
GetIt FTP User Guide



NSC

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What's Included In This Guide

This guide describes the procedures to install and configure GetIt FTP, and do any other day-to-day FTP tasks.

- Chapter 1, “GetIt FTP Overview,” highlights the major features of GetIt FTP.
- Chapter 2, “System Requirements,” details the minimum hardware specifications necessary to run GetIt FTP.
- Chapter 3, “Installing GetIt FTP,” describes the processes of installing and uninstalling GetIt FTP.
- Chapter 4, “Configuring GetIt FTP,” covers set up and customizing of GetIt FTP, including user accounts, security features and registration information.
- Chapter 5, “Running GetIt FTP,” tells you how to operate an FTP client.
- Chapter 6, “Technical Notes,” details the protocol and command support in GetIt FTP.

Using This Guide

Review the first chapter to acquaint yourself with the features that GetIt FTP provides.

Then read any chapter that's about configuration or operational functions that you are unfamiliar with. Each chapter includes an overview of how the components work, what it can do for you, strategies for using it, how to set it up and how to administer it over time.

Some chapters end with a section called "Where To Find More Information." This section points you to the Web sites and other reference material containing more information about the component.

Getting Additional Information

In addition to this document, you will find information about GetIt FTP in:

- The product and support pages at <http://www.nsctech.com>.

GetIt FTP enables computers to transfer files over your network or the Internet. It supports the latest File Transfer Protocol (FTP) features and provides security extensions to protect your information. The software is suited to transferring database, medical, archive, scientific and multimedia files.

SSL/TLS Support

GetIt FTP uses the same security technology that is found in e-commerce websites to protect confidential documents. Secure Sockets Layer (SSL) and Transport Layer Security (TLS) lets you send encrypted, authenticated information across the Internet.

Designed For Your Pocket PC

GetIt FTP sports the latest Microsoft “look-and-feel” and includes navigation tools (like multi-select mode) designed to minimize user input and display data in a compact and easy-to-use fashion. In addition, you can run GetIt FTP in the “background” so you can perform other tasks while transferring files!

Smart File Transfers

GetIt FTP can send and receive files and folders (recursively) with a few quick taps. The software also includes error recovery and mirroring capabilities that enable you to resume broken files transfers and synchronize data at regular intervals!

Built-In File Management Functions

GetIt FTP lets you manage local and remote files, including the ability to create new folders, delete and rename files, change permissions and send custom commands.

Time Saving Features

You can configure GetIt FTP to automatically dial, hang-up and use common FTP settings (like passive and overwrite modes) to help your work more efficiently. The software also includes an “address book” to manage FTP site login information.

Firewall And FTP Proxy Friendly

Firewalls restrict access to your network and impose many restrictions on the web services behind them. GetIt FTP lets you to configure the protocol and the TCP/IP operation, including bandwidth throttle, of your FTP client.

Perfect For Developers

The registered version of GetIt FTP lets you configure and run FTP operations from the command line, so you can develop and deploy your applications faster!

Where To Find More Information

Request for Comments (RFC) documents provide an overview of a protocol or service and details about how the protocol should work. If you are a new system administrator, you will probably find some of the background information in an RFC helpful. Experienced administrators can find the technical details of a protocol in these documents. You can search for RFC documents by number at this Web site:

<http://www.faqs.org/rfc>

For details about FTP, see RFC 959.

The minimum requirements your device needs to run GetIt FTP are:

- A 200Mhz ARM or XScale processor.
- 32MB RAM.
- 1MB of storage; 8MB or more recommended.
- Microsoft Pocket PC 2000/2002/2003 operating system.
- A TCP/IP network connection.
- External storage devices and memory cards are supported.

This chapter describes the procedures to install and uninstall GetIt FTP.

NOTE: If you have purchased GetIt FTP from an on-line distributor, print out your receipt and make a back-up copy of the software.

Installing

Perform the following steps to install GetIt FTP:

1. Open Microsoft Windows Explorer (**Start > Programs > Accessories > Windows Explorer**) on your desktop computer.
2. Double-click the **Setup.exe** icon located in the GetIt FTP folder.
3. Click **Install**.
4. Read the license agreement carefully. If you agree to the terms, click **Accept** to launch Microsoft ActiveSync.
5. Follow the on-screen instructions.

You can also install GetIt FTP on your device:

1. Copy or download the GetItFTP.PPC3_ARM.CAB file to your device.
1. Open Microsoft File Explorer (**Start > Programs > File Explorer**) on your device.

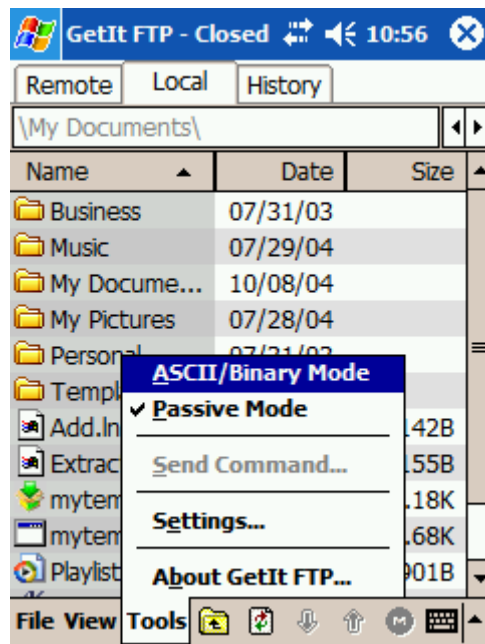
2. Locate and tap the GetIt FTP .CAB file (specified above).
3. Follow the on-screen instructions.

Uninstalling

Perform the following steps to uninstall GetIt FTP:

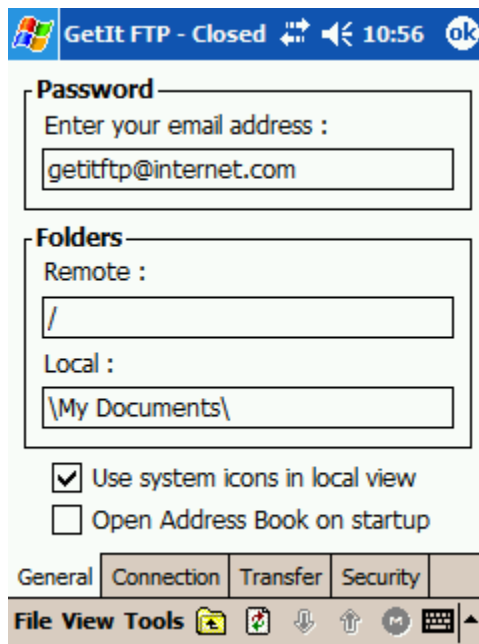
1. If GetIt FTP is running on your device, exit the application.
2. Open Microsoft ActiveSync on your desktop computer.
3. Select the **Add/Remove Programs** options in the **Tools** menu.
4. Select **NSC GetIt FTP** in the application list.
5. Click the **Remove** button.
6. Follow the on-screen instructions.

To configure GetIt FTP, open the application and choose the **Settings...** option in the **Tools** menu.



Step 1: Configure General Settings

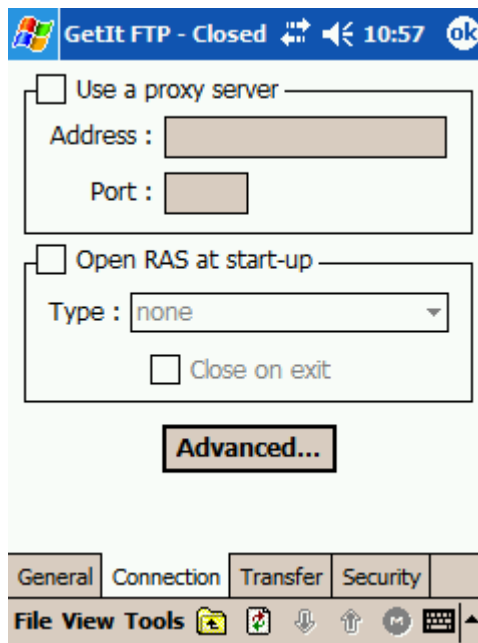
The General settings lets you specify the guest email password and default transfer folders.



1. **Anonymous password.** Enter a password for use on public (anonymous) FTP sites. The format for the email address is: username@yourdomain.com. For example, johndoe@hotmail.com.
2. **Remote folder.** Enter the default location to look for files and folders on FTP sites. The root ('/' forward slash with no quotes) folder is recommended.
3. **Local folder.** Enter or select the location on your device to store FTP files.
4. **Use system icons.** Check this option if you want to use application or “associated” icons in the local view.
5. **Open address book.** Select this option if you want to open the address book when GetIt FTP starts.

Step 2: Configure Connection Settings

The Connection settings let you specify your FTP proxy server (if required), RAS connection and bandwidth throttle settings.



1. **Use proxy server.** Check this option if your Internet service provider requires you to configure a proxy server for FTP usage. If you do not require this setting, skip to step 4.

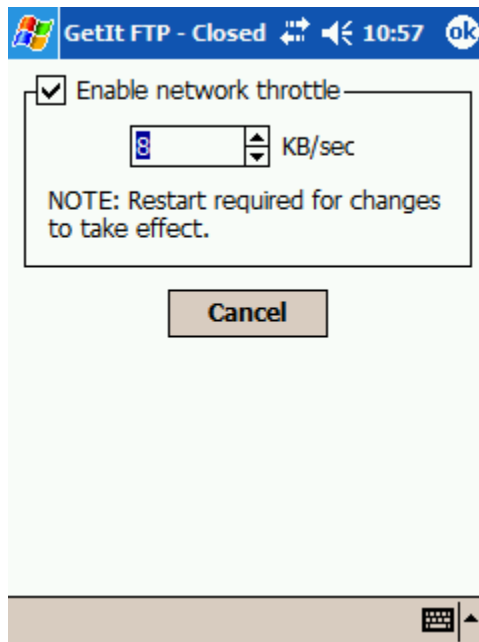
NOTE: Ask your network administrator if you do not understand what this setting is for.

2. **Proxy address.** Enter the IP or name of your proxy server.
3. **Proxy port.** Enter the TCP port for FTP connections.
4. **Open RAS at start-up.** Select this option if you want GetIt FTP to automatically dial/hang-up your Internet connection. Skip to step 7 if you do not enable this setting.
5. **Select RAS connection.** Choose the connection to dial.
6. **Close on exit.** Check this option if you want GetIt FTP to hang-up on exit.

7. **Configure advanced connection settings.** Tap this button to configure the bandwidth throttle.

Configure Advanced Connection Settings

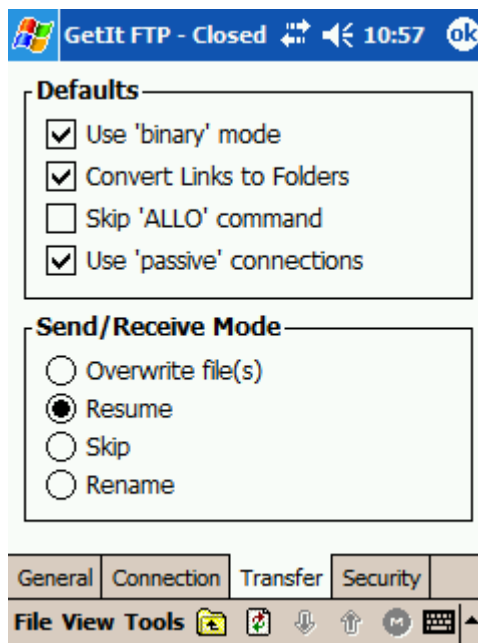
The bandwidth throttle lets you limit the speed of your FTP transfers. This feature was introduced to handle slow or error prone network connections.



1. **Enable network throttle.** Check this option if you want to limit the network utilization of your FTP connection.
2. **Maximum transfer speed.** If you have enabled the network throttle, enter the maximum transfer speed (KB/s). We recommend 8 KB/s or less for slow or unreliable connections.

Step 3: Configure Transfer Settings

The Transfer settings let you specify the default data and write modes.



1. **ASCII/Binary mode.** Check this option to use binary data transfers (recommended); otherwise ASCII (or text) will be used.
2. **Convert links to folders.** Check this option to make symbolic links (a UNIX facility) appear as folders in the remote view. Otherwise they will be referenced as files.
3. **Skip ALLO command.** Select this setting to skip the FTP allocate (ALLO) command in upload sequences.
4. **Active/passive connection mode.** Enable this setting to use passive (client to server) data connections for sending/receiving file data. Note that active connections involve the server connecting to the client which is a security risk and is therefore refused by many servers.
5. **Write mode.** Select the default write mode for sending/receiving files.

Step 4: Configure Security Settings

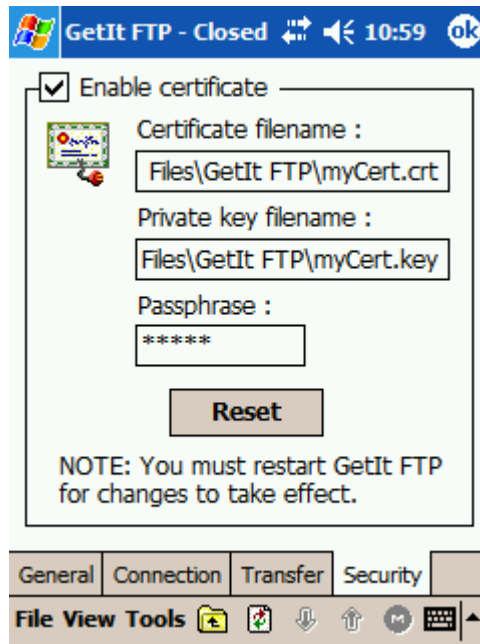
The Security settings let you specify a client certificate for use with secure FTP servers. You should talk to your network administrator for more information about these fields.

SSL/TLS Background

The Secure Sockets Layer (SSL) protocol is designed to secure and authenticate communications over the Internet. It uses a public-and-private key encryption system, which involves the use of a digital certificate from a “trusted” source. SSL has recently been succeeded by the Transport Layer Security (TLS) protocol, which is based on SSL. TLS uses the same cryptographic methods as SSL but supports stronger (168-bit 3DES vs 128-bit) algorithms.

The most important part of SSL is the digital certificate, a piece of data that includes a public key and other interesting information, such as the owner of the certificate, its expiration date, and the fully qualified domain name associated with the server. It is up to the client to either accept or reject the server's certificate. In the case of FTP, many client applications will simply prompt you to read and accept the certificate, others may use an elaborate verification process. If the client rejects the certificate, secure communications cannot take place.

Configuring A Client Certificate



1. **Enable certificate.** Choose this option if you want to use a client certificate. If your FTP server does not require a certificate, then you can skip the remaining steps.
2. **Certificate filename.** Enter the path and filename information for your certificate (.crt).
3. **Private key filename.** Enter the path and filename information for your private key (.key).
4. **Passphrase.** Enter the passphrase associated with the certificate and key files.

NOTE: You will have to exit and restart GetIt FTP after modifying these fields.

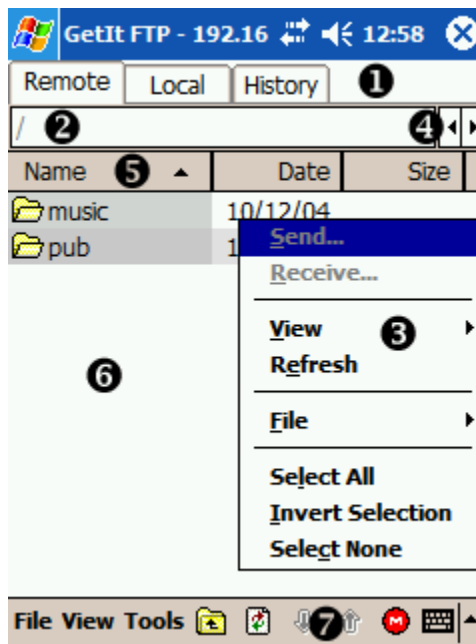
Where To Find More Information

If you require more information about secure network communications, there is a variety of books available from O'Reilly & Associates. See the *Network Security With OpenSSL* book (ISBN 0-596-00270-X) for an in-depth discussion on the benefits of using a CA.

The latest SSL 3.0 specification, an Internet Draft dated November 1996, can be viewed at: <http://wp.netscape.com/eng/ssl3/draft302.txt>.

In this next section, we will examine how to operate GetIt FTP. You should note that you must be connected to a FTP server to send and receive files and perform “remote” file operations.

The Main Display



1. **Viewbar.** Change between remote, local and history (control channel) views.
2. **Pathbar.** Displays the current folder or location.
3. **Context menu.** Tap and hold to display shortcut options.
4. **Forward/backward buttons.** Changes to the previous or next folder.
5. **Header control.** Displays current sorting order. Tap to change sort order.
6. **File and folder view.** Displays relevant file and folder information.
7. **Menu and toolbar.** Commands and options.

The Menu And Toolbar



1. **Parent folder.** Change to the parent directory.
2. **Refresh view.** Update file and folder information.
3. **Download.** Get selected [remote view] files and folders from the FTP server.
4. **Upload.** Send selected [local view] files and folder to the FTP server.
5. **ASCII/Binary toggle.** Switch between ASCII and binary mode.

Connecting To FTP Servers

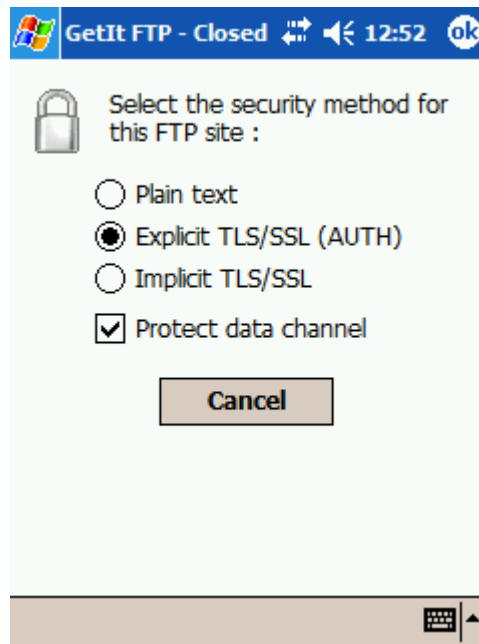
To connect to a FTP server, select the **Open...** option in the **File** menu. Enter the remote server's name (or IP address), your username, password and security infor-

mation. Enable the **Save in Address Book** checkbox if you want to reuse this data in the future. Tap **Connect** to start the FTP session.

The screenshot shows a Windows-style dialog box titled "GetIt FTP - Closed". It contains the following elements:

- Address :** A text box containing "ftp.acme.com".
- Port :** A text box containing "21".
- ☒ **Anonymous Login**
- Name :** An empty text box.
- Password :** An empty text box.
- Acct :** An empty text box.
- Directory :** A text box containing "/"
- Security** (button)
- ☐ **Save in Address Book**
- Connect** (button)
- Cancel** (button)

At the bottom right of the dialog is a small icon of a floppy disk and an upward-pointing arrow.



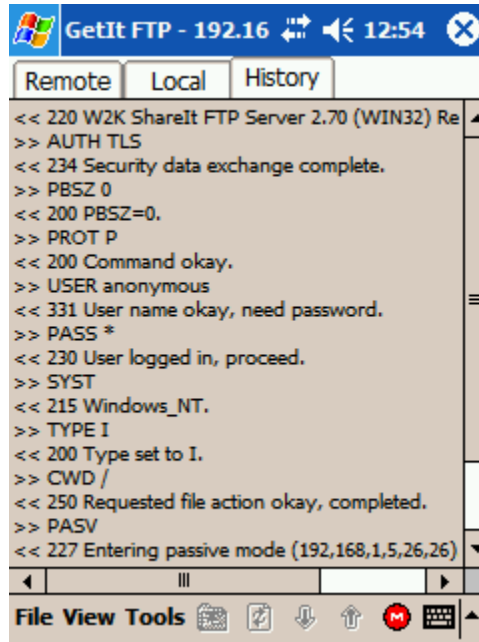
If you have previously saved server information to the address book, you can access it through the **Address Book...** option in the **File** menu.

NOTE: You must register GetIt FTP to use the address book.

Viewing History Information

After connecting to a FTP server, GetIt FTP will display a "history" (control channel) view. This display allows you to read server messages, errors and the progress

of FTP operations. You can switch to this view at any time by tapping the **History** tab or selecting the **History** option in the **View** menu.

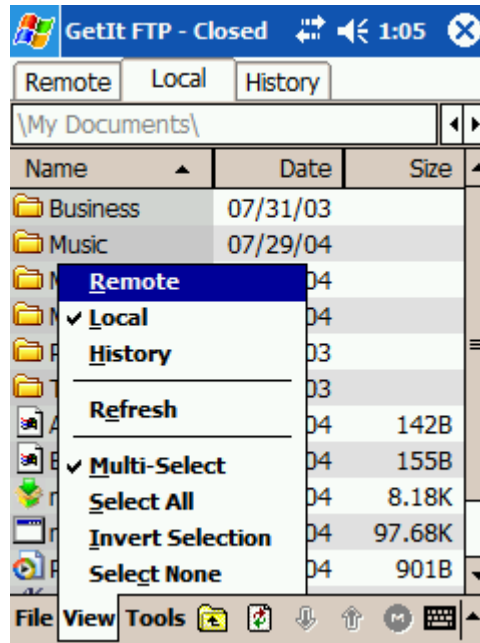


Viewing File Information

GetIt FTP maintains remote and local file views for performing FTP operations. Both views display the name, date, size and permissions of each file entry. The software includes several unique features to help you navigate this information:

- File information can be sorted by tapping the header labels.
- Using the **Multi-Select** option in the **Edit** menu, it is possible to select multiple entries with single taps; without holding down the control or shift keys.

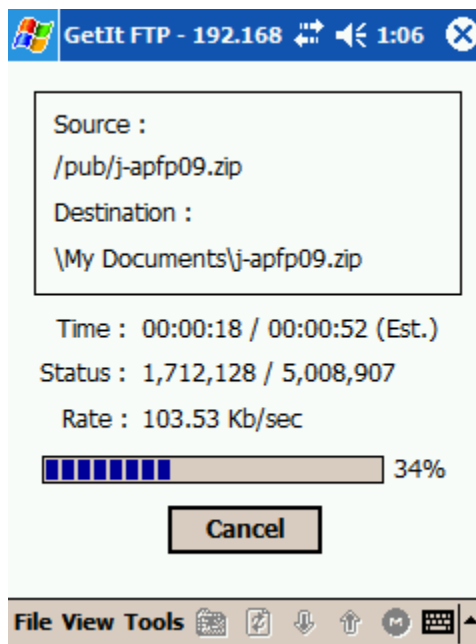
- Double-tap a folder to display its contents.



Sending and Receiving Files

You can download files to your device by selecting file items in the **Remote** view and tapping the down arrow icon (see The Menu and Toolbar section in this chap-

ter). To send files to a FTP server, select items in the **Local** view and tap the up arrow icon.



Note GetIt FTP enables you to upload and download the entire contents of a folder (files and sub-folders).

Creating Folders

GetIt FTP has ability to create folders in the local and remote filesystems. To create a folder on your device, change to the **Local** view and select the **New Folder...** option in the **Edit** menu. You will be prompted for a name before GetIt FTP creates the folder. Creating remote folders works in the same manner as the local process.

Renaming Files And Folders

To rename a file or folder, select the entry in the appropriate view and select the **Rename...** option in the **Edit** menu.

Deleting Files

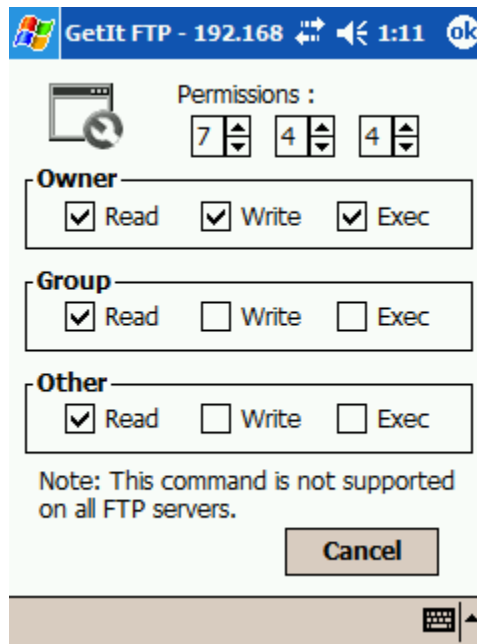
You can delete files and folders by selecting entries in the local and remote views and choosing the **Delete File(s)...** option in the **Edit** menu.

NOTE: Some FTP servers require you to delete the contents of a folder before you delete it.

Changing File Permissions

To change the permissions of a remote file or folder, select the file entry and choose the **Chmod...** option in the **Edit** menu. GetIt FTP will display a screen which con-

tains options to create a UNIX compatible permission set. Tap **OK** to update the file.

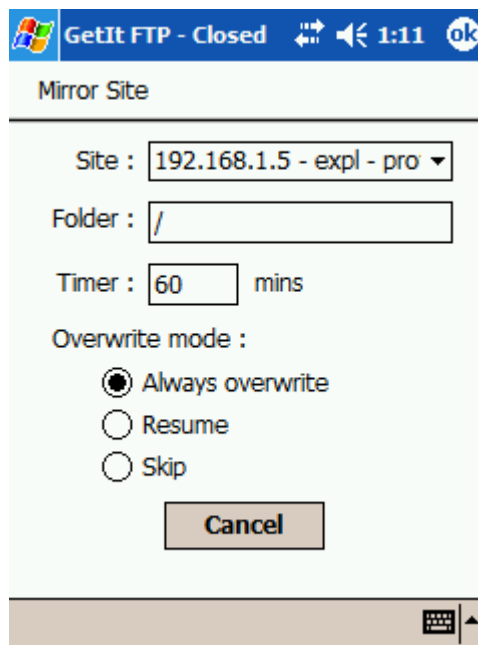


NOTE: Some Windows FTP servers will support this operation.

Mirroring An FTP Site

NOTE: This feature is for registered users.

GetIt FTP supports FTP site mirroring, which means it can be configured to download files from an FTP server at regular intervals. To mirror a server:



1. Change to the **Local** view, and choose a folder where you want to store files.
2. Select the **Mirror Site...** option in the **File** menu.
3. Select the FTP server. Each entry name is from the Address Book. This login information will be used.
4. Enter the remote folder.
5. Select an overwrite mode.
6. Tap **OK** to start mirroring.

Changing Connection Modes

Some FTP servers require 'passive' connections, where the client always connects to the server, for security reasons. If you know that a server requires passive connections, or if you are having problems receiving data, change to 'passive' mode by selecting the **Passive Mode** option in the **Tools** menu.

Changing Transfer Modes

If you are connected to a remote server, you can change between binary and ASCII transmission modes by selecting the **ASCII/Binary Mode** option in the **Tools** menu or by clicking the round 'M' icon on the toolbar. This will allow you to set the right server mode for sending and receiving text (ASCII), data and executable files (BINARY).

This section contains advanced system and protocol details for GetIt FTP.

Port Range

GetIt FTP uses the TCP ports between 2500 and 3000 for data connections. If your device is behind a firewall, you should update the network rules to allow incoming traffic (for PORT commands) in this range.

How To Create And Edit A Shortcut

On your Pocket PC:

1. Open Microsoft **File Explorer**.
2. Find and select the file you want to create a Shortcut for.
3. Select the **Paste Shortcut** option in the **Edit** menu. A file with the prefix “Shortcut to” and the extension “.lnk” will be created.

On your Microsoft Windows PC:

1. Open **Windows Explorer**.
2. Locate the **Mobile Device** folder (located under “My Computer”).
3. Find and select the Shortcut file (.lnk) you created on your Pocket PC.
4. Copy this file to a location on your Windows PC.
5. Open **Notepad** (**Start > Run > Notepad**).
6. Edit the Shortcut (see instructions below) using **Notepad** (**File > Open**).

Copy the Shortcut file back to your device.

Pocket PC Shortcut Format

The Shortcut file format provides a simple interface to run applications with custom parameters. It can be edited in any text editor and uses the following rules:

<number of chars after ‘#’>#<“application path and file name”>[<space>option1
[<space>option 2]...]

Command Line Parameters

NOTE: This feature is for registered users.

GetIt FTP supports the following command line parameters:

PARAMETER	DESCRIPTION/SYNTAX
address	FTP host address. Syntax: address <SP> [IP DNS name]
port	FTP port (default 21). Syntax: port <SP> #
user	Login username (default “anonymous”). Syntax: user <SP> username
pass	Login password (default GetIt FTP preferences). Syntax: pass <SP> password
acct	Login account (default none). Syntax: acct <SP> account

PARAMETER	DESCRIPTION/SYNTAX
ldir	Local folder. Syntax: ldir <SP> folder <i>Remember to use quotes to specify folders with spaces in the filename.</i>
rdir	Remote folder. Syntax: rdir <SP> folder
send, put	Send file to FTP host. Syntax: send <sp> filename or put <sp> filename <i>Remember to use quotes to specify filenames with spaces.</i>
recv, get	Get file from FTP host. Syntax: recv <sp> filename or get <sp> filename
rest	Restart position for send/receive. Syntax: rest <sp> offset
ssl	Use explicit SSL/TLS connection (using AUTH command).
implicit	Use implicit SSL/TLS to connect.
protectdata	Use SSL/TLS encryption on the data channel.
ascii	ASCII mode.
binary	Binary mode.
pasv	Use passive connections.
port	Use active connections.
dial	Dial default RAS connection.
hangup	Hangup RAS connection on exit.
status	Show operation success/failed dialog.
hide	Run GetIt FTP in the background. You can open the application through the system tray (Start > Today).
quit	Exit the application when command line processing is complete.

Note unspecified options will default to the application preferences.

Examples

The following example will download the file screenshot.jpg from the FTP server at 192.168.1.5 using SSL/TLS. GetIt FTP will launch in the background (accessible from the system tray) and automatically exit when the download is complete.

```
150#"Program Files\GetIt FTP\GetItFTP.exe" /address 192.168.1.5 /ssl /protect-  
data /ldir "%My documents" /rdir pub /get screenshot.jpg /pasv /binary /quit
```


COMMAND	DESCRIPTION/SYNTAX	RFC
LIST	List file information in current/specified directory. Usage: LIST [<sp> pathname] <CRLF>	959
NLIST	List file names. Usage: NLIST [<sp> pathname] <CRLF>	959
CWD/XCWD	Change working directory. Usage: CWD/XCWD <sp> directory <CRLF>	959
CDUP/XCUP	Change to parent directory. Usage: CDUP/XCUP <CRLF>	959
PORT	Specify remote IP address for data transfer (server to client). Usage: PORT <sp> b0, b1, b2, b3, b4, b5 <CRLF>	959
PASV	Passive data transfer (client to server). Usage: PASV <CRLF>	959

COMMAND	DESCRIPTION/SYNTAX	RFC
TYPE	Set representation type. Usage: TYPE <sp> [A I L 8 N T AN AT] <CRLF>	959
ALLO	Allocate storage space (ignored). Usage: ALLO <sp> filesize <CRLF>	959
STOR	Store (upload) file. Usage: STOR <sp> filename <CRLF>	959
STOU	Store unique file. <i>The server will generate and return a filename in the reply.</i> STOU <CRLF>	959
APPE	Append file. Usage: APPE <sp> filename <CRLF>	959
RETR	Retrieve (download) file. Usage: RETR <sp> filename <CRLF>	959
PWD/XPWD	Print working directory. Usage: PWD/XPWD <CRLF>	959
ABOR	Stop current operation. Usage: ABOR <CRLF>	959
USER	Set username. Usage: USER <sp> username <CRLF>	959
PASS	Set password. Usage: PASS <sp> password <CRLF>	959
ACCT	Set account (ignored). Usage: ACCT <sp> account-info <CRLF>	959
DELE	Delete file. Usage: DELE <sp> filename <CRLF>	959
RMD/XRMD	Remove directory. Usage: RMD/XRMD <sp> directory <CRLF>	959
MKD/XMKD	Create directory. Usage: MKD/XMKD <sp> directory <CRLF>	959

COMMAND	DESCRIPTION/SYNTAX	RFC
RNFR	Rename from. <i>Must be followed by RNTD command.</i> Usage: RNFR <sp> filename <CRLF>	959
RNTD	Rename to. Usage: RNTD <sp> filename <CRLF>	959
SYST	System command. Return host operating system information. Usage: SYST <CRLF>	959
MODE	Set transmission mode. Usage: MODE <sp> [S] <CRLF>	959
STRU	Set file structure. Usage: STRU <sp> [F R] <CRLF>	959
STAT	Status. Return information about the current operation. Usage: STAT [<sp> pathname] <CRLF>	959
REIN	Reinitialize. This command terminates a user, flushing all IO. Usage: REIN <CRLF>	959/ EXT
MDTM	Set/get file modification time. Usage: MDTM <sp> pathname <CRLF> and MDTM <sp> timevalue <sp> pathname <CRLF>	EXT
SIZE	Return the size of a file (using current representation type). Usage: SIZE <sp> pathname <CRLF>	EXT
FEAT	Feature command. Show server capabilities. Usage: FEAT <CRLF>	2389
OPTS	Options command. Allows the client to set command behavior. Usage: OPTS <sp> command [<sp> options] <CRLF>	2389

COMMAND	DESCRIPTION/SYNTAX	RFC
HELP	Display command and syntax information. Usage: HELP [<sp> command] <CRLF>	959
NOOP	No operation. Usage: NOOP <CRLF>	959
EPRT	Extended PORT command. Usage: EPRT <sp> <d><net-prt><d><net-addr><d><tcp-port><d>	2428
EPSV	Extended PASV command. Usage: EPSV [<sp> ALL] <CRLF>	2428
AUTH	Set authentication/security mechanism. Usage: AUTH <sp> [SSL TLS] <CRLF>	2228
PBSZ	Set protection buffer size. Usage: PBSZ <sp> size <CRLF>	2228
PROT	Set data channel protection level. Usage: PROT <sp> [C P] <CRLF>	2228
QUIT	Logout. Usage: QUIT <CRLF>	959