Gui-FTP

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Chapter 1

Gui-FTP

1.1 Gui-FTP 3.1

Gui-FTP V3.1, Reference Manual Coyright © 1994-1996 Kevin Preece

This is release 3.1 of the program. Deatials of the changes in this release can be found here.

Legal Stuff Copyright, licence and warranty.

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1.2 Introduction

Introduction

As its name suggests, Gui-FTP is a file transfer client implementing the internet File Transfer Protocol (FTP) as described in RFC959. It has a graphical interface to make access to its features as straightforward as possible. The section Revision History contains fuller details of the changes in this release.

Starting with version 3.1 there are various enhancements for OS 3.0 and later.

1.3 How your E-mail address is determined

How your E-mail address is determined

Your e-mail address is used as a password when you log into a site using anonymous FTP. Gui-FTP determines your e-mail address as follows:

- 1) If the tooltype "EMAIL" is defined then the value assigned to it is used as the e-mail address.
- 2) If no such tooltype is found the program looks for the environment variables USER and HOST, or if HOST is undefined, HOSTNAME. These are used to construct the address as USER@HOST or USER@HOSTNAME. For example on my system USER is set to "kev" and HOST to "qsilver.demon.co.uk", which yields the e-mail address of "kev@qsilver.demon.co.uk".

1.4 The Phone Book

The Phone Book

The phone book is a file that contains details of the sites that you connect to most often. The site name, user ID and password are stored here. The file is called "Gui-FTP.rc" and is located in the same directory as the program.

You can select up to a maximum of ten sites from this file to appear under the "Connection" menu to make connecting to these sites even simpler.

The phone book is accessed from the site details dialogue box by clicking on the small marked button to the right of the site name string gadget. Clicking on this button opens another dialogue box. Most of this dialogue box is taken up by a listview gadget. If the phone book file exists and contains entries they will be shown here. To the right of this list are four buttons "Edit", "Copy", "Add", "Delete" and "Save". At the bottom are two further buttons "OK" and "Cancel".

On the left of each entry in the list the site name is shown, and on the right, after the colon (":") the description you gave it. To use an item from the list use the scroll bar and arrows to locate the item, then either double click on the required entry or select the entry with a single click and hit the "OK" button.

To add a new entry click on "Add". A requester will be displayed for you to enter the data into. To alter details for a site, select the entry and click on "Edit". The same requester as for add will be displayed but filled with the site details. The entries in this requester are:

- Site The name or I.P. address of the site.
- IP Address The I.P. address of the site.
- Description A description of the site meaningful to you.
- User ID The user ID to use when logging into the site. If omitted it defaults to "anonymous".
- Password The password for the user ID. If omitted it defaults to your e-mail address which is determined as described earlier.
- Account Account information for the user if it is required.
- Default Dir The directory that Gui-FTP will make current whenever this site is opened
- List Command The FTP command to issue to obtain a list of the contents of a directory
- Filter The external command to run to convert a directory list into a format understood by Gui-FTP.

And three checkboxes:

- Show on Menu Checked if the entry should appear under the "Connection" menu.
- Anonymous FTP Check this item if you want to log on to this site anonymously. If this button is checked, the 'Userid', 'Password' and 'Account' fields will be disabled.

Save Password Check this item to save the password along with the other site information. If unchecked the site will not be saved. This box is disabled if the Anonymous FTP box is checked.

For details of which of these fields are used by the program and which are currently ignored see the next section on the format of this file. With the exception of "Site" all fields are optional and will take sensible default values or blank. The Format of the File

The file is stored as a plain ASCII file with a format similar to the file "ncftprc" that ncftp uses. In fact if you have such a file from ncftp you can copy it to the same directory as Gui-FTP, rename it to "Gui-FTP.rc" and Gui-FTP will happily use it. Note though that Gui-FTP does not recognise some of the keywords that ncftp uses, in particular "macdef" is not supported. Once the file is saved by Gui-FTP it will be unusable by ncftp.

The format of the file is discussed below. Each entry starts with a line containing the keyword machine and is followed by further lines each containing a single keyword and its arguments. The entry is ended when a blank line or the end of the file is encountered. There is no limit to the number of entries in this file, other than the number that can be loaded by Gui-FTP which in turn depends upon the amount of free memory your computer has.

Because the file is plain ASCII it can also be edited by a text editor or word processor if the file can be saved as ASCII text without formatting information.

Editing Using a Text Editor

If you edit the file using a text editor it must save files as ASCII text, it must not save formatting information in this file. For each entry in the phone book, each keyword must start on a line by itself and will be followed by the its parameter. Parameters must be on the same line as the keyword and may not span more than one line. A blank line or end of file marks the end of an entry.

- machine This keyword starts an entry and is followed by the name or I.P. address of the site, for example "ftp.wustl.edu" or "128.252.135.4".
- ipaddress Identifies the internet protocol address of the host. It is
 presently unused by Gui-FTP except for documentation purposes.
 If you use this field it must be in the usual dotted decimal
 notation, for example 128.252.135.4
- description Is a description of the site in a form meaningful to you. It is a string of up to 128 characters and may not continue on another line.
- user The user ID to use when logging into the site. This need not be specified, and if omitted you will be prompted for it at the appropriate time.
- password The password for the user ID. This is in plain text so I recommend that you take steps to protect this file, perhaps encrypting it with PGP, if it contains sensitive passwords. If you omit this entry and the named user ID requires a password you will be prompted for it at the appropriate time.
- dir The initial directory that Gui-FTP will place the program in when this site is opened.

account Account information if required. Omit this entry if a site does

not need an account before it allows access.

- filter The name of a program or script that will convert a directory list from the format sent by the host to the format understood by Gui-FTP. This feature is described in detail below.
- listcommand Allows you to specify which FTP command to use to obtain a listing of a directories contents. Using this feature also allows additional arguments to be passed to the remote program. If unspecified the "LIST" command is used. This is for advanced FTP users.
- onmenu Specifies that this item should appear under the "Connection" menu. It takes no arguments.
- anonftp Specifies that this site will use anonymous FTP. The 'password' 'user' and 'account' fields are ignored if this keyword is encountered.

An example entry might be: machine ftp.wustl.edu ipaddress 128.252.135.4 description Main Aminet site, University of St Louis user ftp password kev@ onmenu

machine ftp.demon.co.uk
 description Demon UK
 onmenu
 anonftp

In the first example user and password have been specified, but they could have been omitted and would have taken the values "anonymous" and your e-mail address respectively.

A sample file is supplied which contains entries for the main Aminet site "ftp.wustl.edu" and its world-wide mirror sites. A couple of other sites that are good sources for Amiga programs can also be found in the file.

1.5 Filters

Filters

Filters are programs or scripts that convert a directory listing sent by a host into a format understood by Gui-FTP. Some example filters written in ARexx are supplied in the REXX sub-directory. The mechanism of data transfer and the requirements that the filter program must meet are discussed below.

Data is passed between Gui-FTP and the filter program using two pipes, one to pass data to, and one to receive data back from the filter program. In the following discussion PIPEA is the pipe that Gui-FTP uses to pass data to the filter program, and PIPEB is the pipe used to pass data back to Gui-FTP. Also, a line of data is taken to mean a sequence of zero or more characters terminated with a newline character. The filter is started as a shell process that runs asynchronously with Gui-FTP and it has its standard input stream redirected to read from PIPEA and its standard output stream redirected to write to PIPEB.

For each line of data that Gui-FTP receives from the host one line of data is written to PIPEA. The filter program should rearrange the data to a form acceptable to Gui-FTP and write a line of data, to PIPEB. If the host sends more than one line of data for each file (or subdirectory) in the directory being read, the filter program must store each line it receives until it has enough information to provide Gui-FTP with the information that it needs. The filter program continues until it detects an end-of-file condition on its standard input stream.

Don't forget that if the filter program accumulates several lines of data for each one it writes that there may be lines stored for which nothing has yet been sent to Gui-FTP and therefore it may need to write one more record to PIPEB after detecting the eof condition.

Gui-FTP expects each line of date written to PIPEB to conform to the following format:

duuugggooo D owner group size mmm dd time year name
-=== +
+ File name
+ date/time file was last changed
+ file size in bytes
+ group that has special priviliges (ignored)
+ owner of the file (ignored)
+ worlds read/write & execute attributes
+ groups read/write & execute attributes
+ owners read/write & execute attributes
+ file type:
d = directory,
l = link,
p = named pipe,
s = socket,
c = character special file,
b = block special file
- = normal file
For example:

 -rwxrwxrwx 1 ftp
 ftp
 132553 Jan 12 12:05 Gui-FTP

 -rwxrwxrwx 1 ftp
 ftp
 652 Jul 24 1995 Gui-FTP.info

 drwxrwxrwx 1 ftp
 ftp
 0 Jan 11 22:42 REXX

If you develop filters for other systems that are not included in this distribution, please send me a copy so that I can include it with the next program release.

1.6 Automatic Conversions

Automatic Conversions

The automatic conversion facility allows actions to be performed on downloaded files based on the files "suffix". Suffix is used in a broad sense here because it can in fact be the full filename, and not just a sequence of characters that appear at the end of the filename. For example you might want to specify that whenever a file called "README" is downloaded a file viewer is started so that it can be read. Or you might want to automatically unpack archive files.

The file "Gui-FTP.magic" specifies these conversions. They are entered as one line for each conversion. Gui-FTP searches the file from top to bottom looking for the first entry that matches, which means that if several similar suffices are used they must be listed starting with the most specific and ending with the least. Wildcards are not currently supported.

On each line there are three entries.

- The suffix that Gui-FTP will attempt to match.
- Either "YES", "NO" or "ASK". It allows you to specify whether the conversion should be applied silently, not applied at all, or whether confirmation should be requested before applying it. ASK is currently unsuported and acts as though NO were specified.
- The command to perform the conversion allong with any switches the command needs. The name of the downloaded file will be appended to the end of the command line. If the command is not in the execution path the command name must include the full path. Comment lines may be included. Any line that starts with a "#" will be ignored. An example follows.

```
# 'Magic' file for Gui-FTP
#
# This file contains actions that will be applied to downloaded files if
# the file extension matches one of those in the list. Note that a file
# 'extension' may infact be a complete filename, as in the later examples.
# Lines starting with a ^{\prime}#^{\prime} are comments. Comments are NOT allowed on
# the same line as a conversion.
#
# column 1 = extension e.g. '.lha'
# column 2 = whether to perform action
#
                yes = always
#
                no
                    = never
                ask = ask for confirmation first (not implemented)
#
# column 3 = command to perform
#
#----
.lha
                   lha x
            yes
                   lha x
.lzh
            yes
                   lzx x
.lzx
            yes
.zip
            yes
                   unzip
                   gzip -d
            yes
• Z
                   gzip -d
.Z
            yes
.tar.gz
                  ungztar
            yes
            yes
                   gzip –d
.gz
            yes
                  work:graphics/fastjpeg/fjpeg
.jpg
                   work:graphics/fastjpeg/fjpeg
.jpeg
            yes
```

.gif	yes	zgif	
.guide	yes	multiview	screen
.txt	yes	pmore	
README	yes	pmore	
readme	yes	pmore	
recent	yes	pmore	
RECENT	yes	pmore	

The command is started as a shell process that runs asynchronously with Gui-FTP and can be used even when Gui-FTP is busy. Commands started in this way are not terminated automatically when Gui-FTP exits.

1.7 Tips and Tricks

Tips and Tricks

This section describes some techniques you can use to make your FTP sessions more productive. Whether or not these tips work for a particular site depends on the software that site uses as its server, in particular not all sites fully implement RFC959. Others do implement the RFC and add extra features of their own.

You should read any documentation provided by the server site to see whether the features mentioned below are supported, and whether it provides other facilities besides.

(De)Compressing a File Prior to Download

Not all files are stored in a compressed form, README files, for example are usually held in their plain text form so that no decompression software is needed by the downloader in order to read it. These files take longer to download than their compressed versions. Some sites are configured to allow files to be compressed or decompressed at the server end before transmission to the client. Whether or not compression or decompression is performed depends on the suffix added to or removed from the file name. Typical siffices are:

.Z used 'compress' to compress the file. .gz use 'gzip' to compress the file. .tar use 'tar' to collect file(s) into a single archive file.

The suffices can usually be combined and are applied left-to-right. For example adding '.tar.gz' would collect the file(s) into a single tar archive, then compress the archive using 'gzip'. The compressed archive is transmitted.

For example, assume that the host contains a file called 'README' and that there is no file called 'README.gz' in the same directory. Specifying a filename of 'README.gz' should be downloaded would cause the server to compress the file 'README' with gzip before tramsission.

To use this feature with Gui-FTP:

Select the file in the remote list.
 Click on the 'Get' button - the dialogue is pre-filled with the selected

4) Click on the 'Ok' button.

Notes:

- The host is usually unable to determine the size of a file compressed 'on-the-fly' and so it's size, and therefore the time remaining, are normally shown as 'Unknown'.
- 2) You need the appropriate software to decompress the files. Versions of 'compress', 'gzip' and 'tar' can be found on aminet in the 'util/arc' and 'util/pack' directories. (gzip can uncompress '.Z' and '.gz' files). Read the documentation with these packages for their use.

Downloading a complete directory

This is an extension to the above. An entire directory can be collected into a tar archive, compressed and then transmitted:

Select the directory.
 Click on the 'Get' button.
 Add '.tar' or '.tar.gz' as the suffix (see below).
 Click on 'Ok'.

Once the file transfer is complete you can run the de-archiving tools to recover the individual files. Apply the tools in order, reading the suffices from right to left. E.g. for a file with '.tar.gz' as the suffices', run gzip first to decompress the file, then tar to 'untar' the individual files.

Whether you should use '.tar' or '.tar.gz' as the suffix depens on the contents of the directory. If all files are already compressed use '.tar' since additional compression will result in little or no decrease in file size (or may actually increase it slightly). If any or all the files are uncompressed use '.tar.gz'.

1.8 Troubleshooting

Troubleshooting

If you are having trouble with Gui-FTP this section may help.

- Problems with hard epu and xpk disk compression. If you are using either of these and you see errors such as 'Cannot create local file' when downloading then this is probably the cause. Don't download to a disk with epu or xpk compression.
- The cursor is always displayed in low-resolution and looks chunky in high-resolution modes. This is because I'm working from the 2.04 RKM's
- Some people have reported problems with the connection being dropped immediately after logging in successfully. A message in the log reports:

"": command not understood.

Investigation showed that the file "ENV:HOST" contained two lines - the first had the correct host name; the second was blank. Editing the file so that it contained no new-line after the host name cured the problem.

1.9 Credits

Credits Thank you go to the following people:

- Marcel Offermans & Frank Groen For EAGUI (Environment Adaptive Graphical User Interface) which made the task of making the main display resizable and font adaptive a lot easier than it otherwise would have been. EAGUI V3.0 is available from Aminet in dev/gui.
- The beta testers for allowing a (simetimes) unstable program onto their machines.
- Everyone who mailed me with suggestions, good and bad. Please keep them coming.

1.10 For The Future

For The Future

Below is a list of features, in no particular order, that I want to add to future versions of this program. It is by no means an exhaustive list, since it contains only (what I consider) the most important features missing at the moment. Note that I will I commit myself to adding all (or even any) of these features.

If you have any ideas about what is missing and it's not in the list below, feel free to contact me.

- 1. Wildcard patterns on at least the remote directory listing to limit the number of files listed.
- 2. Gui-fy the programs options.
- 3. Allow multiple selections in the directory lists.
- Multitask the directory lists, i.e. allow scrolling up/down them even as they are being built.
- 5. Multi-lingual support.