank branches, payable to "Texas Imperial Software".

Basically, if your check doesn't have a USA address on it somewhere, it cannot be cashed here without a significant (and often unpredictable) payment. We do not accept payments that require us to pay a further charge without prior approval and the inclusion of that charge in your payment. **This includes Canadian "US Funds" accounts** - our bank charges huge and unpredictable amounts for "collection" on all non-US checks. Especially, please don't write out Eurocheques for US funds, since that is not a legal currency for Eurocheque payments.

Cheques in sterling must be drawn on UK bank branches (or be Eurocheques), made payable to "Alun Jones".

Texas Imperial Software is an American company only, and has not been established yet in the UK. Since we cannot cash sterling cheques made out to Texas Imperial Software, they have to be returned. We cannot yet accept cheques in Euro funds - this is not what is meant by a Eurocheque.

Texas Residents (or businesses with operations in Texas) must add 6.25% sales tax.

If your organisation is tax exempt, there will be a certificate that you must send to me to avoid paying sales tax. This is not a petty restriction - I could get into serious trouble from the State Comptroller's Office if I accept payment without either sales tax or an exemption certificate. While our address indicates our mail is accepted through the Cedar Park post office, we are part of the Municipal Utility District, and have not been annexed - therefore, they get no sales tax from us, only the state does.

Please allow adequate time to process your order.

We aren't well equipped to deal with "urgent" orders. US postal Mail may take a week or two to reach us. It's also worth considering that if we move, mail gets forwarded automatically for only a year; FedEx / DHL / UPS / etc. don't. We have seen such "express courier" deliveries sit in the warehouse for several weeks before someone gets the idea to call you and ask what you want done with the order. When the company is closed for vacation or holidays, we will note this on the front page of our web site.

The prices for WFTPD and WFTPD Pro are shown on the order form. Note that we don't do disk duplication - if you order 100 licenses through the mail, you'll get one disk and a piece of paper authorizing you to make up to 100 copies of that software.

The cost in pounds is slightly more expensive, but usually cheaper than getting a money order in dollars. Please, if neither of

Order Form WFTPD version 2.41 – prepay (ONLY for accompanying payment by cheque, cash or money order)

Texas Imperial Software

1602 Harvest Moon Place, Cedar Park, TX 78613-1419

(UK Distributor for Sterling payment: Alun Jones, 47 Sugden Road, Long Ditton, Surrey KT7 0AD, UK)

This form MUST accompany all prepaid orders for WFTPD or WFTPD Pro.

Name: _____

Company Name: _____

Full Postal Address: _____

(give State, Country, etc.) _____

Phone Number: _____

Delivery Method: Regular Mail E-mail FTP (mark at least one)

E-Mail Delivery by: MIME (Eudora Lite, etc.) Uuencoded (MS Mail, etc.) (Mark one)

E-mail Address: _____

(If you do not include an email address, I cannot send you information regarding future free upgrades and bug fixes)

For FTP delivery, the following three entries are all required - I will not deliver WFTPD to an anonymous (or guest, etc.) account under any circumstances. Please remember to be careful about upper/lower case distinctions, or I may not be able to send your software to you.

FTP Site: _____

FTP User Name: _____

FTP Password: _____

Number	Description	Price Each	Total
	WFTPD (all systems)	US \$20.00 / UK £20.00	
	Bulk WFTPD – 100 licences	US \$700.00 / UK £700.00	
	WFTPD Pro (NT 3.51/4.0)	US \$100.00 / UK £100.00	
1 (we only ship one disk)	Shipping (Only for orders to be shipped by mail)	US \$5.00 / UK £5.00	

Texas residents must add 6.25% Sales Tax

[or, if you are tax exempt, you must include a copy of your exemption certificate]

If payment is made in pounds sterling, such payment should be payable to Alun Jones at the address above. **See the registration instructions for details of payments accepted.**

Please contact **Alun Jones** at the above address or e-mail alun@taxis.com for site licenses, comments or suggestions. Read the entire registration instructions before completing and sending this order form. Items underlined twice, like this, are required - we need this information for our own purposes, and in some cases, to comply with state and federal laws.

Order Form WFTPD version 2.41 - credit cards / company purchase orders

Texas Imperial Software

1602 Harvest Moon Place, Cedar Park, TX 78613-1419 or fax to:

+1 (512) 378 3246

(UK Distributor for Sterling payment: Alun Jones, 47 Sugden Road, Long Ditton, Surrey KT7 0AD, UK)

Name: _____

Company Name: _____

Full Postal Address: _____

(give State, Country, etc.) _____

Phone Number: _____

Delivery Method: Regular Mail E-mail FTP (mark at least one)

E-Mail Delivery by: MIME (Eudora Lite, etc.) Uuencoded (MS Mail, etc.) (mark one)

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FTP Password: _____

Quantity	Description	Price Each	Total
	WFTPD	US \$25.00 / UK £25.00	
	Bulk WFTPD – 100 licences	US \$800.00 / UK £800.00	
	WFTPD Pro (NT 3.51/4.0)	US \$110.00 / UK £110.00	
1 (we only ship one disk)	Shipping (Only for orders to be shipped by mail)	US \$5.00 / UK £5.00	

Texas residents must add 6.25% Sales Tax

[or, if you are tax exempt, you must include a copy of your exemption certificate]

Credit card information (if ordering by credit card):

Expiration date: _____ / **Card Number:** _____
Card Type: VISA Mastercard

Cardholder Signature: _____

This form is not for prepaid (check / money order / cash) orders.

If you are using a company purchase order, please include that with your order form. Credit cards will be charged in US dollars only - your bank will apply any appropriate exchange rate.

Please contact **Alun Jones** at the above address or e-mail alun@taxis.com for site licenses, comments or suggestions. Read the entire registration instructions before completing and sending this order form. Items underlined twice, like this, are required - we need this information for our own purposes, and in some cases, to comply with state and federal laws.

How to become a beta tester

It's very easy, really - simply register the program (oh yes, that is important), and report any bugs that occur in your normal use of the program. I choose my beta testers from those whose bug reports have shown more use to me than any others. If I'm worried about a particular area that seems to be within your area of expertise, you might become a beta tester for a while.

Previous beta testers report that inclusion in the beta test program has led to them becoming internationally famous and dating super-models. I don't believe a word of it.

I think some of the current crop of beta testers may be running out of steam a little, so I'm looking for more beta testers. Beta testers will have the following attributes:

- you've been a registered user for some time now - i.e. you've got a good feel for the software's "personality"
- you have a good amount of technical experience - i.e. you're not going to think the CD-ROM tray is a drinks holder
- you have some time to spare in trying out several different versions of WFTPD - especially if your site gets fairly frequent use
- you can maintain a backup of the release version, and don't mind dropping back to that version if the beta test version becomes dramatically unusable

If you feel this describes you, then please email me at "alun@taxis.com" and ask to become a beta tester. I'm particularly looking for people outside of the US time zones, who can test versions that I put together late at night, and give me a decent report early in the morning J

How to Win Any Argument About A.I.

If people argue that machines will never be cleverer than humans, simply ask them if their VCR still flashes "12:00".



[How Do I Register?](#)

[What's New in this version?](#)

[WFTPD Pro Announcement](#) - Announcing WFTPD Pro, for Windows 2000 / Windows NT

[Quick Setup](#) - how to start quickly

[Common Questions](#) - what people keep asking me - your answer may be here.

How To:

[Fix what broke in the quick setup](#)

[Work with Log files and screen logging](#)

[Secure your system](#)

[Win Most Arguments About Artificial Intelligence](#)

[Become one of my beta testers for future versions](#)

Menus:

Use the [File Menu](#) to deal with log files.

Use the [Edit Menu](#) for nothing much, yet!

Use the [View Menu](#) to turn off or on the status bar, which displays useful status information.

Use the [Logging Menu](#) to control what information is saved to the log, or on screen

Use the [Messages Menu](#) to give messages to users on connection, logout and change of directories.

Use the [Security Menu](#) to limit the number of users, who can log in, and where they may log in from.

Command Line Options:

[Options include 'h' \(hidden\), 'm' \(minimised\), 's' \(service\), 'i' \(new INI file\), or specify the IP address and port to listen on.](#)

Miscellaneous:

[Upload Announcement](#)

[Changes made in version 2.4x](#)

[Changes made in version 2.3x](#)

[Changes made in version 2.2x](#)

[Changes made in version 2.1x](#)

[Changes made in version 2.0x](#)

[Changes made in version 1.96](#)

[Changes made in version 1.95](#)

[Changes made in version 1.9 \(and minor version changes\)](#)

[Look for these features soon...](#)

[Acknowledgements](#)

[About The Author](#)

[What are all the INI settings?](#)

Quick Setup

Important to having a quick setup is to note what WFTPD has as its defaults:

A Log File is not generated.

Logging to screen or disk is disabled, except for warnings, which are logged to the screen.

The Greeting and Farewell messages are both set to blank in the registered version - the unregistered version informs your users in these messages that you have not registered.

The MESSAGE.FTP file is not displayed to users when they navigate around your disk(s).

Login/out sounds are disabled.

User/password security is enabled, but **no users are defined** (i.e. no-one can log in yet)

The anonymous user is disabled, and restricted to its home directory and beneath, should you re-enable this user.

Users may upload, unless they are anonymous.

All users have full rights to all areas of all disk drives.

Host/Net security allows all hosts/networks to access WFTPD, and WFTPD will not wait for DNS servers to return name information for connecting clients.

There is no limit on the maximum number of simultaneous users.

There is a 5 minute (300 second) time-out of idle connections

This means that what you will need to do at a minimum on first starting up WFTPD is either to enable the Anonymous user, or add users and passwords, or a combination of both. Or, if you don't need password protection, simply disable user/password security and allow anyone full access to your entire system.

We strongly recommend leaving the time-out enabled, since this may save you from hangs on your server (and it also prevents people from hogging your server). Also, timing out on held-open sockets may be instrumental in protecting your site from being involved in IP 'spoofing' attacks on other systems that trust yours. A time-out of five minutes (300 seconds) is fairly common, although I sometimes set mine to 600 seconds, or ten minutes, to allow for people with slow links.

Beyond this very simplistic setup, we would also thoroughly recommend reading through this help file to understand how to further control and protect your server system. It's not a tough read, and you will find many helpful hints and commands spread through the help file.

Also, if you encounter any problems connecting to WFTPD from any client program, we recommend you try using a command-line FTP client, so that you can see exactly what error message is being sent by WFTPD. Frequently, web browsers will simply display some cryptic message to the effect that the FTP server wouldn't let you connect, without actually passing on the full message we give that describes *why* you couldn't connect. Web browsers are notoriously poor FTP clients, in general.

The Log File

The Log File is a simple text file with the following format:

[X nnnn] <date> hh:mm:ss <Message text>

X is a single character, one of:

L - login

C - command

G - get (RETR)

P - put (STOR/STOU)

A - anonymous login

? - debug information

! - warning / helpful information

For completeness, we also include the other character included in log statements on screen:

- information (such as your IP address, and welcoming messages)

nnnn is a four digit number for the connection number that this message applies to - connections are numbered from 0001 from the time the program is first started. When the program is exited and restarted, the count restarts where it left off last time.

After 9999 connections, the counter loops back around to the start again.

<date> is the date, and hh:mm:ss is the time of the message being written to the log file. Dates are currently written in whatever short date format your Windows system is configured to use. Please note that this differs from versions of WFTPD previous to 2.41, which used a two-digit year. This is to address the Year 2000 issues that many companies have with two-digit years.

[Windows 3.1 users note: we still use the two-digit date format, mm/dd/yy, on the 16-bit version of WFTPD]

At times, the log will include error codes – these are standard Windows system error codes, and there are many ways to look these up, including a utility from Microsoft that maps error numbers to descriptive text.

This same information is written to the screen.

You can select the types of messages that will be listed through the Logging menu options.

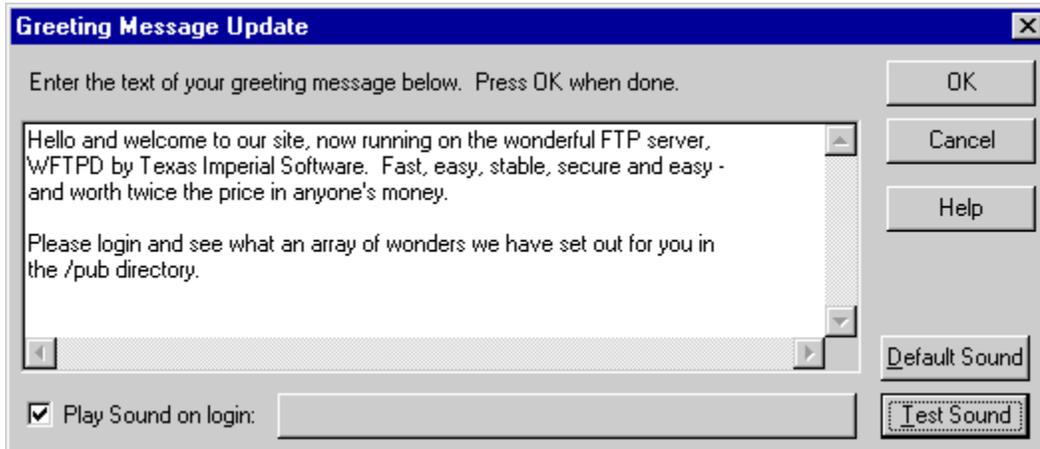
Opening the log file

When you use the "File | Open Log" menu option to open a log file, you can either create a new file, or append to an existing file. In either case, WFTPD will continue to write to that log file whenever it is running and has something to log, up until the point that you either open a new log file, or use the "File | Close Log" menu option to cease logging to file. If you had a log file open when you last closed WFTPD, it will re-open that file when it is next opened. That way, you do not have to repeatedly open the log file every time you re-start WFTPD.

Note regarding Internet Explorer behavior

Internet Explorer 4.0 ends every transfer by sending the ABORt command and resetting the data socket used for the transfer. Hence, every transfer initiated by an Internet Explorer client will be logged as an "unsuccessful" transfer, because that is exactly what IE is indicating to the FTP server. We can only speculate that Microsoft decided that this might improve performance in some fashion, but it does seem downright rude.

Greeting And Farewell Messages



These messages are currently a maximum of 20 lines long, and are entered through a very simple multi-line edit control. Any text can be entered here, although it would be advisable to limit yourself to only those characters that are most prevalent amongst the Internet community - i.e. 7-bit ASCII. [If you don't know what that is, limit yourself to characters that you can get from the keyboard without using the Ctrl, Alt, or Alt Gr. keys] It is a good idea to avoid the "angle brackets", '<' and '>', as these are used in HTML tags, and may confuse any web browsers connecting to your FTP site. [One web browser in particular got so confused by non-existent HTML tags that it displayed text that *should* have been kept secret, and which didn't come from WFTPD!]

The Greeting message is displayed to each new connection before they get the prompt for the user name, and the Farewell message is displayed after the FTP daemon receives a QUIT command from the client. In addition, I add one line to each of these messages as a kind of 'promotion', to remind users who wrote the marvelous server that they are connected to. Note that many FTP clients use these extra lines as an easy way of determining what variety of FTP server they are connected to, so it would not be good sense to try to remove or change them. In particular, the needs of good security are better met by keeping current with new releases of the software, than by removing this message.

In the Greeting and Farewell messages you can use any of the [magic cookies](#) that are allowed in the MESSAGE.FTP file - some will not display useful information, such as the user name (the user hasn't logged in yet), or free disk space (again, the user hasn't logged in). Depending on your settings in the [Host/Net Security](#) dialog, it is possible that the cookie %R, for the remote machine name, may also not be available.

In addition to specifying a message that gets sent to the user, you may also specify a sound that gets played on your computer. Checking the "Play Sound" box will enable that sound to be played (at the server) when a user logs in/out. The button to the right of "Play Sound" lists the path of the current sound - blank, if you're set to use the default sound. When you press this button, you are given a File Open dialog, where you can choose any WAV file on your system. The "Default Sound" button will set the sound back to the original one stored in the WFTPD executable. The "Test Sound" button allows you to hear the sound that is currently chosen.

The default messages are blank in the registered version. In the unregistered version, you cannot edit these messages, and they bear messages noting to your users that you have not registered the software. We do not recommend using unregistered software in a production environment, as you cannot be sure that you are kept up to date of new versions that fix bugs or security flaws. Only registered users are notified directly when a new version is released.

The MESSAGE.FTP File

When this option is checked in the Messages menu, any time a user changes directory (including when they first log in), the new directory is searched for a file called MESSAGE.FTP. If this file exists, it is sent to the FTP client as part of the success message informing the user of his change of directory.

This file may be as long as you can type, but bear in mind that many people have twenty or so lines of screen and no scroll-back - if it can't fit on one screen, you stand a good chance that it will not be read in its entirety.

This feature was inspired by wuarchive's facility to display a ".message" file on certain commands, as are the "Magic Cookies" that can be expanded by WFTPD - placing one of these items in your file produces the following expansions:

%%	Displays one single percent sign
%N	The number of users currently logged in
%M	The maximum number of users allowed to log in
%T	Local time (form Thu Nov 15 17:12:42 1990 - i.e. asctime() output)
%F	Free space (Kbytes) in partition of CWD - only if they're logged in!
%C	Current working directory
%R	Remote host (i.e. FTP client's) name
%L	Local host (i.e. your machine's) name
%U	The name the client logged in under - only if they're logged in!
%E	The server's email address

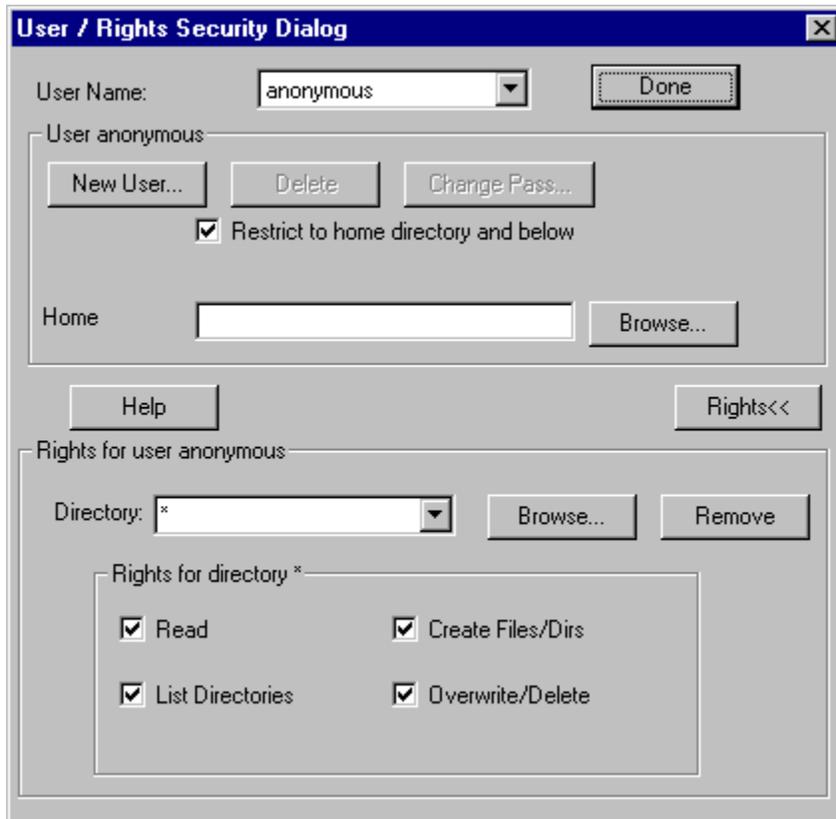
Time system is going to shut down. (same format as %T)

Time current connections will be dropped (same format as %T)

Time new connections will be refused (same format as %T)

You may want to make the MESSAGE.FTP file hidden, so users do not try to delete it, or change its contents. This is especially important since rights are implemented on a directory - by - directory basis, rather than down to the individual file; if a user can write to a directory, they can change the MESSAGE.FTP file's contents. You can also make it read-only, so that people are not tempted to overwrite it if they suspect or know that it is there; WFTPD's rights cannot override protections placed at the file system level. To make this file hidden, you can use the DOS command "ATTRIB +H MESSAGE.FTP", or from the File Manager, select MESSAGE.FTP, then choose the "Properties" option under the "File" menu, and check the "Hidden" box. To make the file read-only, use the command "ATTRIB +R MESSAGE.FTP", or check the "Read Only" box under the Properties dialog in File Mangler.

The Users / Rights Security Dialog



This dialog allows you to grant (or deny) different users access to different parts of your disk(s). It initially appears smaller than shown here, with everything below the "Help" and "Rights" button hidden. Further, the "Rights" button is labeled "Rights>>". The chevrons pointing right (">>") indicate that clicking on the button will expand the dialog to the size shown here. The chevrons pointing left ("<<") that you see in this picture indicate that pressing the "Rights" button will remove that extra information from your display [but the data is retained].

Done

The **Done** button simply exits the dialog - entries are written to the configuration file as you enter them - this explains why there is no "Cancel". This allows you to quickly change someone's rights if you happen to notice them visiting a directory you'd rather they weren't able to.

User Name, New User, Delete

The "**User Name**" field is a simple drop-down list, and shows you the users currently defined - to add a new user, you must click the "**New User...**" button. To delete a user, select their name in the "**User Name**" field, and click the "**Delete**" button. The "**New User**" and "**Delete**" buttons are in the box labeled "**User...**" - when a user name is selected, e.g. Fred, the box will be labeled "**User Fred**". Users "anonymous" and "default" are pre-defined and cannot be deleted - anonymous may be easily disabled from the General Security dialog, and the default user is simply a placeholder for default directory rights. While creating a new user, the dialog box for changing passwords will be displayed - a password must be created for any new user. Leaving the password blank is a security risk, and we do not recommend doing that. Spaces are allowed in user names, although it is advised that you not use spaces in user names or passwords, since this can confuse some FTP clients.

Also in the "User..." box:

Change Pass...

You may change any user's password by clicking the "**Change Pass...**" button when the user's name has been selected - this pulls up a new dialog with two entries - "**Password**" and "**Verify**". The **Password/Verify** boxes will always display '*' for each character entered. This is a standard protection scheme to ensure that people in the next town with high-powered binoculars can't log in to your prized system. You will not be able to press "**OK**" until the **Password** and **Verify** fields are the same (this avoids typing mistakes, since you can't see what you type). A user may have a blank password, but it is not advisable.

The passwords are stored in encrypted fashion on the WFTPD.INI file. If you wish to retain your password from a UNIX system, you may copy the password entry from the /etc/passwd file into the WFTPD.INI file - e.g. if my /etc/passwd entry is:

```
alun:hajibabaomars:194:958:Alun Jones:/home/home/on/the/range:/bin/bash
```

I would put an entry in the [passwd] section of the WFTPD.INI file a line that reads:

```
alun=hajibabaomars
```

We use a standard UNIX encryption algorithm, but we take an extra step that allows passwords longer than eight characters. A UNIX user who believes his password to be "ElephantCake" will find that a regular UNIX system might also accept "ElephantBun" or just "Elephant", since those are the first eight characters of the password. WFTPD will make a distinction between the three passwords. [As a further note on security, "Elephant" is a bad password to choose - not only is it a simple English word, but if someone sees you type the first three letters, they'll be able to guess the rest. A friend of mine had his account hacked by students in just this manner. A better password choice, if you need something pronounceable, could be "mortepharil", since watching just a fraction of the letters entered would not give away the remainder of the word, it requires letters from both sides of the keyboard, and it isn't a dictionary word in any language I'm aware of. The best passwords are those that contain a mixture of letters, numbers, and symbols. Switching between upper and lower case can help obscure the password as well.]

Home Directory

The "**Home Directory**" is the directory that the user first sees when he logs in. Because of several tech-support emails questioning me as to why a user gets the message "Unable to find home directory", this version of WFTPD requires that you enter a valid directory name in this box. It is also advisable when creating a new user account to try and access the system as that user - this way, you will avoid having to debug the connection over the telephone. Most FTP clients will be able to connect to the special site name "localhost" for test purposes. The "Browse" button will pull up a directory selection box for the home directory. We thoroughly recommend you use the "Browse" button for directory or file selection whenever it is available to you.

Restrict To Home

If you select the option "**Restrict to Home**", the user will not be able to change directory to any directory that is not either the home directory or a subdirectory thereof. Nor will he be able to access files outside of that restriction by any means other than shortcuts [which cannot be created through WFTPD]. Starting with version 2.1, the user is shown prompts that indicate that his home directory is the top of the tree - this is a feature commonly seen on UNIX FTP servers, and will also make it easier to use WFTPD with Web servers. It is often known as a "false root", or by the name of the UNIX command that achieves this functionality, "chroot" [pronounced like "cheroot"]

Outside of the "User..." box:

Help

The "**Help**" button will display this help page to help you use this dialog. Pressing F1 while this dialog is uppermost will also open this help screen.

Rights>>

When you click on the "**Rights >>**" button, it will unfold the section of this dialog to deal with user / directory rights - each user may have different rights in each directory. Clicking the "**Rights<<**" button will fold the dialog back up again.

The "Rights for user ..." box:

When a user's name has been chosen, the box will bear the user's name, e.g. "**Rights for user Fred**"

Directory

The "**Directory**" entry is for you to specify a particular directory where this user has particular rights. Remember that you are also implicitly defining access rights for each child directory that this directory has, since rights are inherited by each child directory from its parent. Naturally, you may override this behavior by defining specific rights for that child directory. The special directory "*" allows you to specify rights for the currently selected user on all directories on all drives. You may also enter a full directory path (including drive letter), or [if you are not running on Windows 3.1x] a UNC - Unified Naming Convention - pathname. A UNC starts with "\\<server>\<share>", where "<server>" is the server where the directory or file resides, and "<share>" is the name of the shared item under which the path lives. The "Browse" button will pull up a directory selection box for the home directory. When a directory has been entered in this box, the check boxes underneath will show what rights are defined or inherited for this directory and user combination. To create a UNC path name, you can browse and go through the Network Neighborhood.

To change the rights on a directory that already has specific rights defined for it, you may choose that directory by pressing the down-arrow button, to drop down the list of previously entered directories. You may also type the directory in full, at which point the rights defined for that directory will be shown. Short-forms of long path names will be expanded into their long equivalents, since all access determinations are made using these long paths. It would be programmatically simpler to use the short path names, but there are other security issues with that, related to the fact that the same long file name may have any number of

different short versions if it has been deleted and recreated, or backed-up and restored, for instance.

Remove

Once a directory's specific rights are no longer necessary (e.g. the directory has been deleted, or a parent directory has the rights that this user needs for this directory), you may press the "**Remove**" button. This does **not** delete the directory itself, or its contents - it merely removes its entry from the list of directories with specific access requirements.

Read, Overwrite, Create, List - access rights

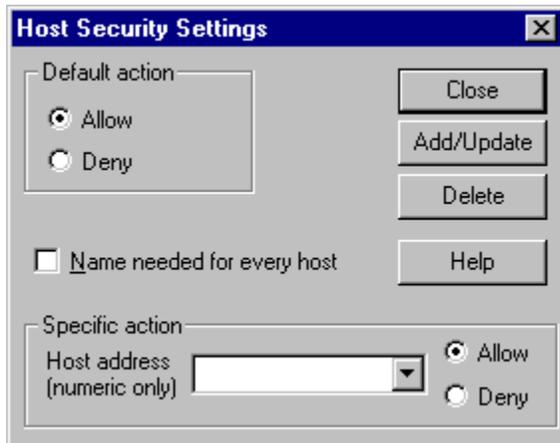
To set access rights, check or uncheck the options for "**Read**", "**Overwrite**", "**Create**" and "**List Directories**" - if a box is checked, then this user may perform that action in the specified directory. **Read** allows the user to read a file in that directory - in other words, to get the file. **Overwrite** allows the user to do any action which alters a file already on the disk - such as deleting, renaming, overwriting, or appending. **Create** allows a user only to add files to the system, i.e. putting a new file, or making a directory. **List Directories** allows the user to display directory listings in this directory, and subdirectories. If a user is not given any rights to a directory, that user will not even be allowed into that directory (or subdirectories).

Clicking on the "**Rights <<**" button again will fold the dialog back up. Remember that any rights granted (or refused) to a user on a particular directory will apply on any subdirectory, unless otherwise specified.

A note on how access is granted:

When an access request for a file is received, the directory in which the file resides is checked for rights entries in the WFTPD.INI file. If this directory is not associated with this user in the INI file, the parent directory is checked, repeatedly, until we reach the root directory of the current disk. If there is no entry for this user with the root directory, we check to see if this user has a default ("*") entry. If so, we use that, otherwise we repeat this whole process for the default user. If the default user has no default directory entry, we allow all accesses that are not specifically guarded against. (*This is to allow a usable system without having to specify any initial parameters*)

Host/Net Security



This dialog allows you to deny or allow access to your site based on the Internet address of the host trying to connect. There is a pair of radio buttons indicating what the default action is - whether you want to generally deny all incoming connections, or whether you wish to allow all connections by default.

Specific Action

At the foot of this dialog is a box labeled "**Specific action**", which contains a list box labeled "**Host address**". Any hosts listed in this box (and you can simply type extra hosts in) may be changed from the default action. Please note that to add or change a host's entry, you **MUST** click on the **Add/Update** button. To remove an entry, simply select it in the list, and click on the **Delete** button. Note also that the **Add/Update** button is the only way to record a change to the default action.

The Host Address may be a numerical IP address or a host name. A numerical IP address is four decimal numbers from 0 to 255 separated from one another by dots (the "." character). A host name is the fully qualified domain name for the connecting client. You may use asterisks (the "*" character) as a 'wild-card' in the host address to be denied or allowed - it represents any number (including zero) of any characters. For instance, 'xx*yy' represents any host name beginning with 'xx' and ending in 'yy'. While WFTPD can be configured to reject or accept connections based on the name of the connecting client, please note that this requires you to enable the "Name needed for every host" check-box noted below.

Once any address or address range has been set to '**deny**', no connections from that site can be made. Once an address or range has been set to '**allow**', all connections from that site can proceed. If a connecting site qualifies under both '**deny**' and '**allow**', it will take the **opposite action from the default**. This sounds bizarre, but it makes a certain amount of logical sense. If you think it's wrong, try and come up with a situation where you might want a different action performed - I couldn't.

"**Name needed for every host**" - if this box is checked, then WFTPD will not let a client connect until WFTPD has verified it has a name listed in the DNS. It may take anywhere from several seconds, to a few minutes, for WFTPD to check the name, and this may cause some clients to be unable to connect to your system, if their FTP client programs time out before the DNS query does. You **must** check this box if you wish to deny or allow access based on the host name.

The **Close** button will exit this dialog box - it will not in itself save any alterations that you have made to the host tables - this is done only through the **Add/Update** and **Delete** buttons.

The Security Menu



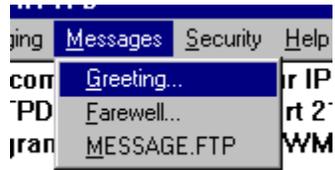
This menu contains four options that allow you to tailor the security of your site. Click each option for a description of that option's dialog.

General - for miscellaneous settings

Users / Rights - to add users, edit their passwords, set home (login) directories, and to assign access based on directories.

Host/Net - to accept or deny connections based on what machine they come from

The Message Menu



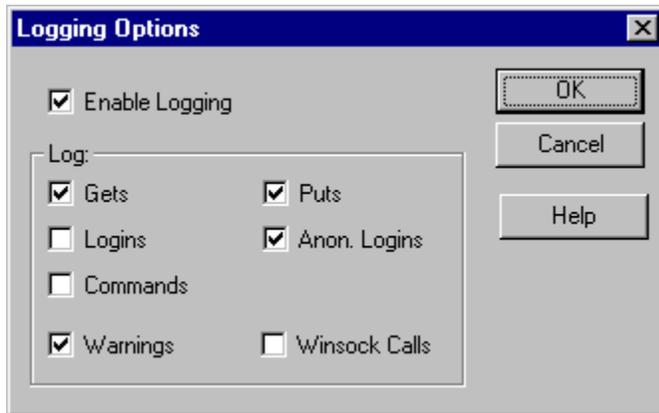
This menu contains three options.

The Greeting and Farewell messages allow you to design messages that are printed when a user logs in or out, respectively.

The MESSAGE.FTP option is a checkable option, that, when enabled, allows a message to be printed out which can change for each directory the connecting user enters.

Don't forget, when entering these messages, that many people are still accessing the Internet through UNIX systems, or similar, and have a 20-line display of 80 characters or less. It's a good idea to restrict your messages to fit on such a display.

The Log Options Dialog



The Log Options Dialog has the following check boxes:

Enable Logging - turns logging to screen and log file (if opened) on/off.

Gets - starts/stops logging all Get (RETR) commands

Puts - starts/stops logging all Put (STOR/STOU/APPE) commands

Logins - starts/stops logging all successful user logins

Anon. Logins - starts/stops logging all successful anonymous logins

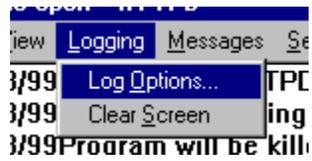
Commands - starts/stops logging of all FTP commands received.

Warnings - starts/stops logging of all warnings from WFTPD - it is recommended that you leave this enabled, since the warnings are usually signs of things that you may need to fix.

Winsock Calls - this option is **only** to be used for debugging purposes - many of the items reported are of little consequence, and despite some bizarre numbers appearing when this option is enabled, most are simply status reports. If this is enabled, it may cause WFTPD to use more memory, to slow down, and maybe even to appear to hang. It is **not recommended** unless you are trying to solve a problem in conjunction with us at Texas Imperial Software.

Note that if the **Enable Logging** box is not checked, none of the other options can be altered. It makes no sense to alter the log options if logging is not occurring!

The Logging Menu



This menu has the following options:

- Log Options** - brings up the "Log Options" dialog
- Clear Screen** - clears the log on screen.

The View Menu



Connected Users.

This option will show a modeless dialog box listing all the users currently connected, what they last tried to do, or started doing, and the status of that last command (Usually "Success"/"Fail" or a percentage or size of transfer). You may select one or more users and click the "Disconnect" button, to have these users immediately logged off your system. They may feel this is rude, and we disclaim all responsibility if disconnected users start stalking you, harass your children or torture your pets. The "Close" button refers only to closing the dialog, not the user. If things happen a little too fast on this dialog for you to keep up with, you can uncheck the "Auto-refresh" box, and only hit the Refresh button whenever you want to view the current situation. This can be useful when you have a large number of users, and want to disconnect one of them down near the bottom.

Status bar.

The status bar displays first a text string describing the currently selected menu item, or "Ready", if none is selected. After this, the bar displays a count of the current number of sockets in use, and then the current number of connected users. This allows you to make an easy decision as to whether to close the FTP daemon - if the number of users is zero, then it's safe to close WFTPD. It is especially worthwhile closing and restarting WFTPD if the number of users is zero, and the number of sockets is any number other than one. The number of sockets in use is a function of the following:

- Number of users - each user requires one socket
- Number of transfers in progress - each transfer or directory listing requires one additional socket.
- The socket that listens for new users - one socket.

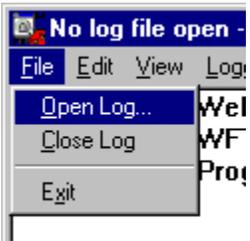
Hence, if less than one socket is displayed, the FTP daemon either has lost count, or just isn't listening any more!

Note that this same information is displayed as a "ToolTip" when WFTPD is minimised into the System Tray in Windows 95, 98, Windows 2000 or Windows NT 4.0, and the mouse is held over the WFTPD icon.

The Edit Menu

In some later version of the software, this will allow you to copy sections of the screen log into the clipboard, for pasting into other programs. Currently, there is no method to copy and paste from the log screen.

The File Menu



This contains commands to open or close the current Log File, and the exit command.

Note that if you had a log file open when you last closed WFTPD, that file will be re-opened immediately on WFTPD's next startup. In this way, opening a log file is a 'persistent' action. You can cease this behavior either by closing the log file, or by opening a different log file.

How To Secure the system

Most of the security in WFTPD comes from assigning individual users with different rights, through the Rights Security Dialog. It is thus possible to allow (or restrict) a user to only download, or only upload, from specific directories.

WFTPD can also be made into a download-only server by options in the General Security dialog. Note that the term "upload" also relates to such actions that might change the content of the disk, such as renaming files, deleting them, etc, which may not typically come under most definitions of "upload".

Full Security is probably best achieved by assigning rights, but still providing each user with a separate directory, and restricting them to that directory and below. All this can be achieved through the Users / Rights Security dialog.

If users persist in being naughty, you can deny them access to your machine through use of the Host/Net Security dialog.

If you want to see users in the act of being naughty, try the "View|Connected Users" dialog.

File Security

Note that since version 2.40, the 32-bit version of WFTPD handles shortcuts in a way roughly compatible to Unix standard symbolic links. To be specific, if a user lists a directory that contains .LNK files (shortcuts), they will see those file names (without the ".LNK" extension) followed by an arrow "->" and the path to the file that the shortcut references (if that path is available to the user). If a link points to a directory, the user must have some rights to access that directory in order to follow the link. If a link points to a file, the user will have the same access to the file as they would to any other file **in the directory containing the link**. This is an important point - by placing a link to a "secured" file into an "unsecured" directory, the file is essentially no longer secured. Deleting or renaming a link through the FTP server deletes or renames only the shortcut, not the item pointed to.

Because shortcuts are essentially binary files with the extension ".LNK", and not special directory entries (as on Unix), there is a danger that someone may (if allowed to) upload a LNK file that contains a shortcut to a protected area of your disk, and thereby download private information. To prevent this, we have disallowed any method we know of through the FTP interface to be able to create LNK files. You will no longer be able to upload files with an extension ".LNK", and you will not be able to rename files through WFTPD to have a .LNK extension (unless those files already have a .LNK extension). We are aware that this places some limits on legitimate .LNK files (such as link input files for developers), but we believe that the ability to access shortcuts is important enough to take this protective action.

Unified Naming Convention [UNC] - Network Access

In addition to mapped drive letters, network files and directories can now be reached through WFTPD by the use of UNC's (a path beginning "\\Server\ShareName" is a UNC path) on the 32-bit version of WFTPD. This is required to handle many shortcut files that are created with UNC paths. This access is, of course, limited to that provided to the user running WFTPD, as well as the rights assigned to the user logging in - you may want to make sure that you do not assign too permissive a set of rights. We are working on providing support for UNC paths in the 16-bit version of WFTPD also. (Shortcut files will not be supported in the 16-bit version, since that requires operating system support that is not present)

How To Work with Log Files and Screen Logging.

When you first fire up WFTPD, no log file will be defined, and all logging will be disabled. You will probably want to use a Log File, so that you can find out what happened during your unattended hours, and so that you can have a record of what is going on in your system.

To create a log file, simply open it from the File Menu's Open Log option. From now until you close the file, all log messages will be stored into this file. If you close the software, it will re-open this file when it is restarted.

Logging to the screen is automatically enabled whenever logging is on. This is selected from the Logging Menu. Through this menu, you can also select what actions are logged, and you can also clear the log on screen. There is no way to log to file, but not to screen, short of running the program hidden.

How To Fix What Broke in the Quick Setup

I'm not sure what you mean - nothing broke in the quick setup. :-)

Maybe you should email me at "alun@taxis.com", with some details of the problems you're experiencing, and we'll find out what went wrong.

New and Innovative Uses for WFTPD

The following uses have been reported to me:

- As a standard FTP daemon - this is obvious.
- For remote system administration - simply install it with the 'h' option, and run it on all of your systems - this allows you to update software, and retrieve configuration files for local editing, allowing you to remotely administer windows machines anywhere on your network.
- As a poor man's WWW server - place your HTML files in a directory that the 'anonymous' user can get to, using the extension ".htm", and point people to the URL "ftp://yoursite.domain/yourdirectory/yourfile.htm" - this was new to version 1.95, and works better in version 1.96 and above. This current version works even more like a regular UNIX FTP server, in that you can ask for "ftp://yoursite.domain/yourfile.htm" and it will fetch the file from the anonymous user's login directory.
- To upload web pages to a machine running a web server.

I used to have a feature where you could print by putting a file to LPT1, but because it was an unsecured use of FTP, I have disabled this feature. If you wish to print to a system through Winsock and TCP/IP, please use one of the many good LPR daemons that are around.

Upload Announcement for WFTPD 2.41

WFTPD241.ZIP Windows FTP server 2.41 for Winsock 1.1
32WFD241.ZIP Windows FTP server 2.41 for Winsock 1.1 / 2.0

Uploaded by the author.

Do you want to turn your Windows machine into an FTP site? Take a tip from the book "**Setting Up An Internet Site For Dummies**":

"Several good shareware FTP server programs are available for Microsoft Windows. The one to trust is WFTPD by [Texas Imperial Software]"

Try WFTPD, by Texas Imperial Software. A trial version is available from our web site at <http://www.wftpd.com>. The full version costs from \$20 per licence, with big discounts for large volumes.

WFTPD is the only FTP server to be picked by PC Computing magazine as one of their "Internet All-Stars Best 1001 Free Downloads From The Web", and is registered in use at over 6500 sites (as of July 1999), with tens, perhaps hundreds, of thousands of individual users. (See the July 1996 issue of PC Computing, or visit <http://www.pccomputing.com> for details of the "Internet All Stars")

WFTPD is also consistently the highest rated FTP server, with (for example) 5 stars in the ZDNet Software library (<http://www.zdnet.com>), 5 cows at The Ultimate Collection Of Winsock Software (<http://www.tucows.com>) and 3.5 stars at the Stroud Consummate Winsock Apps site (<http://www.cwsapps.com>).

WFTPD is the only FTP server for Windows whose author is an active member of the IETF FTP Extensions Working Group. As such, many future RFCs are implemented early in WFTPD, and in general more correctly. For example, at the time of writing, WFTPD is the only Windows FTP server to correctly implement restarting of interrupted transfers - even those of our competitors that claim to resume transfers do not correctly resume uploads at the time of writing.

Some of the new features recently added to WFTPD:

- o "Magic Cookies" - include time and date, user's name, disk space remaining, etc, in greeting, farewell and navigational messages.
- o STAT command now supports file listing to the control connection
- o Shortcuts (.LNK files) are supported on 32-bit Windows, acting just like symbolic links on Unix.
- o UNC (Unified Naming Convention) filenames are supported on 32-bit Windows (Windows 3.1x support for UNC's will follow shortly)
- o Transfer statistics included in log file
- o Correct handling of numeric codes at the start of lines in message output (even most Unix servers are not entirely RFC compliant in this respect)
- o wildcard expansion inside path components
- o additional Windows 95, 98, Windows 2000 and Windows NT 4.0 user-interface features
- o activity monitor, allowing immediate disconnect of unruly users
- o safety shutdown - waits till users have finished before closing WFTPD down
- o sound alert, to inform you of users logging in or out
- o TCP large window scale option supported, where the underlying network stack allows
- o New machine-readable listing format (MLST and MLSD commands) supported.
- o FEAT and OPTS commands supported [from recent RFCs]
- o File and disk sizes over 2GB supported fully.

These features have been in WFTPD for many versions now, and were mostly introduced to the Windows FTP server market by WFTPD (space prevents me from listing all features available):

Compatibility features:

- o may be installed as a service under 32-bit versions of Windows, and will not be automatically killed when you log out
- o support for all applicable Unix 'ls' command-line switches - useful (even vital) if you want your site to be mirrored using standard software
- o strict compliance with Internet RFCs 959 and 1123, as well as several draft RFCs.
- o extra FTP commands SIZE and MDTM supported
- o multi-homed site support
- o resume interrupted transfers (at the time of writing, WFTPD is the only FTP server for Windows to correctly support resuming of both interrupted uploads and downloads)
- o support for non-standard ports

- o works through most firewalls

Usability features:

- o easy-to-read help file ("The first help file I read all the way through", as one user told me)
- o intuitive yet powerful user interface, following Microsoft's Interface Guidelines
- o configurable logging of all client actions, to screen and/or file
- o customisable messages on login, logout, and change of directory
- o all FTP responses can be customised/translated using resource editors

Security features:

- o host/network-based acceptance/denial of login
- o idle/hung connection timeout
- o maximum user count
- o "read-only" operating mode
- o individual user rights on directories
- o hidden operation - can be run invisibly

As the first standalone FTP server for Windows (now available for all Intel versions of Windows, as well as Digital Alpha AXP Windows NT), WFTPD has a long history of speed and stability. As a fast, stable FTP server, it is in place at major national and international Internet Service Providers, phone service companies, software and hardware manufacturers, tool shops, space agencies, Universities and even Realtors' offices. The author's writing style was so admired by even his major competitors that some of them have felt compelled to cut and paste from the WFTPD documentation into theirs.

Despite the author working only part time for the first couple of years of this product's development, most of WFTPD's features were first offered to Windows users by WFTPD, and many are even now not offered by other FTP servers for Windows. The author now works full time on developing and supporting WFTPD, another advantage that is not present on many other Windows FTP servers.

Upgrade announcements will be sent out to all registered users of current versions of WFTPD, at which point they may download and install the new version for free. The price of the licence for WFTPD includes the first year's maintenance and upgrades. If you are a registered user and have not received your upgrade announcement a week after this message is first sent out, please email me at alun@texas.com.

Texas Imperial Software is proud of its most recent member, Colin Lester Jones (born 5/17/96) - buy WFTPD and help pay for baby to get some new shoes!

Changes Introduced in Version 1.9

(Minor version changes are at the bottom of this page)

The following features have been moved in this version:

- o File|Security dialog is now under Security|User/Password
- o Logging|Logfile dialog is now under File|Open Log
- o File|Greeting dialog is now under Messages|Greeting

New items on the menu include:

- o File|Close log - stops logging transactions to file, but carries on logging to screen.
- o The Messages menu now contains Greeting (formerly under File), Farewell (for the logout message) and MESSAGE.FTP - when this toggle is turned on, any CWD operation will look for the file MESSAGE.FTP in the new directory, and if it exists, will display it to the user.
- o The Security menu now contains User/Password (formerly File|Security), Host/Net (for restricting which hosts may log in to your server), and Rights (for assigning each user a different set of rights in each directory. Rights will be activated when I write the code to do it, probably in version 2.0.
- o On-screen logging is now supported - this has been the most requested feature since the FTP daemon was first released! Since my internet connection is often flaky, I figured I'd cut down on my incoming mail and actually put the feature in!
- o RMD will not accept a parameter with ':', '\ ' or '/' in it - this way you have to CWD to a directory's parent in order to delete it. This may seem cumbersome, but is a valuable security feature. MKD has a similar restriction.
- o CDUP and XCUP are supported, as is STOU, SYST, REIN.
- o The title bar will display the log file when it is opened from the .INI file.
- o If the backlog of stuff to send is bigger than the socket buffer, it's now expanded continually, and eventually when the information gets sent the buffer will reduce. It'll do this in steps of 4K.
- o I am still finding it difficult to open a file sharable by other processes, so the log file is still locked.

Minor version changes

1.9a - fixed a bug in the asynchronous message handling for trumpet users.

1.9b - fixed a really bad security bug that allowed unprotected access.

1.9c - fixed a tiny bug in the directory listing, that made it list times wrongly. Also made the help file prettier!

Acknowledgements

I would like to acknowledge the following people for their help in producing this product. They are listed in more or less random order.

- o The developers of the Winsock specification.
- o Peter Tattam and all at Trumpet, for producing a damn good Winsock implementation.
- o Fred Whiteside (of Beame & Whiteside) for helping me find a version of the crypt function. And Carl Beame for being helpful.
- o Those first few registrations that made all the difference, and kept me going
- o Chip Sparling, Bob Quinn, and all at FTP Software for sending me a PC/TCP Developers Kit in such a short time.
- o Bob Quinn for changing the way PC/TCP worked so that developers like myself have an easier time of it, and for producing the Winsock spec clarification document, which helped me realise all the mistakes I had made. (And some of the ones Winsock stack developers have made!) If you want to write good solid Winsock code, read Bob's book "Windows Sockets Network Programming" (and see <http://www.sockets.com>!)
- o Steve McCarthy and everyone at SunSoft, for helping me find out how to deal with problems caused by old versions of PC-NFS. (The trick is to UPGRADE!)
- o All of my 6500+ registered users, and those using my program under site licences! Without you, I would have stopped work on this program long ago (it's far exceeded what I personally needed it to do).
- o The beta testers - now too many to mention.
- o And, much importance and a significant drum roll to my wife, for putting up with the amount of time I spend on this program, and for helping me to keep the business side working.
- o My last employers, TEAM Development, for being very understanding about the fact that I had a separate income. (You'd be surprised how many other companies view this as an insult!)
- o SHARP, for their AN-200SC video converter - \$500 to allow me to watch all my English videos over here, even though you can't get technical support for it when it goes wrong.
- o The IETF FTP extensions Working Group, for providing me with technical insight, and a forum for my own technical ramblings.

What is FTP?

FTP is the Internet standard File Transfer Protocol. The WFTPD program attempts to provide the most useful and most often used elements of the daemon (server) side of this protocol, as described in RFC # 959, and amended in RFC # 1123. I believe that I'm strictly compliant with both RFCs. In addition, I am actively participating in the FTP extensions working group mailing list, to define the next version of FTP. You'll note my name in the "Acknowledgements" sections of a few of the recent RFCs that define additions and extensions to FTP.

What is a daemon?

A Daemon, also referred to as a server, is a program which will run in the background carrying out certain tasks while the main work of the processor carries on in the foreground. A client program, often on a different computer connects to the daemon, to tell it what to do.

The term derives from a word meaning a 'helpful servant', and unlike "demon", has no intrinsic connection to either good or evil. The word is supposed to be pronounced "day-mon".

Doctor Who and the Damons is a completely different story.

Look at the How To Register section in this file. Please be sure to use the order forms provided in this section.

Generally I ask for \$700 for each block of 100 licenses (or \$800 if not prepaid - i.e. ordered by credit card or company Purchase Order), of whatever version of WFTPD. Site licenses for WFTPD Pro are of course available at a commensurately higher price - please contact me for details. This does not include the cost of source code. If you want to buy source code, please send me email, or contact me at the address in the [How To Register](#) section in this file.

Firstly, you lose the limit on the number of files that can be transferred in a single session. You can also modify the greeting and farewell messages. If you have sent me an Internet-reachable e-mail address on your order form, you will be added to a mailing list, and kept informed of all new versions during your maintenance period. On the more esoteric side, you get a good feeling, and you encourage me to work on new versions and fix bugs.

Things mostly paid for by WFTPD:

Last year's tax bill

My wedding and honeymoon

A new computer (so I can develop faster, and so I can make Win32 versions)

Another new computer (for the Alpha AXP version - so the Alpha users need to register lots to pay for this!)

Things I hope (perhaps unrealistically) to be paid for by WFTPD:

Some of the expenses naturally incurred by having a baby (Colin Lester Jones, born May 17, 1996)

A living wage, since I have been working full time on WFTPD since August 1996.

As a final note, please remember that we price WFTPD specifically so that we can make a living, not a killing. We are not the next Microsoft, and we can't afford to rent the outhouse in either of Bill Gates' or Michael Dell's houses.

Registered users with current maintenance are informed of updates and bug fixes whenever they are made, and these new versions can be downloaded free - there is a charge of \$5 imposed for delivery through regular mail. Users registered before July 1996 will have their "first" year's maintenance start at the end of July 1996; users registered after that date will have a free year from the end of the month in which we ship the software to them. When we decide to implement fees for maintenance, we will give each user three months notice of when their maintenance is due.

You should be able to find news about the current version of WFTPD, along with links to download it, from the new Texas Imperial Software web site at <http://www.wftpd.com/>

The unregistered shareware version should always be available from our main web site, or our FTP server [ftp.wftpd.com](ftp://ftp.wftpd.com), or the SimTel archives - this version should go at <ftp://ftp.simtel.net/simtelnet/win3/winsock/wftpd241.zip> and <ftp://ftp.simtel.net/simtelnet/win95/winsock/32wfd241.zip>. I also try to put the file onto [ftp.winsite.com](ftp://ftp.winsite.com), [ftp.demon.co.uk](ftp://ftp.demon.co.uk) and [sunsite.unc.edu](ftp://ftp.sunsite.unc.edu) - all standard Winsock sites.

You've fetched down the winsock.dll file from ftp.ftp.com, which only works alongside the full TCP/IP package produced by FTP Software, called PC/TCP. This Winsock is *NOT* free - you should either find one that is, or buy one of the commercial stacks that support Winsock programs. Heaven knows - maybe you could even buy FTP Software's PC/TCP!

You are using an old version of PC-NFS. I believe that this is a problem with version 5.0, but it certainly is a problem with previous versions. Please contact your dealer, and get the new version, or whatever patches might exist.

If you are using FTP Software's PC/TCP, this is something that was fixed in mid 1994. You might want to check the FTP site ftp.ftp.com to see if a new version of winsock.dll is there that will fix your problem. Note that this winsock.dll will only work with FTP Software's PC/TCP stack.

A similar bug is apparently inherent in the Winsock supplied with Spry's Internet in A Box package.

Not necessarily - it's entirely possible, since the Winsock specification is at times a little vague (as are all specifications), it's possible that there may be some parts of the spec that I read in a different way from the people who developed your Winsock stack. Winsock developers are working hard to make their stacks work with the most frequent of the disagreements, and I am also ready to change my program to work wherever it turns out I have a misconception.

If you think there may be a problem with your Winsock stack, please email me, or contact technical support for your Winsock stack. Please note that I will not allow bug reports to degenerate into each side blaming the other - if your Winsock stack providers will not work with my software, I will attempt to work with them, and produce incontrovertible evidence one way or another. In an argument with a Winsock stack provider, if we both blame each other, at least one of us loses a customer. I'd like for us both to keep the customer, and to get more through word-of-mouth advertising (which is cheap and efficient)

This is a common misconception - my program is designed to work with any Winsock stack that implements version 1.1 or 2.0 of the Winsock specification (it has a slight alteration to work more efficiently with version 2.0). Most Winsock stacks on the market implement version 1.1 of the spec, but to differentiate between different versions of their own stack, they give different version numbers to each copy of the stack. Hence, PC-NFS may be at version 5.1, while PC/TCP might be at version 2.31, and Trumpet Winsock may have version 2.0 rev. B (Note: all of these versions are old and have been superseded - they are just given here as examples). All of these versions implement an interface that is compatible with version 1.1 of the Winsock specification.

Not unless you are willing to spend some money - I've made sales of the source code to a couple of companies, and it's a little unfair on these people if I offer the code free to anyone else, or if I sell it for significantly less. Feel free to contact me if you wish to discuss buying the source code. Bear in mind that the cost of the source code represents partly the amount of time put into developing it, and partly the possible loss of income from you selling derivative copies.

Open Source is a noble goal, and I've certainly contributed myself to the release of Open Source software in the past. However, I do need to make a living, and while it's been shown that some companies can make a living providing technical support for products where the source code is freely available, I prefer to make my living with a product that shouldn't need to have technical support. As such, technical support is currently freely available, whereas the program is not.

The greeting and farewell messages in the unregistered version of WFTPD are not meant to embarrass anyone, nor to cause any problems. It is our intent that you use the unregistered version of WFTPD solely to test its suitability to your task, not to have customers or users outside of a test group connect to you. We have tried to pick restrictions and messages that make WFTPD testable, but not fully appropriate in a public or corporate setting.

As another interesting point, I've had many people tell me that they registered specifically because they found the message an amusing and appropriate way to encourage registrations.

Since the messages and restrictions were added, registrations dramatically increased - since these changes in the unregistered version make for more registrations than they lose, it is simply good business sense to keep them. Since almost nobody registered before the messages were added, I must assume that anyone who won't buy the software because of the messages also wouldn't buy the software if the messages were absent.

I'm not really sure what's going to be the big thing in the next version - it all depends on how much time I am able to devote to it.
Also, [Look Here!](#)

Well, this is a tough one. I've generally tried to put out one release every six months. Occasionally, the period between releases is shorter or longer. Keep an eye out for news at my web site, at <http://www.wftpd.com>.

My current (and final) mail address is alun@taxis.com.

I know this is all confusing, but now that I have my own domain, this shouldn't ever change again. Mail sent to my old addresses should be forwarded to my current address.

I used to use the Trumpet Winsock under Windows 3.1 at home - this can be fetched from many public FTP sites. It costs \$20 to register, and seems to be pretty robust. The canonical site is <ftp.trumpet.com.au> or <ftp.trumpet.com>, but it is very difficult to log onto, because of its high traffic.

Most often, though, I use Windows 98, Windows 2000 or Windows NT 4.0 and their own support.

At one time, I used the Microsoft VxD TCP/IP stack, code-named Wolverine, which is available for free from the FTP site <ftp.microsoft.com> - last time I fetched it, it was in directory `/peropsys/windows/public/tcpip`. This is a fairly solid stack, and promises to be the basis of TCP/IP support in future versions of Windows. Currently, this VxD stack works only on Windows for Workgroups 3.11. The Windows '95 TCP/IP implementation is very good, and with the addition of a scripting package for dial-in SLIP/PPP connections, is certainly an acceptable implementation. Be sure to download the kernel patch from <http://www.microsoft.com>, if you are using an older Windows 95 system.

Also available is the PC/TCP stack, from FTP Software, PC-NFS from Sun, Chameleon from NetManage, and several others. Check in computer magazines for more details - look under "network software". If the advert doesn't explicitly say that it's Winsock compliant, call the company to verify before buying it. WFTPD will only work on Winsock compliant stacks. Also, you could try reading the newsgroup "alt.winsock", which regularly has discussions on the various Winsock implementations. As with all newsgroups, it is helpful to just read the newsgroup quietly (known as "lurking"), since there is often a posting of answers to Frequently Asked Questions (FAQ), and some people get pretty annoyed if you ask a question that's already answered in such a document.

This is much easier in version 2.1 and later of the software - as an example, the URL "ftp://your.host.com/file.htm" refers to the file "file.htm" in the anonymous user's home directory. Anyone who had URLs pointing to earlier versions of WFTPD than 2.1 may need to rewrite their links.

The change in WFTPD 2.1 that was made to accommodate this is the ability to restrict a user to his/her home directory, so that directory is seen as the root of the file system. To read more on this, visit the help topic on [The User/Password Security Dialog](#)

This is usually due to a blank user entered in a previous version of the software (the current version will not accept a blank user name). To fix this, you will need to edit your WFTPD.INI file, and in the [passwd] section, you should find an entry beginning with an '=' sign. Remove this line - it's not connected to any user - and your problem should go away. The current version of WFTPD will automatically remove these entries if it finds them.

I've written one other Winsock program so far - "cooksock", which was a cookie server. This reads in a file of "fortune cookie" type quotes, and for each connection received on port 17 (the well-known port for quotes), it sends out one of these quotes and then disconnects.

I don't think that a telnet server would be worth the effort it would require, since there are a lot of awkward decisions to be made as to how best to represent the DOS screen over a terminal line, especially when you cannot guarantee what type of terminal is at the other end.

There are other mail and web servers out there, and I'd be at quite a disadvantage trying to beat any of those.

I've been giving some consideration to writing a news server, but there's just no way it could happen with my current time constraints - maybe later this year, when I start work for myself, I shall have more time to start on this.

We also have a TFTP server in beta, since we get a fair number of requests for that. (TFTP is a very different protocol from FTP, despite being the "Trivial File Transfer Protocol"). Visit our web site at <http://www.wftpd.com> for details and news.

Frequently Asked Questions

Select the question you would like to ask, and the answer should pop up.

(Don't feel embarrassed if you have to ask any of these questions - if lots of other people hadn't already had to ask them, they wouldn't be here. And please email me at "alun@taxis.com" if you don't understand the answers, or if you have a question that doesn't seem to be represented here. Who knows, it may be a question that I forgot to put here, or one that will be in a future list?)

Registration and contact information:

Q. How Do I Register?

Q. What Does Registration Get Me?

Q. What e-mail address can I reach you at?

Q. How do I get a new version of WFTPD?

Q. What do you offer in the way of site licences?

Q. I'm interested in learning Winsock programming, or using your program commercially - can I get a copy of your source code?

Q. What Winsock stacks do you know of that I might fetch?

Q. Have you written other servers? Can you write a [telnet, news, web, mail] server?

Q. How do I find your current email address, or the current version of your program?

Q. Why haven't you processed my order yet - did you receive it? I sent it to the address in an old copy of the help file - will it reach you?

Q. How much does it cost to upgrade from my registered 16-bit version to the 32-bit version?

Shareware concerns:

Q. Why is the evaluation version of WFTPD 'crippleware'?

Q. Why do you have a fixed greeting message in the unregistered version? (*"My customers don't appreciate seeing this when they log in, and some of them are very influential people!"*)

Technical questions:

Q. When I run your program, a dialog says I am missing PCTCPAPI.DLL - why?

Q. My server only allows one connection, before I have to restart it - why?

Q. Why can I only transfer about the first 32k of all files, or not transfer anything at all?

Q. Is my Winsock stack faulty, since it won't work with your software?

Q. You say you require Winsock version 1.1 compliance, but my stack is version 1.0. Where can I get the updated version?

Q. Why do I get "WSANODATA - no service record" warnings on starting WFTPD?

Q. How do I set my FTP server up for Mosaic / Netscape / Cello?

Q. I tried to pull down the list of users, but I don't get some of the users I know I've added - why?

Q. Is WFTPD multi-threaded? Is a multi-threaded server better than one that isn't?

Q. Why does WFTPD say it can't find my user's home directory?

Q. Why does WFTPD tell me I can't run it in DOS mode?

Q. How do I change the port WFTPD listens on?

Q. Why do I get "Invalid Page Fault" messages with WFTPD?

Q. Why do I get a message "WSAEAFNOSUPPORT"?

Q. Does WFTPD work on Windows 2000? Windows NT 4.0? Windows 98? or on the latest Windows beta version?

An eye to the future:

Q. What's going to be in the next version?

Q. When are you going to ship the next version?

Q. What's going to be in the "professional" version, and how much will it cost?

Q. How do I make WFTPD run as a service under Windows 2000 / Windows NT?

Q. How do I make WFTPD run as a service under Windows 95 or 98?

Look for these features soon...

Please note that none of these features have yet been written or designed, and some of them may not yet make it into WFTPD. Please tell me which features you'd like to see. If there are other features you would like to see, please email me, and I will either add them to the wish-list, or explain why I don't think I want to implement them. Sometimes people suggest things that surprise them in their consequences - one user suggested a feature that his system administrators told him would enhance the system security. I was able to explain to him that implementing the suggestion would actually lead to a decrease in system security.

(The ordering is most definitely not indicative of preference)

Suggested Features (the "Wish-List") If there are other features you'd like to see, email them to me at "alun@texas.com" :

- o Access limited at various times to different numbers of users
- o Different limit on number of Anonymous users
- o Configurable limit on number of transfers per login or user.
- o Tidy up on-screen log handling - perhaps allow access to the full log file?
- o MESSAGE.FTP's name should perhaps be changeable, and it should not be PUTtable.
- o Verify authenticity of Zip files on upload (tricky, but who knows?)
- o User count displayed on iconised description
- o Socket flush - for use when you know there's no-one logged in, and you want to flush any remaining idle sockets (theoretically unnecessary, but there will always be bugs) - for now, you can just close and re-open the program.
- o Greeting/Farewell message box should use a fixed-width font, to allow better design of greeting screens.
- o Use Windows 2000 / Windows NT's user name and password information (although this would be a security violation, we still get many requests for it) WFTPD Pro version 3.0 will have this functionality.
- o Have an option to require anonymous users to enter valid email addresses, or perhaps a user-specified format of password. Again, not a good idea to implement, but we get too many requests to completely ignore it.
- o Use a B-Tree based database file for users and rights, instead of the INI file - this will allow for many thousands of user Ids. [If you run up against the limit in size of the INI file, please note that WFTPD Pro uses the registry, and does not have the same limitations]
- o Virtual directories - like links, but only visible through WFTPD.

Bugs (or mis-features) to (try and) fix:

None so far with version 2.41. Please report any bugs you find to bugs@texas.com

The "Rude" Greeting Message

The message that we are talking about, in case you forget, is:

This FTP site is running a copy of WFTPD that is NOT REGISTERED

Shareware can only improve if supported by its users.
The easiest way to support shareware is to register it.
WFTPD costs only \$20 to register.

To register this program, or receive new details on it, send email to alun@texis.com (Alun Jones), or snail-mail to Texas Imperial Software, 1602 Harvest Moon Place, Cedar Park TX 78613-1419 USA

As added incentive for the site owner to register, you will be restricted to five (5) transfers - to get more transfers, please re-login.

Please note - Alun Jones is only responsible for the software that this site runs, and is not responsible in any way for either the content of this site, nor its location on the Internet.

The only complaint I treat as valid is the complaint that you have not yet had time to send me the money, or that I have not yet responded to your registration.

The basic point is that WFTPD is **NOT** free software - it is shareware, which means you are welcome to distribute the unregistered version, and you are welcome to try the unregistered version out to see if the registered version is likely to fulfill your needs. I would hope that you are either not likely to test unregistered shareware on any business clients, or that you keep them fully informed that they are participating in a test of unregistered shareware. I doubt that you will find any test users that will protest at the simple message above.

What's new in release 1.95

I think I've fixed the following problems:

- o ABORting a transfer should work properly now.
- o Leading spaces are not stripped from messages stored in the INI file
- o MESSAGE.FTP is now displayed on all logins.
- o "GET *.EXE" (NOT MGET) no longer produces "Internal Application Error".
- o The scrollbar always shows up, even if WFTPD is started minimised.
- o Memory leaks on closing WFTPD should be (mostly) fixed.
- o Memory hogging is reduced, and logging is much improved, because I stopped fighting the system!

I also enabled these new options:

- o Use the port address in the services file (if present), otherwise default to 21.
- o PASV mode support (for Mosaic).
- o Fetching files with full path names while maintaining security (for Mosaic).
- o The Security options "Enable Security" and "Allow Anonymous" have moved to underneath the "Security ; General" dialog from the "Security ; User Security" dialog.
- o The "Security ; General" dialog has an option to limit the number of users that can connect. (Setting the limit to 0 makes it unlimited. If you want to disable logins, simply close the FTP daemon!)
- o All "Add/Alter" buttons now read "Update" so novice users can understand.
- o I have tightened up the "PUT" functionality, so that hopefully it'll cause fewer problems.
- o Directories don't show up any more in NLST results - only regular files.
- o LIST and NLST results are now sorted before being output.
- o LIST commands can no longer list directories you don't have access to (part one of beefier security)
- o If users are added with no password, they get placed properly into the [passwd] section.

I have completely written the networking subsystem, so PUTting has sped up, and the greedy option now has no effect. GET commands no longer tie up the machine, either!

This version seems to work well with Beta 14 and above of the Trumpet Winsock - Peter Tattam has fixed some messaging problems that were causing me trouble.

About the author

Alun Jones is an English programmer, who married an American PC specialist in October 1994; together they have a son, Colin, born in May of 1996. Alun is very pleased that there have been some site-licenses that allowed him to get married and go on honeymoon without going too deeply into debt. One particular source license allowed him to buy a new machine, a new compiler, and a new operating system, so that he could produce both a 16-bit (Windows 3.1x) version and a 32-bit version. Recently, we have even purchased a Digital Alpha based system, allowing us to provide a version of WFTPD and WFTPD Pro for that platform under Windows NT.

Alun appreciates all user feedback, and is smart enough to know that if he can fix a bug, it'll help him make more money because it's easier to sell a better program. What he doesn't appreciate is when people complain about his program (especially in public forums), without first checking with him as to whether he might have already fixed the problem. This is especially annoying when the bug referred to was fixed several months before - you have been warned! J

Since August 1996, Alun has been working full time on WFTPD and similar quality networking programs. This means he is able to undertake customization work, and possibly some consulting. For consulting and customization, call Alun or fax him at (512) 378 3246. Please note that our business hours are Monday to Friday, 9am - 5pm, Central USA Time. When we are on vacation, we will post such a note on our web site, and on the answering machine, and the email address will respond similarly. All emails, phone messages and faxes will be received and looked at once we return from vacation. Some may be addressed while we are on vacation, but we do not promise anything on that. Regular mail can not be handled while on vacation.

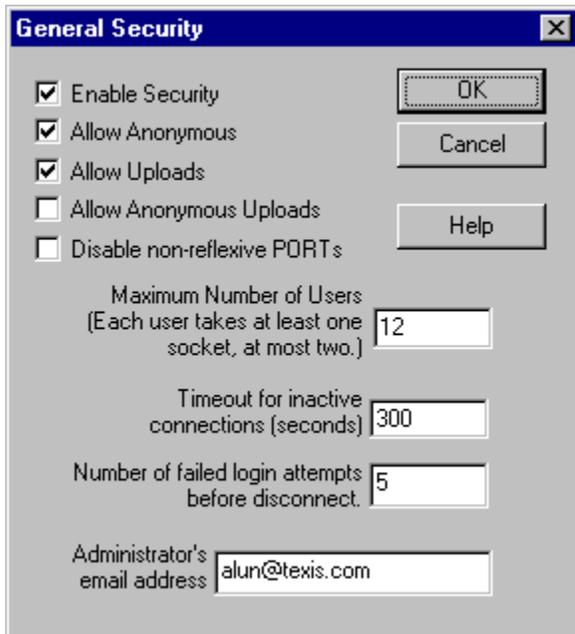
What Alun *really* hates is Barney - the bloated purple Styrofoam dinosaur. Kids should be encouraged to imagine, yes, but they should lead their own imagining, not have it led by some overweight Jurassic remnant with an apparent IQ lower than room temperature.

About the author's wife

The author's wife, Debbie, now works full-time at Texas Imperial Software, having left her job as a Windows NT Systems Administrator in October of 1999. Debbie is a Microsoft Certified Systems Engineer and Microsoft Certified Trainer, and works as a contract trainer teaching Microsoft Official Curriculum in addition to her duties supporting WFTPD. Her latest skills include SMS 2.0 and Windows 2000. With her background as a BBA, she brings valuable business savvy to add to the rather more technical skills exhibited by her husband. Be warned - those invoices will be paid!

Debbie *really* hates Information Super Highway metaphors. If the computer people of America rise up together, we can beat this thing! Please don't perpetuate these silly, ignorant-sounding analogies.

General Security Dialog



The General Security dialog is accessible from the Security menu, and has five items of interest, besides the usual **OK** and **Cancel** buttons:

"Enable Security" - when checked, WFTPD will ensure that nobody logs in without entering a valid user name, and its associated password, and will check accesses requested against the rights database. If this box is not checked, users may log in with any name and password whatsoever, with full access to all areas of your disk.

"Allow Anonymous" - Anonymous FTP is the term for logging in to an FTP daemon as "anonymous", or "ftp", at which point you are asked to enter your email address as your password. Hence, anyone can log in to your machine when this option is checked - they do not need to know a password, but they will be restricted by your choices in the [Users / Rights Security dialog](#). [It is traditional to use your email address as your password when anonymously accessing an FTP server, but in recent years, the spam problem has become so bad that any time you pass out your email address is a worry for many people]

"Allow Uploads" - when checked, all users will be allowed to upload files to your machine. When unchecked, WFTPD will make your site "read-only". Note that "uploads" in this case also includes other actions that require write-access to your system - creating directories, deleting files or directories, renaming them, etc.

"Allow Anonymous Uploads" - When checked, anonymous users will be allowed to upload files (so long as **"Allow Uploads"** is also checked, and obviously, they can't log in if **"Allow Anonymous"** isn't checked. Also, rights assigned on the [Users / Rights Security dialog](#) are taken into consideration). When unchecked, anonymous users will only be able to download files, no matter what rights they may have been given. Please see above for descriptions of other actions considered "uploads".

"Disable non-reflexive PORTs" - added in version 2.30, this switch is disabled by default. When checked, each PORT command received by the FTP server will be checked to see that its return address is the same as the IP address of the client that is requesting it. If this option is disabled, WFTPD could be used by a hacker to (for instance) send mail to any SMTP server to which you have access, and which the hacker knows about. Furthermore, that mail will appear to have come from your computer. It is this author's opinion that good SMTP servers will not accept such a connection from an FTP server, for many reasons including the fact that WFTPD always tries to connect on PORT commands from its own local port number 20. The server should recognize this as being an unlikely source port for an email message, and disable the connection. Enable this switch if you really want to tighten down on security. WFTPD will not under any circumstances connect to any reserved ports (i.e. those with port numbers <= 1024). If you need that functionality, you will find it in WFTPD Pro. The reason is that such a feature is liable to be a violation of most security policies, and so we only allow it in the product that is aimed at more security conscious users.

"Maximum number of users" - this is the largest number of users that may be logged into your server at any one time. Each user requires one socket for his command and output connection, and each time they transfer a file, or do a directory listing, they will take up another socket for the duration of that transfer/listing. By restricting the number of users that log in, you will make sure that your machine runs smoothly (it has less to do!). This will also please those users that can log in, since they will not

face messages telling them they cannot transfer a file because of a network error, when there are several users on at once.

Entering 0 as the maximum number of users sets the FTP server to accepting any and all incoming connections. (If you want to set it to not allow any logins, simply close it down!)

"Time-out for inactive connections" - if a user stays logged in to your server, but does nothing, he's wasting one of your sockets, and hogging system resources. Similarly, since TCP/IP connections don't have a "heartbeat" [a signal transmitted and acknowledged at regular intervals when no other traffic is present], there is no way to tell the difference between an idle connection and one that has been unplugged. If all connections that have been 'idle' too long are disconnected, then you remove at a stroke those users that are hogging resources unnecessarily, and those that have become disconnected. For such a purpose, you will want to put a value in here - often about 5 minutes (which is 300 seconds) should be sufficient for most users, and is the default when WFTPD is set up. Once this period of time has gone by on any connection with no activity, the connection will be broken, and the user informed that they have been disconnected due to inactivity. If you put a 0 here, then no one will be disconnected for being idle for too long. Try not to put something like 15 seconds, since that doesn't leave anyone time to type commands in! Try it out yourself from a command line FTP client, to check that things work. [Of course, you may want to do this to allow web browsers to access your site, but not ordinary FTP clients] Note that such disconnected or idle connections may leave files locked until the connections are closed. If you have no idle time-out set up, you will probably need to close and restart WFTPD every so often just to clear these locks.

Number of failed login attempts before disconnect. - In compliance with the draft RFC on FTP security issues, we now pause 5-10 seconds on a failed login (i.e. when the user name or password are not found in our database), and after a configurable number of such failures, we disconnect the offending client. The initial value for this setting is 5. As with many other WFTPD settings, setting it to 0 will disable the feature.

Administrator's email address - this is only used in the %E [magic cookie](#) - it is intended to be used to provide your users with an email address to contact should they require any assistance. Of course, you can put any text here you like, and it will be displayed in place of %E in any messages.

Many people use the term 'crippleware' to refer to software that is restricted in some way in its unregistered form, and some people feel that 'crippleware' should not be encouraged. I also feel that this *should* be unnecessary, but for reasons explained below, I have decided that I have to restrict the shareware version.

The full story:

Several years ago, I wrote an HPGL to Postscript translator, HP2PS for short. It apparently served its purpose rather well, and I decided to release it and ask that people simply send me some portion of the money they believed it was worth to them. Over three or four years of answering email, fixing bugs, etc., still no one had sent me a penny. The final straw came with two people from a Research Laboratory associated with the Space Shuttle phoned me to discuss a couple of bugs and suggested features. They offered to pay me once I had fixed the bugs and added their features, and so I set to work. After finally fixing their bugs, and sending the new version off to them, they now don't return my phone calls. What a surprise! [Please don't be surprised or offended that I will ask for a purchase order *before* I get started on **any** customization work.]

Then came WFTPD - in October 1993, I had something that I thought other people could use, so I put it out on the net, with no restrictions, and a registration fee of \$20. In the two months that followed, during which I added many features, two users registered (although many more thanked me for the free program). I then decided to restrict the program as you see it now, and since then I have had on the order of more than one new registration every day - each site license is counted as one registration here.

My point here is that if I had not restricted the software, I would have received so few registrations that I would have given up working on it, and there would not be a WFTPD program today. And if Nxxxxxxx Research want to register WFTPD, they can pay in advance this time, please.

What's New in Release 1.96

Netscape & Mosaic compatibility checked - everything seems to work okay now.

RFCs 1123 and 959 are now complied with - this should mean your client can talk to me quite happily. If not, there's a chance your client software may not have full compliance with these RFCs!

The NLST command lists directories as well as files, so all your Mac users will be happy.

Each new connection results in a log message (If you log Logins), detailing the IP address of the client connecting to WFTPD.

3D Controls are added - you'll need to have a copy of CTL3DV2.DLL in your WINDOWS\SYSTEM directory and nowhere else!

My address has changed once again - now, I live in Austin.

Two new options on the General Security dialog - "Allow Uploads" and "Allow Anonymous Uploads" - these should be self explanatory, but are explained in more detail under the topic for the General Security Dialog.

MESSAGE.FTP bug fixed - there are now no spurious blank lines, or extra numbers sent in the message.

The CWD command now accepts strings ending in slashes. (DOS doesn't!)

The bug whereby the user count was often exceeded with no users logged in has been fixed.

The occasional hanging of the FTP daemon has been traced, and fixed. Hopefully this can be left running for weeks without causing trouble.

A time-out facility has been added. The server is only fully RFC 1123 compliant when the time-out value is set to a non-zero value (setting it to zero simply disables the time-out). Please use this feature, since it means that people will not be able to clog your server, nor will crashed connections keep hanging around.

Most of the response messages have been put into the resource portion of the executable, so that you can modify them with a resource editor. If you edit these strings, please bear in mind that sequences beginning with a '%' character are special to C, and they should not be altered or transposed. If you do this, the program will crash.

The Logging options have been moved to their own separate dialog - now, you can enable/disable several options without having to keep opening the Logging menu.

The log file itself is now sharable while the program is running, so you can read it in other programs while WFTPD runs!

On closing WFTPD down, all transfers are interrupted properly, and all control connections are closed safely.

Entering a command "dir c:\dos" is now the same as "dir c:\dos*.*" (assuming the directory c:\dos exists, that is!)

Above all, this version should be much more stable than 1.95, which I admit was put out in a bit of a hurry.

Prior to version 1.95, I simply used port 21 in TCP to listen for incoming FTP connections. Many people asked to be able to start the FTP server listening on alternate ports - for example, to get around some firewall restrictions. So, I figured, if I ask Winsock what port it's been told "ftp" is, then users can easily change that value (usually in the "services" file). It now turns out that many of you do not have this file, or have not got it in the right directory. Each Winsock is different, but the Trumpet Winsock (which I get more of these reports on) requires the "services" file to be in the same directory as "winsock.dll". It may also benefit you to know that the protocol and hosts files should be in this directory too, on Trumpet Winsock. If this information makes no sense, please read the instructions that are supplied with your Winsock stack, and if that does not help, please contact your Winsock supplier, since I don't know anything more than this.

You can also use the [command line parameters](#) to choose a different port to listen at.

What's New in Version 2.02

2.02 adds more stability to version 2.01, fixing a number of small problems that users had noticed (mainly with Netscape, who won't answer my emails). It also fixes a few problems that were noted while porting to 32 bits, and which were mostly to do with making sure the program could run longer without hitches. Hopefully now, all "WSAENOTSOCK" messages in Trumpet will have disappeared (although generally, they are little to worry about), and all unused sockets will be closed, allowing the server to run for longer periods of time. Also fixed in this release is the whole host/net security thing, which now works fully as documented.

2.02 is the first release of the 32-bit version of WFTPD.

2.01 is a security update to 2.00 - 2.00 had a bug in it that allowed users to log in without entering passwords. 2.01 does not have this flaw. Below is a description of the 2.00 new features.

Well, quite obviously, the Rights Security dialog, along with its attendant increase in security is the new item that's in right now. I've worked on the PUT procedures - now it only logs a PUT once, instead of three times. There's a little more work in this area still to be done, but that may fix most problems.

Context sensitive help should now exist for all dialogs - try it with either F1, or the Help button on each dialog. The About box should work properly now, too.

The scroll bars now work properly, and text output should be cleaner.

More work on putting - STOU now works as it should (ignore file name, and generate a random one)

Users now cannot log in if their home directory does not exist.

The status bar now displays the current count of connected users and open sockets, so that administrators may decide whether the system needs to be rebooted.

Why Shouldn't I Log Winsock Calls?

The main reason that you shouldn't enable Winsock Call logging is that it takes up an awful lot of space with messages that basically say "Status OK at some line or other". Another reason is that these messages can occur very frequently indeed, and you will quickly fill your log file with messages that make no sense to you if you don't have the source code. Also, because it now has to spend time logging calls that were previously finished very quickly, you will slow your server down to a crawl, and also the machine that it runs on!

The only reason this option is here is to assist the author in tracking down specific problems that you are experiencing - even then, many problems can be traced without even having to try the Winsock Call logging.

How do I get up to date information on you and WFTPD?

The simplest way is to register and include an email address with your registration - then, I'll send you email announcing each release, and how to get your copy.

You can also check out our web site at <http://www.wftpd.com/>

To find the newest shareware copy, you can also look in the SimTel archives, whose main mirror site is <ftp://ftp.simtel.net/simtelnet> - you'll find WFTPD in the Winsock directory under either win3 or win95.

To find my current email address (which should always be **alun@taxis.com**), and my mailing address, simply use a 'whois' program (accessible from most UNIX shell prompts, and also available as a Winsock program at SimTel), and ask it for **AJ11** - that's me. (Note that's the letters "AJ" followed by the number eleven) Or, you could just ask it "whois taxis.com" or "whois 'Texas Imperial Software'".

We recommend that anyone wishing to run WFTPD as a Windows 2000 / Windows NT service should look into WFTPD Pro. Current information on WFTPD Pro is always available at our web site <http://www.wftpd.com/>

Here's an excerpt from an email, from our user Sebastien Caisse, offering a detailed explanation of how you can make WFTPD run as a service on Windows 2000 / Windows NT, if you really insist on doing it - please note that **we can not offer support on this method of running WFTPD**:

«Note that I expect that you know a bit about what you will be doing at least to a point that you know how to find a file in a certain directory, don't be offended by the simple remarks I put in, since some of them would have been helpful to have when I installed it, and others have been asked to me before. All "" are NOT included in file name or whatever unless specified. [] are used to specify text that may change depending on your computer.

«Step 1: Make sure you have "SRVANY.EXE" and "INSTSRV.EXE"! It took me some time to find out where it was, but I finally found it, (although to all NT veterans this is an easy answer, this is going to be helpful to those less acquainted to it) it's in the Resource Pack. Now I didn't get at first what this Resource Pack was all about until I bought it, a 250\$(can) package from Microsoft, with which they deny all responsibility, and officially shouldn't even support it (yeah, Microsoft, gotta love 'em!). You can find the svrany once you install the Resource Kit on your server (Tip for the 3.51 users who didn't buy it yet, and don't really wanna buy it anyway: Only buy the upgrade, it comes with the CD and both the svrany and instsvr programs are on it, and only costs a 5th of the price). Notes: Make sure svrany and WFTPD is on your local hard disk, or it won't work! (well, actually that's what I've been told, I never actually tried it) So now you have anysvr, but don't know exactly how to use it, since all the documentation I saw were so flaky, well, here's it comes:

Step 2: Install svrany as a service:

Go into your DOS prompt, and type "instsrv [Service_Name] [SVRANY_Drive]:\[SVRANY_Dir]\svrany.exe"

Reminder: INSTSVR is found in your Resource Kit directory. I usually call my service "WFTPD Server" :> (note that the "" are needed since there is a space!)

/ Note: I installed my service and used another account than the System, and don't remember what happened when I tried it in System account since I now have a permanent user for it, I guess I had a problem with using the System account and resolved to this solution, so I will assume that it is unsafe to use it */*

Step 4: What next?

I would recommend creating a user specifically designed for this service instead of using the System account, so go create yourself a new user! The user needs to have access to all the directories you want WFTPD to serve, and make sure read/write rights go accordingly, and I don't suggest giving special read/write rights just for that user, or you'll be lost in user access hell, I personally just gave him a normal user access...

/ If they don't know how to build a user, then the chances are they're not an administrator -- would anyone else then an administrator be able (have access) to set up a service? I don't think so... */*

Step 5: So you installed svrany as a service, but is it done?

No, you need to specify how it starts and link it to the user...

Go into your Control Panel, select Services, click on your service, then click on "Startup..." Now select Automatic (this is why you wanted to install it as a service right?), then mark the option "This account:", fill out the correct user you want the system to use and of course, fill out the password section accordingly if need be.

Step 6: Yeah, bin there, done that...

A word of warning: you can ruin WinNT while playing in the registry editor. If you stick to what I say, nothing bad should happen to it, but if something bad happens, nobody else then YOU is responsible for it. In any case, I suggest making a backup of your registry, for safety purposes. The Registry Editor is a very powerful tool!

Start your Registry Editor (It's in the directory "[YourNT_Dir]/System32" and is called "REGEDT32.EXE" Go into the HKEY_LOCAL_MACHINE window, then into /SYSTEM/CurrentControlSet/Services/[Service_Name].

Add a Key (Edit | add Key) named "Parameters", then go into this key. I insist, go into this key!

/ If they don't get it, I can't help it... Visibly, quite a lot of people I know created the value not in .../Parameters but in .../[Service_Name] */*

Once you are in this key, add a Value (Edit | add Value) named "Application", which is a type REG_SZ, and the value is the application you want to run, in this case WFTPD so it should look like this: "[WFTPD_Drive]:\[WFTPD_Dir]WFTPD.EXE". Note that the value is NOT case sensitive, but I don't know about the value name/ +s if you add my suggested parameter :) */ some be keen on the value name/* +s */!*

If you want to add command line parameters, then add another value named "AppParameters" in the same key, also of type REG_SZ and put the parameters in the value box.

Step7: Now what?

Well, all you have to do now is start the service or reboot to check if everything is fine!»

The following is taken from one of my users' emails:

FYI, here's how to install WFTPD so that it runs at startup under Win 95 or 98 machines (if they require a network login, like mine, then simply putting them in the Startup group means that it won't be run if the machine is rebooted -- the Startup group isn't processed until after a person logs in!):

1. *Run the policy editor (poledit)*
2. *Select the File|Open Registry menu item*
3. *Double click on Local Computer*
4. *Go to Local Computer/System/Run Services and make sure the check box next to it is enabled*
5. *Click on Show*
6. *Click on Add*
7. *Supply a name (typically WFTPD) and a filename (e.g. d:\network\wftpd) in the spaces provided*
8. *Click on OK, click on OK, click on OK (should now be back at the System Policy Editor window)*
9. *Select the File|Save menu item*
10. *Close the policy editor*

This works pretty well; if my computer ever freezes and I'm away and need access to it, I can just have someone go into my office and hit the reset button.

If the user wants to run WFTPD in hidden mode, they can specify "d:\network\wftpd h" in the filename box.

Note, that to keep the program running while Windows 95 or 98 users log in and out (through the Shutdown menu), you must use the "s" option (And now, they can use the "m" option to run it minimized)

What's New in Version 2.1

(What's new in version 2.11 appears towards the bottom of this page)

From the wish-list:

- ü All users restricted to their home directory should see that as root, so as not to tempt them
- ü Note the current IP address and/or host name on startup
- ü Accept 'SIZE' command, if anyone can find me documentation for it.
- ü Command line option to run minimized
- ü Restrict passwords to eight characters in the entry dialog.

Right Write Rights, Right? - The "Write" right has been split into two rights - "Create" and "Overwrite". "Create" allows you to make new directories and put new files. "Overwrite" allows you to put files with the same name as existing ones, append to existing files, delete existing files, rename existing files, or remove directories. Think of "Overwrite" as being the ability to affect existing files in any way, and "Create" as a polite upload capability. Previous rights entries of "Write" are taken to mean "Create" and "Overwrite", and when edited, will be re-written to the INI file as such. If you want to do this for all entries at once, simply edit the [rights.xxx] section (for each user 'xxx'), and change all the "W"s to combinations of "O" and "C", as appropriate. 'Overwrite' does not imply 'Create'.

Off The Beaten Path - Any user that is restricted to within their home directory will no longer be able to see the directory structure above their home directory, nor will they have to enter that directory structure when passing an absolute path. This allows URLs on Web browsers to work more as people expect them to. If you previously had references to WFTPD through URLs, you will either have to change them to match the way things currently are. You may do this simply by removing the path to the restricted user's home directory from the URL.

Who Am I? - To help you in setting up WFTPD, and in telling your friends what address to connect to, WFTPD will now display on start up your numerical IP address. This is the string of four numbers with dots separating them, and is the address that your users should be able to use, to guarantee connecting to you. I don't try to print out the **name** of your system, since that requires Domain Name Service calls, which may take some considerable time to complete. Besides, the numbers will provide a guaranteed route through, whereas the name may not even exist.

Time And Relative Dimensions In Space - A small bug with WFTPD's communication with WS_FTP has been fixed - when WS_FTP was not set to host type of WFTPD, it would list bad file sizes and dates. This has been fixed in WFTPD, by printing two digits for the hours, even when the hours are less than 10. John Junod, author of WS_FTP, has been most helpful in sorting out this, and other incompatibilities between our two programs. This is why WS_FTP will work very nicely with WFTPD. I recommend that your users run WS_FTP as their client of choice.

Space - The Final Frontier - I corrected the response to the seldom-used "ALLOcate" command, so that Frontier Technology's FTP client would work properly. I guess the "be generous in what you accept" rule should be applied to Frontier Technology's client, but instead I decided to adopt the "be strict in what you send" part of the same quote :) ALLOcate is used in reserving space for a file about to be put, and makes little sense in our scenario. A later version might use the parameter on this command to approve PUTs that are below the size remaining on the disk.

Just In Case - The case sensitivity of long file names in the 32-bit version of WFTPD is now preserved - previous versions forced lower case. Case, however, is ignored when sorting file names in directory listings. FTP-Serv U apparently alters case in file listings - I don't agree with this idea, since there is no point destroying case in a case-preserving system! Note that, since case is only important when creating the name of a file/folder, WFTPD is not case sensitive when retrieving files - only when putting them.

Size IS Important - the MDTM and SIZE commands have been implemented, so that hopefully Netscape will be a little better behaved. It would have been nice if I could have gotten this information from Netscape themselves, but they seem to be unable to respond to my email. Has anyone noticed just how much NCSA Mosaic has improved since Marc Andreessen left NCSA for Netscape? I think it merits close scrutiny :-).

More Speed, Less Haste - yes, another change to make WFTPD even faster - this time, to make directory listings come out faster - many of you have remarked that in directories with a thousand or so files, the FTP client would often time out. This should not happen any more, since I have dramatically sped up the sorting. This should also be a boon to those of you that weren't timing out, but were growing old while waiting for directory listings.

Service With A Smile - for those of you running WFTPD as a service in Windows 2000 / Windows NT (using servany) or 95/98 (using instructions in other parts of this help file), try using the 'm' command-line option. It runs the program minimised. This is, of course, totally exclusive of the 'h' command-line option. You cannot use the two together - it makes absolutely no sense at all.

Thanks for the Memories - No more temporary files when listing directories - it's all done in memory now. This should help speed and reliability, not to mention not leaving tmp files around if the machine crashes.

Share and Share Alike - The sharing is now specifically set to allow reading, but no writing when a file is being transferred - I'd be grateful if you could test this thoroughly for me.

You can stop typing now... - Since encryption on the passwords is limited to eight characters, the entry in the dialog is limited to eight characters, also.

There's No Place Like Home - or at least, if there's no place such as your user's home directory, when you enter it into the User Security (Rights) dialog, you won't be allowed to leave. This should reduce the load on my email.

Help, I Need Somebody! - the help file has been substantially altered to make it easier to find those items that I am most often quizzed about. The FAQ section has been reorganised, as has the section on how to register.

What's new in version 2.11?

The fixing of these bugs made me decide to produce version 2.11, a bug-fix release:

Reading Allowed - on the 32-bit version, the structure used for storing the deny/allow flag was being read into only the bottom 16 bits of a boolean flag, meaning that, under most circumstances, any host referenced in the Host/Net section was denied access.

"This is London Calling" - due to some bad Microsoft documentation in my copy of Visual C++, the 32-bit version doesn't know what time it is - unless you work entirely in Greenwich Mean Time, or the more romantically named "UTC". Later versions of the Visual C++ help files seem to get this point across, which is why I'm at a mystery as to why my copy of the help files are wrong! To be fair, the current Microsoft documentation gives examples to help avoid this error. However, it still gets the file size wrong, stating that the file size is achieved as follows:

nFileSizeHigh

Specifies the high-order DWORD value of the file size, in bytes. This value is zero unless the file size is greater than MAXDWORD. The size of the file is equal to (nFileSizeHigh * MAXDWORD) + nFileSizeLow.

Since my code didn't work this way, but worked when I used nFileSizeHigh + nFileSizeLow, I can only assume something is still up.

To err is human - I guess I count myself as human - I missed a couple of return values on file status routines, which meant that putting a file that didn't already exist on to a server would occasionally (or often, depending on what's in memory on your PC) produce the error "550 Error: xxx is a volume or a directory." A similarly screwed up coding error meant that putting files to, or fetching files from, an absolute path would result in a bad path being generated, which then made for a file error. Both of these bugs should have been fixed by this release, but the very intermittent nature of the first meant that I could not reliably determine whether it was fixed or not.

What's New in Version 2.2

What's new in version 2.20?

Here's the additions that prompted me to produce version 2.20:

Let's try that again - The "resume" capability offered by CuteFTP, or "reget" in ncFTP and many Unix FTP clients is now supported - if you are getting a file, and the transfer fails, or is aborted, you may continue fetching the file from the point that you stopped, rather than having to re-transfer everything that you already have.

Focus, Pinky, Focus! - when changing focus away from the home directory field to other applications, the warning dialog that appears could cause problems, including making the computer unusable. This has now been fixed.

Just Browsing - the directory entry fields are now equipped with a "Browse" button, that will open up a directory browse dialog, to make it easier to find the directory you're looking for.

Up against the wall - Because many firewalls expect me to bind the local end of the socket to a port before opening a connection to a client on the other side of the firewall, I now do this specifically. I am told this may break SOCKS support, but I suspect this to be more due to a bug in SOCKS - you may even find, if you use SOCKS, that everything works just fine.

Wage Slave - Due to bizarre circumstances, I am finally able to quit my current job, and work full time on development of WFTPD and other related projects. To smooth this transition, we are making a few changes in the price structure of WFTPD - mainly, that I now don't care whether you want the 16-bit or 32-bit version, the price is the same, and the zip file that will be sent to you has both versions. Also, I will be charging a yearly maintenance fee. Everyone with valid, paid registrations by the end of July will receive one free year's maintenance from that date, and will be entitled to download the latest version of WFTPD, whether it be a bug-fix or just a feature update. A new product, tentatively to be called "WFTPD Professional" is in the works, and will provide many features that Internet Service Providers, and other larger sites will find extremely useful. This version will be priced higher, and will be developed on a parallel track with the regular version of WFTPD. Starting at the beginning of August 1996, Texas Imperial Software will also be available for consulting services.

Command Line Arguments -

The 'h', 'i', 'm' and 's' options, and changing the listening address or port.

The 'h' option - run "Hidden"

If you run WFTPD with a command line argument of 'h' or '-h' (case is unimportant), then the program will run without an icon, and will not show up in the task switcher. This means that WFTPD cannot be closed without exiting windows, and its options cannot be altered. This is probably only useful for remote system administration, where (to quote an existing user) "you don't want bozos deciding they know how to rewire their systems".

Since command line options are not allowed in the 'load=' or 'run=' lines of the WIN.INI file, if you want to run WFTPD hidden in Windows 3.1, we suggest renaming WFTPD.EXE to WFTPDH.EXE, whence it will run hidden. For 32-bit operating systems, you can get around this by specifying the command line in a batch file, and placing the batch file's name in the "load=" or "run=" line.

There is currently no way to prevent users of Windows 95 or 98 from using CTRL-ALT-DEL to find and kill WFTPD.

The 'm' option - run Minimised

If you run WFTPD with a command line argument of 'm' or '-m' (case is unimportant), then the program will start up minimized. This is designed for people who want to use the program as a [Windows 95 or 98 service](#).

The 's' option - (Service) - don't stop

If you run WFTPD with a command line argument of 's' or '-s' (case is unimportant), then the program will not terminate when it receives a WM_ENDSESSION message. What this means is that when the Windows user logs off, the server will continue to run, which is useful if you want WFTPD to be run as a [service on NT](#). Starting in version 2.34, it's also useful if you want WFTPD to be run [as a service on Windows 95 or 98](#). Note -the 's' option will not by itself make WFTPD run as a service on Windows 2000 / Windows NT - there are other steps to complete the process. Follow the link above for details.

The 'i' option - specify INI file

When running WFTPD as a multi-homed site (by running several copies of WFTPD), it is useful for each home to be using a different INI file (the default is WFTPD.INI, in your Windows directory). By using the 'i' option, you may tell WFTPD to use a specific INI file - the file's complete path (including name and extension) must follow the option, with a space between the option and the filename.

Changing the listening address or port

You can also tell WFTPD to listen to a different port and/or address. The command line syntax for this is to include an option of the form [IP-Address][:port], where IP-Address is the address that you want WFTPD to listen to - normally, this is 0.0.0.0, and this is what is defaulted to when you leave out the IP-Address. The IP-Address will usually be numeric, but if a name is passed in, and can be resolved, it will be accepted. A different port is specified by putting the port's number or name after the colon. The default behavior is to look at the port for "ftp", which is usually 21 - if this is not found, then it defaults to 21, after warning you. If the IP address and port are both provided, they must be specified together as in "WFTPD 127.0.0.1:21".

Here are some sample command lines - note that the port numbers and IP addresses are made up ones - if you don't know what IP address and port number you should be assigning here, you really have no need to supply them:

WFTPD	Run standard size, listening for all incoming connections, on the "ftp" port, usually 21.
WFTPD m	Run minimized.
WFTPD h	Run hidden.
WFTPD s	When run as a service, use this option to make sure it doesn't die.
WFTPD m 10.21.15.7	Run minimized, listening for incoming connections to address 10.21.15.7, on the "ftp" port, usually 21.
WFTPD h :qotd	Run hidden, listening for all incoming connections, on the "qotd" port, usually 17.
WFTPD 10.5.72.3 i c:\host1.ini	Run listening at address 10.5.72.3, on the "ftp" port, using file c:\host1.ini as the storage for WFTPD's settings (users, permissions, etc)
WFTPD	Run normal size, listening for connections to the IP address represented

myhost.mysite.com:80

by myhost.mysite.com, on port 80 (usually the HTTP port)

What's New in Version 2.3

What's new in version 2.30?

Okay - here's the new stuff in this version:

Beat a beta baiter - WFTPD works fine on my release copy of NT 4.0. It does NOT work on NT 4.0 beta 2. This is an example of why I cannot support beta releases of operating systems - if I had spent time to fix the problem, I would have found myself with code that didn't work in the release version, and which I would have needed to remove.

Service with a J The command-line switch 's' was added, to prevent WFTPD from dying when run as an automatic service under Windows 2000 / Windows NT. (MFC apps by default die when a user logs out, even if they are being run as a service)

Joker's Wild! Unix-style path matching, so that wild-cards can occur at any point in the path - e.g. "LIST */WFTPD.*" works as you would expect it to.

More options than you can shake a small stick at (Mirror, mirror, on the wall...) Unix-style command options for LIST/NLST - the options supported are F, c, d, f, l (the letter), r, s, t, u, 1 (the number), and R. All other options are ignored, since they either won't mean anything through WFTPD, or are more effort to implement than is worthwhile, considering the lack of requests for them. This should allow mirroring software to work, because they generally rely on "ls -lRtu" to work.

Hey! Where'd my program go? On Windows 95, 98, and NT 4.0, when WFTPD is minimized, it shrinks to an icon on the system tray, with a small menu that appears when you click the right mouse button on that icon. The number of users and sockets is displayed as a tooltip if you leave the mouse on the icon for a short while, and double-clicking with the left button on that icon will restore the window to its former size. Most of the functions of WFTPD should be accessible from the right mouse menu.

Who's on first? A modeless dialog box can be displayed that lists the current users, and allows you to disconnect unruly ones (multiple selections allowed).

Wait for me! When you try and close WFTPD, if people are still logged in, you have the choice of disconnecting them, canceling and returning to normal operation, or waiting for everyone to log off.

Say what? Sounds are now supported, and can be played on user login and logout.

Nutscape stupidity fixed MACBinary commands are no longer logged as errors - for some reason, Netscape thinks it's essential, but doesn't ever answer my emails asking why.

You can be insecure again WFTPD can now be used again with security disabled.

Bugs fixed:

- The Browse Directory button for the home directory in the Users/Rights dialog now saves the directory chosen.
- A GPF at or around 0x0002:0x2d94 in the 16-bit version has been removed.
- The status text at the start of each WFTPD run is now displayed whether logging is on, or not.
- Getting a 0 byte file is now possible, no more "illegal REStart marker"
- The correct response ("WIN32") is now given to SYST commands on Win32 systems.
- Files and directories should no longer be occasionally left locked, as long as you install the idle timeout (from the General Security dialog)

What's new in version 2.31?

2.31's main purpose is to fix various problems that had been caused by the new listing code - this manifested in many ways, including listing the wrong directory, the wrong values for that directory, and even to ignore security settings on those directories.

I is initialise's initial The 'I' option has been added to the command line, to allow users of multi-homing to better specify which INI file to use - for example "WFTPD I C:\HOST1\WFTPD.INI" tells WFTPD to use information from the C:\HOST1\WFTPD.INI file (this is where all data will be saved, too). The default is still to use the file in your Windows directory.

Bugs fixed:

- Miscellaneous bugs with the new directory listing function
- Sending a PASV command followed by a PORT command will no longer cause your client to hang when the transfer starts. (It's highly unlikely that your client would do anything so breathtakingly idiotic, but who am I to complain?)
- No more GPFs when closing the program down and saying "OK" to disconnecting the users.
- Debug code, such as the "message received on socket xx which I can't find" log entry, has now been removed completely.
- Much revamped internal code, so as to add further support for multi-homed hosts, and to create the service implementation for the "professional" version.

Why version 2.32?

2.32 has fixed another couple of bugs, most notably that the command line parameters to change the IP address and port listened to were ignored in 2.31. This is fixed in 2.32, and also the speed of downloads from WFTPD is greatly improved. I was tempted to simply release these new fixes as the registered version of 2.31, leaving the unregistered users with the buggy version, but didn't fancy the problems of supporting two different versions with the same number. So, 2.32 isn't a big update to 2.31, but might prove of use.

What about version 2.33?

As soon as I released 2.32, the letters came flooding in, telling me that it didn't work. Eventually a pattern settled in - everyone was using Trumpet Winsock. For the technical among you, every version of Trumpet Winsock to date has returned an error from the inet_addr function when passed the string "0.0.0.0". This is one of those errors that you think "surely someone must have run into this before, and it's such an unlikely error I must be going nuts". Fortunately, Peter Tattam of Trumpet Software International verified and acknowledged this bug in pretty short order - he'll be fixing it in his next release, and I'll work around it in this release. The only change in 2.33 is to work around this bug, so it's not a big release, but is worth installing.

And now, 2.34 - what's with that?

For the longest time, I couldn't get the 's' switch to keep WFTPD running on Windows 95 - I now have the trick figured out. It's also got a bunch of changes to the engine that were brought on by development work on the WFTPD Professional version. There's a price change to announce, as well as new terms of payment - by credit card, to be specific. Check out the registration instructions for more details.

Wow - 2.35 already - it's only been a year!

I had planned for 2.34 to be the last version before 2.40 was released. 2.40 has a large number of major changes internally, that result in a faster, tighter system. However, in the Spring of 1998, a determined effort was made by a bunch of hackers to break Windows FTP servers. FTP Serv-U and WarFTP were both revealed to have some serious security flaws on the Bugtraq security monitoring news network, but WFTPD held up strong. Despite this, we determined to test WFTPD ourselves for security flaws. One minor flaw was found during this process, and we undertook to send out a fix - that fix was version 2.35.

Multi-threaded FTP server software is not necessarily a good thing, and changing WFTPD into a naively multithreaded program would have been more likely to reduce performance and stability than it is to improve it. Currently, WFTPD operates using Asynchronous, non-blocking sockets, which allows the Winsock stack to take more control in deciding how to switch priorities and manage bandwidth. Asynchronous non-blocking sockets, such as WFTPD uses, scale far better as the number of users grows, than would any multithreaded solution. In the simplest implementation of multi-threading, the performance will start off slightly slower than WFTPD, and as users are added, will bog down rapidly in comparison with WFTPD.

WFTPD 2.35 and above use some multi-threading features on Win32, mainly for directory listing.

For a slightly more technical discussion, please note that TCP/IP (and indeed any network traffic) is essentially a serial flow of information. If you have two users connected, they will each speak in turn - when one is speaking, the other is silent. This concept of seriality is extended to any number of users - the number of users connected cannot increase the maximum amount of processing required. To produce a multithreaded server that uses one thread per user would attempt to use a parallel solution to a serial problem. This would not only be conceptually inappropriate, but performance would degrade as more users were added, due to the extra overhead of context switching and thread swapping. As the number of users increases, a single thread will degrade linearly, but a server that uses one thread per user will degrade faster. Directory listings inside the server, by comparison, are not serialized, and hence benefit greatly from being threaded.

While it is common for Unix servers to use one thread per user, the Unix threading model is much simpler than that in Windows, and hence the degradation is not as marked. In Windows, a server that uses one thread per user will not work as well as a single threaded server once more than five or six users connect.

The algorithm for finding the home directory is so basic that I have yet to see a situation where this error was reported other than that where the home directory specified for the user is not a full path. This means it must include a drive letter, followed by a colon (":"), then a full path down from the root of that drive, with each directory spelt correctly, and with no backslash at the end of the path. (Hint: go to the DOS prompt, and try to "CD" to the directory in the edit box of the Users/Rights dialog, or use the Browse button to confirm the presence of the directory.)

This version of WFTPD checks for valid directory entries, and will not let you exit the dialog without entering a valid, existing directory. So, just visiting the Users/Rights dialog, and selecting the user that is having trouble, will often let you know what is going wrong.

If you are running WFTPD as a service, please remember that drive mappings are either not available, or are unreliable, for use as home directories. Remember that these drive mappings are only available while someone is logged in as a Windows 2000 / Windows NT user, and will go away when that person logs off.

We've been operating out of Cedar Park, just outside of Austin, since December 1995. We're actually in the Municipal Utility District nearby, which explains the low sales tax rate. The automatic mail forwarding from my previous addresses may very well have expired. If you put a return address on your envelope, it should have been returned to you by the Postal Service; otherwise it might very well be utterly lost in the mail. I do my best to make sure that the major FTP sites are kept up to date with the latest versions of my software, which include more up-to-date registration instructions (order forms, addresses etc). For the current version, visit the WFTPD web site at <http://www.wftpd.com> .

Upgrading to the 32-bit version from the 16-bit version is now free, since I don't differentiate between the two on the order form any more. If you are a registered user of WFTPD, you will have received **both** versions in your zip file or on your disk. If you are registered, but can't find the 32-bit version, please email me for a new copy.

There are two possibilities here - either you really ARE trying to run it in DOS mode :-), or you're trying to run the 32-bit version of WFTPD on a Windows 3.1x machine without first installing Win32s. You can download a current version of Win32s from ftp.microsoft.com, or you can fetch the 16-bit version of WFTPD from the WFTPD web site at <http://www.wftpd.com>. Please note that we do not support the use of the 32-bit version of WFTPD on 16-bit versions of Windows (Windows 3.1x and before, or Windows for Workgroups). We use some 32-bit features that are not available on the 16-bit platform (multithreading being the main one).

WFTPD 2.11 and before asked the Winsock stack only what port the "ftp" service should run on. This is often configurable by editing a services data file - the equivalent of the Unix standard "/etc/services" file. You'll have to talk to your Winsock supplier to determine just where this configuration change can be made. The current version of WFTPD does this by default, but this behavior can be overridden in the command line used to run WFTPD. For instance, if you want to listen on port 2579, simply run "WFTPD :2579" (note the colon is a separator - the full parameter is an IP address (numerical or name), followed by a colon, then the port number (again, number or name - names are searched on in the services database).

Invalid page faults are rarely, if ever, actually caused by WFTPD. The code is very stable, and is in use on many thousands of computers around the world. Mostly, invalid page faults happen after a period of stable usage of WFTPD, which again points away from WFTPD as the cause. There are, however, some things you can try. The following have been suggested by my wife, who was one of the core team members of a Microsoft Windows 95 support center:

Disable 32-bit disk drivers: Right-click on the "My Computer" icon on your desktop, or in the explorer. Select the "Properties" option in the menu. In the "System Properties" dialog, select the "Performance" tab, and press the "File System" button. In the "File System Properties" dialog, select the "Troubleshooting" tab, and from there you can disable the 32-bit disk drivers. After pressing OK, you'll be asked to reboot. If, over a period of time, you get no more invalid page fault errors, you need to contact the suppliers of your disk driver software for a new version that works properly with Win95/98.

Scandisk: You might also like to try doing a thorough scandisk on all local hard drives on your system, particularly the drive where Windows is installed, the drive you boot from, and the drive where WFTPD is installed. Re-installing WFTPD is also a good option to try AFTER doing the thorough scandisk, as the executable may have become corrupt.

Bad RAM: Another cause of this problem is faulty RAM. Make sure your CONFIG.SYS file has the line "DEVICE=HIMEM.SYS /TESTMEM:ON" to ensure that HIMEM can test your memory. If you have diagnostic tools that can check memory, please use those.

I'd just like to emphasize that if this problem were caused by a fault in WFTPD, I should be inundated with howls of protest, rather than the few occasional emails I get. Following the above steps worked to save my Boss' PC from Page Faults he blamed on Visual C++ 4.0 (they were caused by a bad 32-bit disk driver) - it could save you from wrongly determining WFTPD as a cause.

If you have tried all of my suggestions, and still get repeated page faults, please email me at alun@texas.com, and we'll sort things out.

The WSAEAFNOSUPPORT message is generated because TCP/IP support is not available to WFTPD. This usually has these possible causes:

1. You don't have TCP/IP installed on your computer. Your network software vendor should be able to tell you how to install it, or may have instructions of that ilk in their help files or manuals.
2. You have installed a 16-bit Winsock stack on Windows 95/98. This means that you will only be able to install 16-bit Winsock applications on your machine. The 16-bit WFTPD is available at our web site <http://www.wftpd.com>. I thoroughly recommend that you reinstall the Microsoft TCP/IP stack, as it will enable you to run 32-bit Winsock apps, which work far better with the 32-bit operating system you are running on. 16-bit apps can bring your system to a crawl even when they're not doing anything - just take a look at the CPU performance meter someday!
3. You have installed into Windows 95/98 some program, such as the Vxtreme Web Theater Client, or iChat Pager, that copies a part of the Winsock 2 files into the Windows\SYSTEM32 directory. The two files are ws2_32.dll and ws2help.dll - if these files are present on your system, it should indicate that Winsock 2 has been installed. However, if wsock2.vxd is not on your system, then you do not have a full installation of Winsock 2. This can be fixed either by downloading and installing Winsock 2 fully, or removing (or renaming) the files ws2_32.dll and ws2help.dll.

The "professional" version of WFTPD is now available. Its current price (at time of writing) is \$100 per copy (\$110 by credit card or purchase order), with discounts available for volume purchases, or for existing WFTPD users. WFTPD Pro installs and runs as a Windows 2000 / Windows NT service, configured by a Control Panel applet. It is tested and supported on Windows 2000 / Windows NT 3.51 and 4.0, and will continue to be tested on new versions of Windows 2000 / Windows NT as they are released. WFTPD Pro also has the ability to run multiple hosts from the one instance, with configuration made far easier - each host will have a 'nickname', and the Control Panel applet will display clearly the nickname of the host that you are configuring. Configuration information is stored in the registry, rather than an INI file. WFTPD Pro 2.40 introduces remote administration through the FTP control connection, allowing anyone to write custom administration programs. WFTPD Pro 2.41 will work to some extent on Windows 95/98.

We are unable to offer support on any beta operating systems. I have tested with the released version of Windows 2000, Windows NT 4.0 Workstation and Windows 98, and have not run into any problems yet. If you are trying to run WFTPD on beta versions of Windows, then I can offer no support.

If this seems harsh, please note that all known bugs in running WFTPD on NT 4.0 beta 2 disappeared with the final release of NT 4.0, demonstrating that those bugs were actually in the operating system. By not trying to fix bugs that may be caused by buggy operating systems, I spare time to be used in processing new registrations, and in providing new versions of the software with new features.

We do test and support WFTPD on all currently shipping versions of Windows, and several older ones.

What are all those INI file settings?

First, I'd like to note that the INI file should not, in general, be edited by hand - WFTPD provides user interface methods to set any of these values. However, an understanding of what is stored where may help you if, for example, you are writing programs to modify WFTPD without using the interface.

Second, I should also like to note that these settings are not going to be used with WFTPD Professional. The settings will be stored in the registry and will have a different format to the hierarchy presented below. Full documentation of the WFTPD Pro settings can be found in the WFTPD Pro help file.

Note on path names:

For security reasons, we recommend that you use long path names if at all possible. In some items, such as the Rights directories, for instance, the long path name is all that will be recognized. As an example of the problems that using short file names might cause, please imagine a server with folders "Accounting files – public" and "Accounting files – confidential". These folders will receive the short names of "ACCOUN~1" and "ACCOUN~2", with the number depending entirely on the order of creation. A backup, deletion and restore of these folders may very well result in the short names being assigned in the opposite order. Needless to say, this would result in users being allowed access to the wrong set of accounts if we mapped security by the short name. Short file names are always converted internally to WFTPD before we access any file or directory.

Section "General":

Key name	Default Value	Comments
ScreenPosX	<default window position>	X position of the top left of WFTPD's window
ScreenPosY	<default window position>	Y position
ScreenWidth	<default window width>	Width of WFTPD's window
ScreenHeight	<default window height>	Height
DeviceNames	"CON,AUX,PRN,LPT1,LP T2,LPT3,LPT4,LPT5,LPT 6,LPT7,LPT8,LPT9,COM 1,COM2,COM3,COM4,C OM5,COM6,COM7,COM 8,COM9,CLOCK\$,CONFI G\$,XMSXXX0,\$MMXXX X0,MSCD000,DBLBUFF\$,IFS\$HLP\$"	Comma-separated (no spaces, please) list of device names - WFTPD will not allow access to any file or directory whose name exactly matches one of these elements, or one of these elements with a ':' after it. Note that while "CON" and "CON:" are invalid, "CONFIG", "RECONNAISSANCE" or "MACON" are allowed. This list, and any comparisons to it, are case-insensitive (so "con" and "cOn" are equally invalid). To build your own string, you can run the DOS command 'MEM /D FIND "Device"'

Section "Homes":

Key name	Default Value	Comments
<user's name>	""	Contains the home directory for this user.

Section "Hosts":

Key name	Default Value	Comments
default	0	0 means allow, 1 means deny
WaitForName	0	1 means wait for DNS to return the name of the incoming client, 0 means don't wait. If 1, hosts without names are refused.
<host / net IP address>	<value set for "default">	same as above

Section "Logging":

Key name	Default Value	Comments
ConnectNum	1	The next connection's number
Logging	0	Enable (1)/disable (0) logging
Puts	0	Log all uploads to this site
Gets	0	Log all downloads
Anonymous	0	Log anonymous login/out
Commands	0	Log all commands
Logins	0	Log all logins
Warnings	1	Log all warnings/errors
Winsock	0	Log all Winsock calls and results - do not enable this - it is for debug only.
Logfile	""	The path and filename (including extension) for the file where logging occurs.

Section "Messages":

Key name	Default Value	Comments
MESSAGE.FTP	0	If 1, any login or CWD command will display the MESSAGE.FTP file in the new directory, if it exists.
Greet<n>	""	The nth line of the greeting message - each line must be quoted with ~ characters. N is a 2-digit number, starting at 00.
Bye<n>	""	Nth line of the farewell message - same as for greeting message.
HelloSound	""	Full path to the WAV file played when a user logs in. If empty, the default sound is played from WFTPD's resources.
PlayHelloSound	0	1 to play the HelloSound on each login, 0 to stay silent.
GoodbyeSound	""	Same as for HelloSound
PlayGoodbyeSound	0	Same as for PlayHelloSound

Section "Passwd":

Key name	Default Value	Comments
<user's name>	""	Encrypted password - Unix standard crypt function is used. For obvious reasons, I can't give out source code to this function, but I can point out that a version is available in the source code to the security tool "crack", which can be found in back issues of the comp.sources.unix Newsgroup

Section "Restricted":

Key name	Default Value	Comments
<user's name>	0 for regular users, 1 for anonymous	1 means the user is restricted to their home directory and below. 0 means the user is restricted only by their rights.

Section "Rights.<user's name>":

Key name	Default Value	Comments
<directory name, ending in "\>	<inherited rights from parent, then from section Rights.*>	Values can be any combination of R, O, L, and C - Read, Overwrite, List and Create. The absence of a letter signifies the absence of that right on the specified directory. For backward compatibility, the single letter 'W' is treated as O and C.

Section "Rights.*":

Key name	Default Value	Comments
*	RWL	See above - default rights are to provide all access to all directories.
<directory name, ending in "\">	< inherited rights from parent, then from key *>	See above.

Section "Secure":

Key name	Default Value	Comments
Secure	1	1 means ask for passwords, and check user rights. 0 means any user can log in with or without any password, and can have access to your entire drive. We recommend you keep this setting at 1.
Allow_Anon	0	1 means to allow anonymous users.
MaxUsers	0	0 means no maximum number of users. Any other number means you can't have more users logged in than this setting.
Allow_Puts	1	1 means uploading (or directory creation or deletion) is allowed to directories where users have O or C rights, 0 means it is not.
Allow_Anon_Puts	0	1 means anonymous users can upload if they have sufficient rights. 0 means Anonymous users can only download.
TimeOut	0	Time-out value in seconds, or zero for no time-out. We

Disable_Unsecure_Ports 0 recommend setting this value to about 600 (10 minutes)
 0 means all PORT commands are accepted, allowing proxy ftp transfers to go ahead. 1 disables proxy ftp (transferring between two ftp servers), meaning that your server can't be used to attack other sites that trust your host.

Section "Server":

Key name	Default Value	Comments
Fatal Error	""	Describes what caused the last failure of the server
FileBufferSize	4096	Size of the buffer used to read from or write to files on disk; each read or write will try to be this size, except at the very last read or write in the file.
WindowSize	4096	The TCP/IP buffer size. If set to large values, this may trigger the large window scale option (Windows 98 and Windows 2000 only) in establishing data and command connections.
ExternalDLL	""	Full path to an external DLL supplied by the user, to which WFTPD makes calls on certain documented occasions.
MLST	0	Set to 1 to enable the new MLST / MLSL functionality. At the time of writing, this is only an Internet Draft standard, not a full RFC standard, and as such is subject to change.

Texas Imperial Software, maker of WFTPD, is proud to announce the release of WFTPD Pro version 2.41 for Windows 2000 / Windows NT. WFTPD Pro has the same features that have made WFTPD one of the top-selling, and top rated, FTP servers since 1993, including:

- + Full implementation of required features of FTP standard, as specified in the Internet RFCs 959 and 1123.
- + Operates on Windows 2000 / Windows NT, running Winsock 1.1/2.x TCP/IP
- + Can be run on non-standard ports, on any or all IP addresses in use.

- + Completely enable / disable anonymous access, anonymous uploads or all uploads.
- + Configurable messages displayed to user on greeting / farewell
- + Configurable maximum number of connected users and time-out on idle connections

- + Permit access based on user-name/password, and user's host/network address.
- + Rights assigned on a per-user, per-directory basis
- + Encrypted password database, using Unix standard encryption
- + Users can be restricted to their home directory and below (known as "chroot"), or allowed to access other drives and directories.

- + Full on-line help
- + Resume interrupted transfers using REST, SIZE, MDTM as documented in IETF draft documents for FTP extensions.
- + View connected users and their actions - disconnect unruly ones
- + Supports all applicable Unix 'ls' options - useful for allowing mirror sites.

In addition, WFTPD Pro includes the following advanced features:

- + Works on existing WFTPD engine to take advantage of its unparalleled speed, security and stability - has been in use at thousands of sites for several years.
- + Runs natively as a Windows 2000 / Windows NT service.
- + Full context-sensitive help.
- + Convert from one or more existing WFTPD installations to one WFTPD Pro installation that can handle multiple "virtual" hosts.
- + One control panel dialog allows you to administer multiple virtual hosts.
- + Each virtual host can be restricted to a path as a whole.
- + Use is made of new style controls (list views, etc) for a more modern look.
- + Automatic file conversions (e.g. get file/directory as ZIP) can be created.
- + Remote administration capabilities through the FTP control connection – allows administration from all platforms.

The following features (and more) are new to version 2.41:

- + Remote administration now includes the ability to administer the whole system remotely through a Control Panel applet.

WFTPD Pro is available to existing registered users of WFTPD for \$90 (limit of one discounted copy of WFTPD Pro for each copy of WFTPD you have purchased), and to others at a price of \$110 per copy. If ordering by cash, cheque or money order, these prices are discounted to \$80 / \$100. To order WFTPD Pro, or for pricing information for 10 or more copies of WFTPD Pro, please contact Alun Jones at email address alun@taxis.com, or at phone/fax number (512) 378 3246, 9am-5pm Central Time.

The address for Texas Imperial Software is 1602 Harvest Moon Place, Cedar Park TX 78613-1419 USA. You can also order this software online at <http://www.wftpd.com>

What's New in Version 2.4x

General additions to WFTPD and WFTPD Pro

Added help text for each FTP command in the Control Connection.

Prevented locking of user's current directory - as a corollary, since the user's current directory can now be deleted, we catch this. If the user's current directory is deleted, we transfer them to their home directory - if the home directory is deleted also, then we log the user out.

Added "Magic Cookies", to display such things as the current time, disk space available, the user's name, etc - see the Greeting / Farewell Message dialog for details.

We now indent any numeric codes that might appear in messages and STAT responses that would otherwise confuse an FTP client. We also pad <CR> characters with a <NUL>, as required by the RFCs.

Connections will be delayed - slightly - while a reverse DNS lookup is attempted to get the client's name. This is primarily for the Magic Cookies use, but will be used later to provide an ability to filter by client name.

Logging of connection refusals now lists the IP address that was refused.

In strict compliance with RFC 959, we now wait for transfers to complete before closing the control connection - even if a QUIT command is received. So far, nobody's requested this feature, but we place great stock on being RFC compliant.

Fixed a bug where sending a bad PORT command might confuse the server into thinking that a valid PORT command had been sent. In a related change, we now support the "default port" documented in RFC 959 for when no PORT command is given prior to a stream mode transfer.

Allowed the PORT value of 1024, even when low ports are disallowed.

Changed several messages from "temporary failure" (numbers beginning with 4) to "permanent failure" (numbers beginning with 5), after finding that FrontPage from Microsoft is incredibly intolerant of servers that don't return exactly the error number they expect. (If anyone from Microsoft is listening, this behaviour is counter to the FTP RFC).

We now access LNK files (shortcuts) - see our note on shortcuts for important details on how security is handled with respect to these shortcuts. Since LNK files can point to other files, and possibly access files that would otherwise be protected by WFTPD's security, it is not possible to upload a LNK file to WFTPD, or to rename a file through WFTPD to a LNK file, unless it was already a LNK file.

WFTPD correctly logs Winsock error codes that are unknown to it, simply listing their number.

The logging of file transfers now lists how many bytes were successfully transferred (even in aborted transfers).

The STOU (Store under unique name) command now accepts a parameter - while this may be seen as in conflict with the RFC 959 statement that STOU takes no parameter, we feel it adds useful functionality without causing conflict with RFC compliant clients. When WFTPD receives a STOU command with a parameter, it first tries to create a file with the requested name; if that file already exists, then WFTPD will not overwrite it, but will instead create a file under a new, generated, name. Some FTP clients (I believe WS_FTP is one) support passing a parameter with the STOU command.

If a resume of a previous STOR (store) command is attempted, we will return a fault if the restart marker is beyond the end of the file. Generally, the restart marker provided will be at the end of the file, but we also cope with restart markers inside the file.

Instead of sharing the file being stored exclusively, we now only deny write operations on the file. This allows people to view files that are partway through being uploaded to WFTPD.

In compliance with draft RFCs on FTP security, we allow a configurable number of failed user/password attempts before disconnecting the FTP client, and wait from five to ten seconds between such attempts. This prevents "brute force" password guessing by remote machines.

UNC path names are now supported on Win32 - they look like "\\server\share\path\path2...\pathN\file.ext", if you are not familiar with the term "UNC" (Unified Naming Convention) - thus, shortcuts to remote resources will work properly.

The file and directory listing routine has, once again, been substantially re-written. Listings are now run in a separate thread (on Win32 only), to avoid hanging up the server while we process the listing. The formatting of such a listing is now much closer to a Unix listing, and recursive directory searches now produce output where the directories themselves are correctly sorted. As on Unix, link files are indicated with a '->'

The STAT command now accepts parameters, and will act as a listing to the control connection. We do not advise using this on large directories, as some FTP clients (such as Windows' command-line client) cannot handle large multi-line responses from the FTP server. (Note - in most FTP clients, the "stat" command returns local status - you will either need to use the "remotestatus" command, or enter "quote STAT xxx" to exploit this feature).

Fixed a bug that might confuse clients that send the REIN (reinitialise) command with other commands immediately following.

The MDTM (modification time) response now uses GMT, as required by the draft RFCs that define it.

Added a SITE CHPW command to allow a user to remotely change their password.

Added a new Registered Message (for those of you that monitor such things) under the name "WFTPD Async" to receive asynchronous notification of the connecting client's host name.

Blank greeting and farewell messages now cause only a single line of greeting or farewell to appear.

A new capability, "AddSuffix" is added, to request that any particular user's uploads always be suffixed with a sequence of characters. There is no user interface for this, but a setting in the INI file (or the registry for the Pro version) controls this behaviour.

Added a setting to store the owner's email address, to be used in the output of the %E Magic Cookie.

WFTPD changes

Implemented a workaround for a bug in Windows, whereby a popup menu on a system tray icon does not go away if you click outside of the menu.

Running the program as "WFTPDH" will start the program off hidden - this one's for those of you that like to put WFTPD in your "load=" or "run=" lines.

WFTPD Pro changes

Added file conversions - for instance, if a file called "FRED" exists, and the client asks for "FRED.ZIP" to be sent, then (assuming "FRED.ZIP" doesn't already exist) the file "FRED" can be zipped up and sent. This is fully configurable.

Remote administration is now possible through the SITE ADMN commands, documented in WFTPD Pro's help file.

Added the ability to stop the server remotely - this puts the server into an 'idle' state, where remote administrators can still log in and start the server up again.

Registry strings (for instance, greeting messages) can now be longer than 1024 characters - WFTPD Pro will fetch the correct size of buffer.

Added comprehensive error checking to the service installation procedure, rather than just handling the most common errors.

Purge all sounds before stopping the service - this way, we don't get hung up in sound driver code when we should be shutting down.

New items for WFTPD 2.41:

* Files and disks of over 2GB in size are now supported in WFTPD (32-bit only) and WFTPD Pro.

* New commands:

FEAT - report on the post-RFC 959 features supported.

OPTS - for setting feature options (currently only MLST).

[The following two commands must currently be enabled by a setting in the INI file, since they are draft standards at the time of writing]

MLST - new machine-readable listing format.

MLSD - similar to MLST.

* New HOST command is recognised, but unimplemented as yet.

* Dynamically sized command buffer, to throw off even the most outrageous of FTP denial-of-service attempts without hiccuping.

* Y2K code review carried out.

* Cookies and responses that used angle brackets ("<>") now use curly braces ("{}") instead - Netscape threw up some interesting text when given an undefined 'HTML' value.

* Better interaction with Nagle/Delayed ACK algorithms to improve command response time to well-behaved FTP clients.

* Configurable whether to wait for a reverse DNS lookup or not.

* The PORT command can no longer be used to subvert restrictions to ports <1K.

* Preparation for version 3.0 - we now impersonate Windows 2000 / Windows NT users and revert back to our selves when appropriate. Currently, you can take advantage of this with the new external authenticate DLL function.

* Note to IE users - it will log as an unsuccessful transfer even when it receives the file correctly; IE behaves very rudely in this respect.

* We now fully support even brain-dead FTP clients that send the transfer command before completing the PASV connection to transfer the data on. Note - this is a hideously bad piece of security flaw [in the client], since it means that a hacker could hijack any incoming or outgoing data transfer if he knew something about the system. Workaround: require all data transfers to be reflexive, and beat the relevant FTP client authors over the head.

* When a STOR fails, we log it as a Put, rather than a Get.

* In case of a file error, we now log what the error code is.

* Avoid potential denial-of-service attack caused by sending an option string to a LIST or NLST command longer than 30 characters. "dir -1234567890123456789012345678901234567890" for instance would previously cause a crash.

* Other large-command attacks foiled.

* Any given short path names are always converted to long path names, to avoid somebody using short path names to evade the rights restrictions.

* MLST and MLSD commands added in preparation for the release of the MLST/MLSD Internet-draft as an RFC. This is a big one, since it solves a major headache for FTP client and server authors, in that it provides a reliable machine-readable format for file listings.

* Double-buffering for the transferred file is slightly altered, to allow the user to specify (in the registry or INI file) how much data to read from, or write to, the disk in each go. [Registry entry "<server>\FileBufferSize"]

* When file transfer status is reported, we now correctly use a big 'B' to indicate 'bytes' - a little 'b' should mean 'bits'.

* If the message.ftp file ends in a carriage return, we no longer take that as reason to send a blank line.

* Removed a potential race condition and GPF in the multi-threaded listings.

* New capability to set the TCP/IP buffer/window size, to allow for data transfer over a link where latency or bandwidth are large; on Windows 98 and 2000, this will set the large window scale option in connection negotiation. This may help those of you transferring files to and from orbiting space craft. Seriously.

* On Win32, we try to create temporary files (for listings) in memory, and only write them to disk when memory is exhausted.

- * We no longer force IP address filters (e.g. 'allow/deny this host') to contain only numeric values, since we can now filter on names as well, if we are allowed to perform a reverse DNS lookup.
- * When a WFTPD or WFTPD Pro server fails to start, it will note its reason in the "Fatal Error" registry key / INI value.
- * If a data transfer times out, we don't automatically disconnect the control connection until it, too, times out.
- * Corrected error response number for "command recognised but not implemented" to 502.
- * Log format is changed on Win32 platforms, to use the local short date format - this avoids some user's Y2K gripes, since you can now specify that this should not use two digit dates.
- * Owner Email Address is now saved and read correctly in WFTPD, for the %E cookie.
- * New external DLL functionality added; currently, the only supported external function is to authenticate a user, given his name and password; the DLL's function must then return his home directory, and may return a Windows 2000 / Windows NT user handle for impersonation purposes. See extrnlis.h for the function prototype.
- * On Windows 2000 / Windows NT 3.51 and 4.0, we take NTFS rights into consideration as well as those defined in WFTPD/WFTPD Pro.
- * Unregistered version now displays a dialog when it starts to note that it is the unregistered version, and giving instructions on how to register; this dialog can be permanently dismissed by clicking on a check-box, so it's not a "Nag Screen" - it's an attempt to reduce the number of people who email me saying "How do I register this program?".
- * Copyright stretched to 1999; version number bumped up to 2.41
- * When editing the user name using the arrow keys in WFTPD, the rest of the User Security dialog will update correctly.
- * A new, default, menu option is added to the WFTPD popup menu that is available when WFTPD is minimised to the system tray. This is the "Restore" command, so that a double-click will restore the program.
- * Browsing for the log file now displays "Save" instead of "Open".
- * Upper limit checked on the size of the disk read/write buffer.
- * Timeout on the data connection no longer causes timeout on the control connection.
- * Timeout on the control connection no longer causes GPF.
- * All paths displayed to the user should now be the `_long_` form.
- * If we are getting file access rights, and the OS won't allow us to list those rights, then we are not going to allow access to the file. This avoids the occasional problem of a file listing displaying that suggests you can retrieve the file, and then being unable to retrieve the file due to NTFS permissions.
- * Moved a function call to the top of the destructor, where the data contents will still be valid, thereby avoiding a GPF on logout or termination.
- * Fixed a buffer overflow bug reported by the bugtraq mailing list. It would be *polite* for these people to actually notify me when they're announcing security flaws to the public.
- * Fixed a potential (though unlikely) buffer overwrite found through code review.
- * SIZE command now works with either List or Read rights to the file.
- * File listing now lists to 8-column stops, much like BSD 'ls'. [Useful for clients such as machine tools that expect the listing is a fixed format.]
- * Default setting for "Allow Uploads" is set back to checked.
- * Wildcard matching is now fixed even for restricted users.
- * Fixed a potential (though `_extremely_` unlikely) problem when socket handles get over 64k.
- * Fixed unsightly GPF on stopping WFTPD Pro - was not damaging to data, but looks clumsy.
- * Fixed a GPF caused when security is disabled.
- * Fixed a GPF that could occur when a client connects and then disconnects before its name has been resolved through DNS.
- * 'Salt' characters in the password hash function are now restricted to only those that are allowed in Unix.
- * Prevented a small memory leak in listings.
- * Fixed STOU to upload file under unique name in the user's current directory, rather than WFTPD's executing directory.
- * Altered disconnect functionality so that a user can be disconnected in the middle of a data transfer without waiting for the transfer to complete.
- * Don't respond with "MLST" to "FEAT" command unless MLST features have been enabled.
- * Zero out memory that holds the password entered by the user, just in case someone feels like examining core dumps.
- * If a password longer than eight characters fails, we retry with just the first eight characters, since the password algorithm was changed a couple of years ago to add handling for longer than eight characters of password.
- * Changed the method of creating uploaded files to try and get around a reported sharing problem with IIS (which maintains locks to files long after it's finished reading them).
- * Slight speed improvement on comparison of rights when listing files.
- * Fixed a minor bug in logging in to home directories terminating in a backslash (usually from using the "Browse" button)
- * Allow UNC home directories.
- * Fixed a GPF in 16-bit version caused by a Visual C++ 1.52c compiler bug.
- * Prevent user from logging in if they have no rights to their home directory.
- * Fixed a bug where confusion could occur if the user's home directory ends in a slash or backslash.

- * Log the reason `_why_` a user's home directory is not accessible to them.
- * Fixed an apparent hang at the end of directory listings.
- * Fixed an incompatibility with certain Unix FTP clients that expect the 226 response to come before they will acknowledge the FIN. This led to some FTP clients appearing to hang at the end of data transfers and/or file listings.
- * Due to poor behavior on the part of the GetFileSecurity call, we had been marking files and directories as inaccessible, when the truth was merely that the OS couldn't (or wouldn't) tell us what rights we had. This usually shows up when trying to access remote shares on non-NT systems through UNC's. This is now fixed.
- * "Blue Panda" reported a GPF caused when issuing the RNTD command with no previous RNFR command - this has been fixed.
- * Blue Panda has been busy again. GPFs on issuing a STOR, APPE or STOU after a REST marker is set past the end of the file, or when the file does not exist; and on entering the MLST / MLSD commands prior to logging in. Also, when we try to prevent people writing to / reading from device names such as LPT1, CON, etc, we missed a few device names - partly because they aren't documented anywhere. Since there is no programmatic way (that we know of) to get a listing of devices, we've allowed users to define their own device names in a new INI file entry / registry setting "General\DeviceNames"
- * Another Panda-ism or two - .LNK files could be downloaded, possibly revealing local directory structures - now .LNK files can neither be uploaded, nor downloaded (nor renamed, except to other link files). The "%C" cookie (current directory) also exposes local directory structure - this has now been corrected to respond with the same information as PWD gives.
- * Also from Blue Panda - a long command string consisting of characters in the range 128-255 may cause a GPF.
- * Corrected some instances where a closed socket was not decrementing the socket count.
- * Restrict data entry on usernames to 29 characters, since that is how many we load in from the registry / INI file.

