

# USERS GUIDE FOR THE ENTERPRISE FTP SERVICE<sup>1</sup>

## INTRODUCTION

The USGS Enterprise FTP service will allow secure anonymous file exchanges between the USGS and the general public. It will specially benefit users who do not have access to a public FTP server. The use of this centrally managed FTP service is also recommended for users that exchange large files (over 1MB in size). Sharing small files (less than 1MB) is commonly done over email. Please keep in mind, large attachments may also fail in transmission or be rejected at the receiving mail server or may cause recipients email to go over their quota.

This enterprise service will also help the USGS comply with DOI mandates and security best practices.

## ACCESSING THE FTP SERVICE

There is no need to request access; any USGS employee or contractor can use the service from any computer within the USGS network or a computer connected through the USGS VPN service. The enterprise FTP service involves two servers:

**ftpint.usgs.gov** is located in the USGS intranet and is available for USGS access only.

**ftpext.usgs.gov** is located in a Bureau managed DMZ and is accessible by the public. Certain directories on the Enterprise FTP service allow file exchanges between USGS (ftpint.usgs.gov) and the public (ftpext.usgs.gov). Please see the section “Explanation of Directories” in this document or the document “Quick Start for the USGS Enterprise FTP Service”. Files can be placed on the (ftpint.usgs.gov) enterprise FTP server in two ways, anonymous FTP and encrypted rsync.

### Anonymous FTP

Using an FTP client, individual users will be able to log in as anonymous to transfer files. Most networked computers have a basic FTP client usually available through the command prompt. Other programs such as Microsoft Internet Explorer, WS\_FTP and SmartFTP can also be used.

### Encrypted rsync

The rsync process is an automated process that moves files from a designated computer in your LAN to a specific directory on the enterprise FTP server. This approach requires prior configuration by a systems administrator at your site. Please consult your local IT staff to determine if this approach is currently in use at your office. For configuration instructions see the document, “Configuring rsync for file transfer to ftpint.usgs.gov”.

## GENERAL INFORMATION

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<sup>1</sup> Version 14 – 9/8/05

- No backup service is provided for data on the enterprise FTP servers. Users must maintain local backup copies of all files posted to these servers.
- To download a file from the “from\_pub” or “private” directories, the user needs to know the complete path and name of the file to be downloaded, since directory browsing is turned off.
- This service is for USGS work related files and data only.
- If the data or a file posted on the enterprise FTP server is placed under the “pub” directory (in other words, posted for public access) the data or file must have received all the appropriate USGS approvals for general public consumption.
- Files, in the “pub” directory, are synchronized to the public FTP server (ftpext.usgs.gov) every 5 minutes.
- Large stagnant data sets should not be placed on the enterprise servers, but instead be made available via a web server.
- All connections, uploads, downloads and transactions are logged and monitored on both servers.

## EXPLANATION OF DIRECTORIES

There are three top-level directories on the ftpint.usgs.gov server: **pub**, **private** and **from\_pub**. The following is an explanation of each directory.

### pub

Files put under this directory are copied to the public FTP server every 5 minutes. Users must ensure the appropriate approval process was followed to classify files posted to this directory as “public” documents. The files dropped off (or synchronized) in the pub area of ftpint.usgs.gov, can be picked-up by the public from ftpext.usgs.gov.

The directory structure is in the following format:

/pub/region/state/city

Under the city directory, individual directories should be created for each project/office to maintain organization. For example, the public data directory for the Yucca Mt. Project in Denver, Colorado would look like this:

Example:     /pub/cr/co/denver/yucca

Directories with discipline names exist at the same level as regional directories. Within the discipline directory you will find two other directories *software* and *temp\_pub*. Only authorized discipline personnel can modify the *software* directories. They contain data that is relevant to the entire discipline nationwide. Users will not be allowed to upload data into these directories but downloads are usually allowed.

Example:     /pub/water/software

The other directory, *temp\_pub*, is available for USGS employees to drop-off files which will remain hidden. This area is useful when you want to share a file with a partner or cooperator without making it available to the rest of the world. The person picking up the file will need to know the exact filename. Files in this area will be automatically deleted after 90 days.

**IMPORTANT NOTE: For all files posted under the “pub” directories, users must ensure the appropriate approval process was followed to classify them as “public” documents. The use of 128 bit encryption software such as PGP is recommended when applicable.**

### **from\_pub**

Files dropped off by the public (and cooperators/partners) are located in this directory. They may drop-off files onto ftpext.usgs.gov under a regional directory.

Example:     /from\_pub/er

The public cannot list the contents of this directory. Once the file is uploaded to the ftpext.usgs.gov server, the files are scanned for viruses, mirrored to the ftpint.usgs.gov server and immediately removed from the ftpext.usgs.gov server. Any computer within the USGS network or connected through the USGS VPN service, can connect via anonymous FTP to the ftpint.usgs.gov server to retrieve the files located in the “from\_pub” directory. Files will be automatically deleted after 4 days. The “from\_pub/region” directories on ftpint.usgs.gov cannot be listed. To retrieve files, the exact path and file name must be known.

### **private**

Files put under this directory are for file exchanges within the USGS. This directory is not accessible by the public, it is only located on the ftpint.usgs.gov server, which is only accessible to other **intranet** hosts.

Example:     /private/er

The region directories are not browse-able for security purposes. To retrieve a file, users must know the exact path and file names. Files placed in this directory will be automatically deleted after 90 days.

## **TRANSMISSION METHODS**

There are two methods to transfer files to the Enterprise FTP Service, anonymous FTP and encrypted rsync. For sites that do not have rsync setup to mirror local FTP directories to the central FTP Service, there are two easy ways to drop-off and pick-up files anonymously. Using FTP within Microsoft Internet Explorer or using FTP from the command line. When making multiple files available for download, please compress all of the files into one downloadable file using zip or tar.

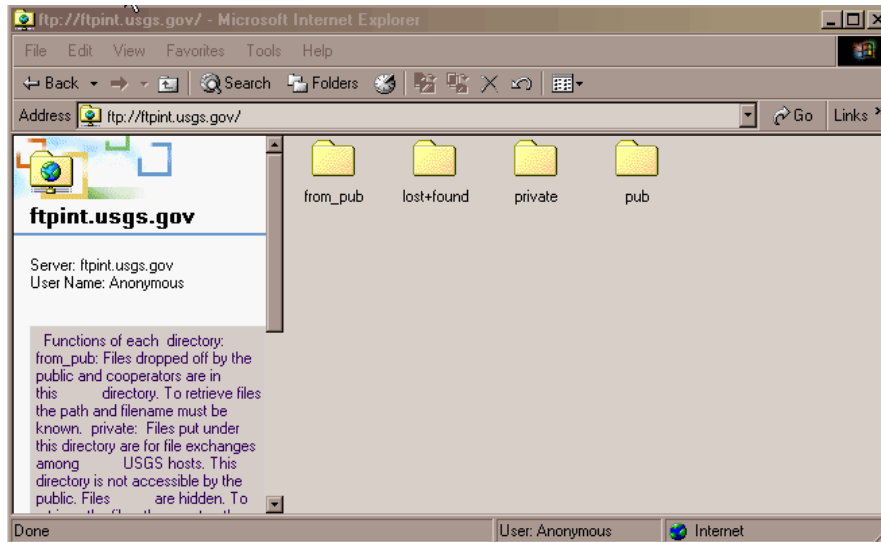
### **Using FTP with MS Internet Explorer.**

Every Microsoft 2000/XP workstation has Internet Explorer (IE) included with the operating system.

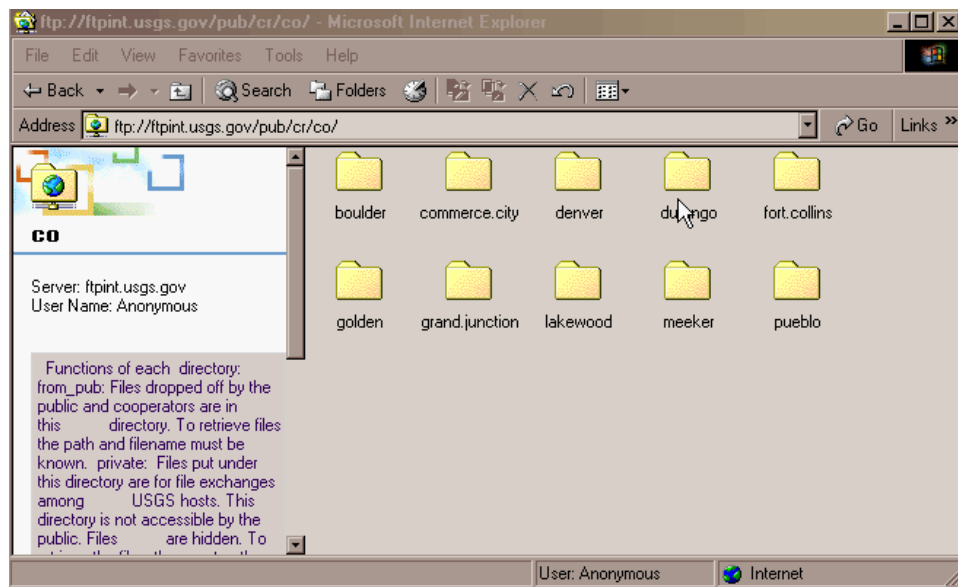
1. Organize the files you want to transfer. Create a folder, with a descriptive name, on your local machine and put all files to be transferred in this folder.
2. Start Microsoft Internet Explorer.



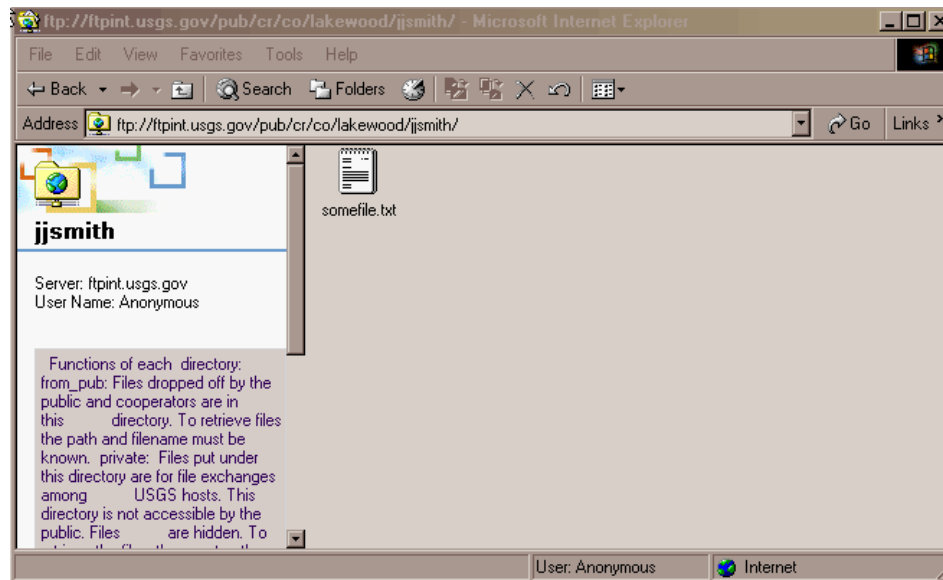
3. In the address field type: **ftp://ftpint.usgs.gov**  
(NOTE: only USGS hosts have access to this server.)



4. Double click on “pub” then your “region”, your “state” and your “city”.



5. Drag and drop the file you want to upload (from step 1) into the Internet Explorer window.



Within 5 minutes the file(s) will be available to the public on **ftptext.usgs.gov**. Email the entire path and folder/file name to whomever you want to retrieve the file(s).

For example:

`ftp://ftptext.usgs.gov/pub/cr/co/lakewood/jjsmith/somefile.txt`

### Using FTP from a command prompt

Most operating systems have a command prompt FTP client installed by default. The **bolded** words below are FTP commands. The words in *italics* depend on the directory names and file names being transferred.

(To open a DOS window on a Windows 2000 / XP machine: Start → Run → Type **cmd**, click OK)

**ftp** ftpint.usgs.gov

Enter "anonymous" as the userid

Enter your email address as the password.

**cd** pub/*region/state/city*

**mkdir** *myofficedir*

**cd** *myofficedir*

**put** *myfile*

**quit**

- Go to the appropriate directory under pub
- If it does not exist, make a directory for your project/office.
- Change to the directory you just created.
- Upload you file to the central server.
- Type **quit** or **bye** to exit the program.

The following is an example of an **upload** using the FTP client from a DOS command line. What you see on your screen may vary depending on the FTP client you are using. In this example the file "funetest.lft" is uploaded into the Eastern Region, Florida, Gainesville East directory.

C:\ftp ftpint.usgs.gov

```
Connected to ftpint.usgs.gov.
220-#####
220-# This is a United States Government computer system, maintained #
220-# by the Department of the # Interior, to provide Official #
220-# Unclassified U.S. Government information only. #
220-# Use of this system by any authorized or unauthorized user #
220-# constitutes consent to monitoring, retrieval, and disclosure #
220-# by authorized personnel. #
220-# #
220-# USERS HAVE NO REASONABLE EXPECTATION OF PRIVACY #
220-# IN THE USE OF THIS SYSTEM. #
220-# Unauthorized use may subject violators to criminal, #
220-# civil, and/or disciplinary action. #
220-#####
220
User (ftpint.usgs.gov:(none)): anonymous
331 Please specify the password.
Password:
230-
230-
230- from_pub: Files dropped off by the public and cooperators are in this
230- directory. To retrieve files the path and filename must be known.
230-
230- private: Files put under this directory are for file exchanges among
230- USGS hosts. This directory is not accessible by the public. Files
230- are hidden. To retrieve the files, the exact path and filename
230- must be known.
230-
230- pub: Files put under this directory are copied to the PUBLIC anonymous
230- FTP server every 5 minutes. Users must ensure the appropriate
230- approval process was followed to classify files posted to this
230- directory as PUBLIC DOCUMENTS.
230- The files dropped off on this server, are picked-up by the public
230- from ftpext.usgs.gov.
230-
230 Login successful.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
from_pub
lost+found
private
pub
226 Directory send OK.
ftp: 36 bytes received in 0.03Seconds 1.20Kbytes/sec.
ftp> cd pub/er/fl
250 Directory successfully changed.
ftp> cd gainesville.e
250 Directory successfully changed.
ftp> put c:\funetest.lft
200 PORT command successful. Consider using PASV.
150 Ok to send data.
226 File receive OK.
ftp> ls -l
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
-rw----- 1 14 50 0 Jan 09 21:02 funetest.lft
drwxr-xr-x 2 14 50 4096 Jan 08 18:21 journal
drwxr-xr-x 2 14 50 4096 Jan 08 18:21 test6
226 Directory send OK.
ftp: 198 bytes received in 0.02Seconds 9.90Kbytes/sec.
ftp>
```

The following is an example of a **download** using a command line FTP client. In this example the file “funetest.html” is being downloaded to the C: drive on your PC.

**NOTE: Files will be downloaded into the directory where you initiated the FTP command.**

```
C:\ftp ftpint.usgs.gov
Connected to ftpint.usgs.gov.
220-#####
220-# This is a United States Government computer system, maintained  #
220-# by the Department of the # Interior, to provide Official      #
220-# Unclassified U.S. Government information only.                #
220-# Use of this system by any authorized or unauthorized user      #
220-# constitutes consent to monitoring, retrieval, and disclosure    #
220-# by authorized personnel.                                       #
220-#                                                                #
220-# USERS HAVE NO REASONABLE EXPECTATION OF PRIVACY                #
220-# IN THE USE OF THIS SYSTEM.                                     #
220-# Unauthorized use may subject violators to criminal,            #
220-# civil, and/or disciplinary action.                             #
220-#####
220
User (ftpint.usgs.gov:(none)): anonymous
331 Please specify the password.
Password:
230-
230-The directories explained:
230-
230- from_pub: Files dropped off by the public and cooperators are in this
230- directory. To retrieve files the path and filename must be known.
230-
230- private: Files put under this directory are for file exchanges among
230- USGS hosts. This directory is not accessible by the public. Files
230- are hidden. To retrieve the files, the exact path and filename
230- must be known.
230-
230- pub: Files put under this directory are copied to the PUBLIC anonymous
230- FTP server every 5 minutes. Users must ensure the appropriate
230- approval process was followed to classify files posted to this
230- directory as PUBLIC DOCUMENTS.
230- The files dropped off on this server, are picked-up by the public
230- from ftpext.usgs.gov.
230 Login successful.
ftp> cd from_pub/er
250 Directory successfully changed.
ftp> get funetest.html
200 PORT command successful. Consider using PASV.
150 Opening BINARY mode data connection for funetest.html (151 bytes).
226 File send OK.
ftp: 151 bytes received in 0.00Seconds 151000.00Kbytes/sec.
ftp> bye
221 Goodbye.
```

## SUMMARY

This User's Guide was written to outline the services offered by the USGS Anonymous FTP service. Additional information on the mandates that started the Enterprise FTP service effort and technical overview documents can be found at <http://itsot.usgs.gov/ftp.html>.