

WMO Publication No. 386 Manual on GTS (2009 edition)

Attachment II-15 OPERATIONAL PROCEDURES FOR THE GTS p.23-24

Local rules of GISC Tokyo's file uploading service are indicated in red.

FTP Procedures

Introduction

FTP (File Transfer Protocol) is a convenient and reliable method for exchanging files, especially large files.

The protocol is defined in RFC 959.

The main issues to be considered are:

1. Procedures for accumulating messages into files so as to minimise FTP overheads with short messages (applies only to existing message types);
2. File naming conventions for existing message types (existing AHL);
3. General file naming conventions;
4. File renaming;
5. Use of directories;
6. Account names and passwords;
7. FTP sessions;
8. Local FTP requirements;
9. File compression.

Accumulating messages into files

One of the problems with using FTP to send traditional GTS messages is the overhead if each message is sent in a separate file. To overcome this problem, multiple messages in the standard GTS message envelope should be placed in the same file according to the rules set out below. This method of accumulating multiple messages applies only to messages for which AHLs have been assigned.

Centres have the option of including or deleting the Starting Line and End of Message strings and indicating which option they are using via the format identifier (refer to points 2 and 4 below).

1. Each message should be preceded by an 8 octet message length field (8 ASCII characters). The length includes the Starting Line (if present), AHL, text and End of Message (if present).
2. Each message should start with the currently defined Starting Line and AHL as shown in Figure 4.2.
3. Messages should be accumulated in files thus:
 - (a) Length indicator, message 1 (8 characters);
 - (b) Format identifier (2 characters);
 - (c) Message 1;
 - (d) Length indicator, message 2 (8 characters);
 - (e) Format identifier (2 characters);
 - (f) Message 2;
 - (g) And so on, until the last message;

~~(h) If necessary, and subject to bilateral agreement, a 'dummy' message of zero length may be inserted after the last real message, to assist with end of file detection in certain MSS systems. This requirement does not exist in most cases and need only be implemented where necessary, and agreed between centres. This option is prohibited.~~

4. Format identifier (2 ASCII characters) has the following values:

(a) 00 if Starting Line and End of Message strings present;

~~(b) 01 if Starting Line and End of Message strings absent (not preferred, to be discontinued).~~

5. The sending centre should combine messages in the file for no more than 60 seconds to minimize transmission delays; this limit should be set to a value depending upon the characteristics of the link.

6. The sending centre should limit the number of messages in a file to a maximum of 100; this limit should be set to a value depending upon the characteristics of the link.

7. The format applies regardless of the number of messages, i.e. it applies even if there is only one message in the file.

Message 1 length (8 characters)	Format Identifier 00	SOH	CR	CR	LF	nnn	CR	CR	LF	Heading	Text	CR	CR	LF	ETX	Message 2 length (8 characters)
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Starting line and end of message present.

Message length: Length from SOH to ETX (e.g. 00001826 = 1826 bytes)

Figure 4.2. Structure of a typical message in a file

File naming conventions for existing message types (existing AHL)

The file naming convention is:

CCCCNNNNNNNN.ext

where:

CCCC is the international four letter location identifier of the sending Centre, as defined in WMO publication No. 9, Volume C;

NNNNNNNN is a sequential number from 1 to 99999999 generated by the sending Centre for each data type determined by ext; 0 is used for (re-) initialization; through bilateral agreement, ~~Centres may use NNNN- instead of NNNNNNNNN in case of limitation on filename length.~~

ext is

'ua' for urgent alphanumeric information

'ub' for urgent binary information

'a' for normal alphanumeric information

'b' for normal binary information

'f' for facsimile information: ~~Files can be received, but will be discarded.~~

Note: ~~Where, through bilateral agreement,~~ Centres allow alphanumeric and binary data in the one file, the b or ub extent shall be used. ~~This option is allowed.~~

General file naming convention using pflag is not allowed.