GIFS Open Access RMTN User Guide (8/1/2012)

File Service. The Global Telecommunication System (GTS) Internet File Service (GIFS) is a service for World Meteorological Organization (WMO) Regional Association IV (RA-IV). GIFS provides global and regional hydro-meteorological products via a file server, to remote users 24 hours a day, 7 days a week.

GIFS URL: https://ra4-gifs.weather.gov/data/

GIFS does not visualize or process data. Visualization and processing of GIFS products and data requires additional software. A list of known commercial suppliers of software is available from the SADIS Website:

http://www.metoffice.gov.uk/aviation/sadis/manufacturers/manufacturers-full

Protocol. GIFS uses Hypertext Transfer Protocol Secure (HTTPS) protocol for secure telecommunication connections and file transfers.

GIFS Interfaces. GIFS provides users the option of using two interfaces – a web browser Graphical User Interface (GUI), and a command line interface. The web browser GUI enables users to navigate through the GIFS directory structure and select files to download; files are downloaded using HTTPS. The command line interface allows users to issue the appropriate Wget commands to receive directory listings and download files. The command line interface can be scripted to automate user sessions and service activities.

File "Pull" Service. GIFS is a file pull service in that data is received only in response to remote users actively requesting the data. Wget, a free software non-interactive command line tool is to be implemented by remote users to automate information and file retrieval from GIFS.

GNU Wget 1.13.4 Manual: http://www.gnu.org/software/wget/manual/wget.html

Data Format. The GIFS file formats are listed in the GIFS WMO Product Association Table at the end of this Guide, and include the following:

(a) Alphanumeric text format.
(b) Portable Network Graphics (PNG) format.
(c) Binary Universal Form for the Representation of meteorological data (BUFR) format [FM 94 BUFR].
(d) GRIdded Binary edition 1 (GRIB1) format.
(e) GRIdded Binary edition 2 (GRIB2) format.
(f) T4 Facsimile (or T4 Fax) format.

File Persistence. Files are available on GIFS for up to 48 hours following their initial arrival onto the file server.

GIFS File Naming Conventions. WMO products stored on the GIFS file server are assigned file names according to the following conventions. The file naming convention used in each of the GIFS directories is identified in the GIFS Directory Structure listing, immediately following this section.

Individual Product Files. Individual WMO hydro-meteorological products are stored as files on the GIFS file server. Naming conventions generally include a portion or all of the products abbreviated WMO header information. The file naming convention for an individual product is:

T1T2 A1A2ii _CCCC_ddhhmm[_BBB]

Where:

T1T2 A1A2ii = WMO data designators.
CCCC = International four-letter location indicator of the station or center originating or compiling the bulletin
yyyy = Year
dd = Numeric day of the month
hh = Hour (00-23)
mm = Minute (00-59)
BBB = Indicator of an addition, a correction or an amendment to an existing bulletin; "_BBB" appears only when the product contains the addition, correction or amendment

Time-Sequenced Concatenated Files. Time-sequenced concatenated files are created by bundling all GIFS text-formatted baseline products received from the GTS during a particular period of time into a single file. The applied parameters and file naming convention are as follows:

- Minute Files. Minute files capture products received during a 60 second interval for each minute of each hour in the day. The 14:00 file (hh:mm) for example, contains products received from 14:00:00 (hh:mm:ss) to 14:00:59; the 14:01 file contains products received from 14:01:00 (hh:mm:ss) to 14:01:59; and so on. The date and time identified in the file names are Coordinated Universal Time. The file naming conventions for minute files are:

  ddhhmm**_RMTN**

- Hourly Files. Hourly files capture products received during a 60 minute interval, commencing at the top of the hour (at 00 minutes, 00 seconds) and ending at the end of the hour (at 59 minutes, 59 seconds) for each hour in the day. The respective parent directory name (RMTN/OPMET/OTHER) appears in the file name. For hourly files, the file naming convention is:

  RMTN_TEXT_HOURLY_ddhh**00**

- Rolling Files. The rolling files span a 5, 30 and 60 minute contiguous time period. Information in the files, however is updated incrementally at a rate that is a fraction of the file's continuous time period For example, the rolling 5 minute file is updated every minute. This means that at the top of the minute, all recent messages received in the last minute (from 00 to 59 seconds) are added to the file, and the oldest minute of messages are removed from the file. Thus at any point in time, the rolling five minute file contains the most recent set of products over the last continuous 5 minute period (to the nearest whole minute). The 30 and 60 minute rolling files are similarly generated and stored on GIFS. As the file is updated, it overwrites the old file, so only one file exists at any one time. The rolling file file-naming conventions are:

  (a) Hourly: **H01_RMTN**
  (b) 5-Minute: **M05_RMTN**
  (c) 30-Minute: **M30_RMTN**
  (d) 60 Minute: **M60_RMTN**

- Forecast Hour Concatenated Files. GRIB1 and GRIB2 files are forecast weather products which present expected weather conditions at a point in time "X" hours ahead of the forecast's effective date and time. GRIB1 products extend from the effective forecast time from 0 (nowcast) to 168 hours in 6 or 12 hour increments. GRIB2 products extend from the effective forecast time from 6 to 36 hours in 3 hour increments. Several individual GRIB products exist at any given forecast hour and are concatenated into a single file. Forecast hour concatenated file names take the following form:

  yyyymmdd_hhmm**f**zz[z]

  - For GRIB1, zz[z] is the forecast hours of: 00, 06, 12, 18, 24, 30, 36, 42, 48, 60, 72, 84, 96, 108, 120, 132, 144, and 168.
  - For GRIB2 , zz[z] is the forecast hours of: 00, 03, 06, 09, 12, 15, 18, 21, 24, 27, 30, 33, and 36.

GIFS Directory Structure :

RMTN

- ADMIN*[A]
- ALL_TEXT_HOURLY*[B]
- ALL_TEXT_MINUTE*[C]
- ALL_TEXT_ROLLING*[D,E,F,G]
- ANLZ_CLIMATE*[A]
- BUFR[A]
- FCAST*[A]
- GRIB_EXTENDED[H]
- PIC[A]
- RADAR[A]
- SAT*[A]
- SURFACE*[A]
- WARN*[A]

NOTES:
* – Alphanumeric-text files
Bolded text indicates fixed text:
A - T_1T_2 A_1A_2ii _CCCC_ddhhmm[_BBB]
B - **RMTN_TEXT_HOURLY_**ddhh**00**
C - ddhhmm**_RMTN**
D - **H01_RMTN**
E - **M05_RMTN**
F - **M30_RMTN**
G - **M60_RMTN**
H – yyyymmdd_hhmm**f**zz[z]

GIFS WMO Product Association Table

	TT	TT Data Type	# Products	File Fmt	RMTN/
ANALYSIS & CLIMATE [ANLZ_CLIMATE] (text)	AB		10	txt	ANLZ_CLIMATE
	AC	Analysis - Cyclone	29	txt	ANLZ_CLIMATE
	AH	Analysis - Thickness	4	txt	ANLZ_CLIMATE
	AS	Analysis - Surface	3	txt	ANLZ_CLIMATE
	AW	Analysis - Weather summary	229	txt	ANLZ_CLIMATE
	AX	Analysis - Miscellaneous	2	txt	ANLZ_CLIMATE
	BM		188	txt	ANLZ_CLIMATE
	CD		3	txt	ANLZ_CLIMATE
	CS	Climatic data - Monthly means (surface)	27	txt	ANLZ_CLIMATE
	CU	Climatic data - Monthly means (upper air)	26	txt	ANLZ_CLIMATE
	CX		5	txt	ANLZ_CLIMATE
FORECAST [FCAST] (text)	FA	Forecast - Aviation area/GAMET/advisories	253	txt	FCAST
	FB	Forecast - Upper winds & temperatures	143	txt	FCAST
	FC	Forecast - Aerodrome (VT > 12 hours)	236	txt	FCAST [1]
	FK	Forecast - Tropical cyclone advisories	30	txt	FCAST [1]
	FO	Forecast - Guidance	5	txt	FCAST
	FP	Forecast - Public	239	txt	FCAST
	FQ	Forecast - Other shipping	10	txt	FCAST
	FR	Forecast - Aviation route	4	txt	FCAST
	FS	Forecast - Surface	2	txt	FCAST
	FT	Forecast - Aerodrome (VT > 12 hours)	744	txt	FCAST [1]
	FU	Forecast - Upper air	2	txt	FCAST
	FV	Forecast - Volcanic ash advisories	146	txt	FCAST [1]
	FX	Forecast - Miscellaneous	10	txt	FCAST
	FZ	Forecast - Shipping area	39	txt	FCAST
GRIB I	HE	Grid point information (GRIB) - Precipitation	78	grb1	GRIB_EXTENDED
	HG	Grid point information (GRIB) - Divergence	48	grb1	GRIB_EXTENDED
	HH	Grid point information (GRIB) - Height	1118	grb1	GRIB_EXTENDED
	HO	Grid point information (GRIB) - Vertical velocity	400	grb1	GRIB_EXTENDED
	HP	Grid point information (GRIB) - Pressure	194	grb1	GRIB_EXTENDED
	HR	Grid point information (GRIB) - Relative humidity	680	grb1	GRIB_EXTENDED
	HT	Grid point information (GRIB) - Temperature	908	grb1	GRIB_EXTENDED
	HU	Grid point information (GRIB) - Eastward wind component	1237	grb1	GRIB_EXTENDED
	HV	Grid point information (GRIB) - Northward wind component	1209	grb1	GRIB_EXTENDED
BUFR	IM		1	bufr	BUFR
	IO	Binary observation - BUFR - Oceanographic/limnographic (water properties)	2	bufr	BUFR
	IU	Binary observation - BUFR - Upper air	67	bufr	BUFR
	JU	Forecast Information - BUFR - Upper air	29	bufr	BUFR
ADMIN	NO	Notices - METNO/WIFMA	30	txt	ADMIN [1]
	NT	Notices - TEST MSG [System related]	6	txt	ADMIN
	NW	Notices - Warning related and/or cancellation	6	txt	WARN
PICTURE [PIC] (binary)	PA	Pictorial information(BUFR/binary) - Radar data	11	obfr	RADAR
	PB	Pictorial information(binary) - Cloud	5		PIC
	PC	Pictorial information(binary) - Clear Air turbulence	1		PIC
	PF	Pictorial information(binary) - Aerological diagrams (ash clouds)	53		PIC [1]
	PG	Pictorial information(binary) - Significant weather	53		PIC [1]
	PH	Pictorial information(binary) - Height	4		PIC
	PJ	Pictorial information(binary) - Wave height + combinations	3		PIC
	PM	Pictorial information(binary) - For national use	2		PIC
	PP	Pictorial information(binary) - Pressure	5		PIC
	PT	Pictorial information(binary) - Temperature	1		PIC
	PU	Pictorial information(binary) - Eastward wind component	1		PIC
	PV	Pictorial information(binary) - Northward wind component	1		PIC
	PW	Pictorial information(binary) - Wind	148		PIC
	PY	Pictorial information(binary) - Observational plot chart	28		PIC
	QA	Pictorial information regional - Radar data	1		PIC
	QH	Pictorial information regional - Height	7		PIC
	QP	Pictorial information regional - Pressure	1		PIC
	QU	Pictorial information regional - Eastward wind component	1		PIC
	QW	Pictorial information regional - Wind	1		PIC

	TT	TT Data Type	# Products	File Fmt	RMTN/
SURFACE [SURFACE] (text)	SA	Surface data - Aviation routine reports	1320	txt	SURFACE [1]
	SD	Surface data - Radar reports (parts A & B)	24	txt	SURFACE
	SE	Surface data - Seismic data	97	txt	WARN
	SI	Surface data - Intermediate synoptic hour	128	txt	SURFACE
	SM	Surface data - Main synoptic hour	334	txt	SURFACE
	SN	Surface data - Non-standard synoptic hour	46	txt	SURFACE
	SO	Surface data - Oceanographic data	34	txt	SURFACE
	SP	Surface data - Special aviation weather reports	525	txt	SURFACE [1]
	SS	Surface data - Drifting buoy reports	32	txt	SURFACE
	SX	Surface data - Miscellaneous	12	txt	SURFACE
SATELLITE [SAT] (text)	TC	Satellite data - Satellite cloud interpretations	15	txt	SAT
	TI		4	txt	SAT
	TP		55	txt	SAT
	TT	Satellite data - Sea surface temperatures	5	txt	SAT
	TW	Satellite data - Winds & cold temperatures	32	txt	SAT
UPPER AIR [UA] (text)	UA	Upper-air data - Aircraft reports	149	txt	UA [1]
	UD	Upper-air data - Aircraft reports	21	txt	UA
	UE	Upper-air data - Upper-level pressure, temperature, humidity & wind (Part D)	47	txt	UA
	UF	Upper-air data - Upper-level pressure, tempeature, humidity & wind (Parts C & D)	6	txt	UA
	UG	Upper-air data - Upper-wind (Part B)	18	txt	UA
	UH	Upper-air data - Upper-wind (Part C)	2	txt	UA
	UJ		2	txt	UA
	UK	Upper-air data - Upper-level pressure, temperature, humidity & wind (Part B)	102	txt	UA
	UL	Upper-air data - Upper-level pressure, temperature, humidity & wind (Part C)	59	txt	UA
	UM	Upper-air data - Upper-level pressure, temperature, humidity & wind (Parts A & B)	12	txt	UA
	UP	Upper-air data - Upper-wind (Part A)	5	txt	UA
	UQ	Upper-air data - Upper-wind (Part D)	9	txt	UA
	UR	Upper-air data - Aircraft reports	59	txt	UA
	US	Upper-air data - Upper-level pressure, temperature, humidify & wind (Part A)	117	txt	UA
	UX	Upper-air data - Miscellaneous	15	txt	UA
	UZ	Upper-air data - Upper-level pressure, temperature, humidity & wind from a sonde released by carrier balloon or aircraft (Parts A,B,C,D)	75	txt	UA
WARNING [WARN] (text)	WA	Warnings - Airmet	101	txt	WARN
	WB		1	txt	WARN
	WC	Warnings - Tropical cyclone (SIGMET)	185	txt	WARN [1]
	WD		6	txt	WARN
	WE	Warnings - Tsunami	78	txt	WARN
	WF	Warnings - Tornado	257	txt	WARN
	WG	Warnings - Hydrological/river flood	31	txt	WARN
	WH	Warnings - Marine/coastal flood	164	txt	WARN
	WN		1	txt	WARN
	WO	Warnings - Other	145	txt	WARN
	WP		1	txt	WARN
	WR		7	txt	WARN
	WS	Warnings - SIGMET	815	txt	WARN [1]
	WT	Warnings - Tropical cyclone (typhoon/hurricane)	285	txt	WARN
	WU	Warnings - Severe thunderstorm	303	txt	WARN
	WV	Warnings - Volcanic ash clouds (SIGMET)	332	txt	WARN [1]
	WW	Warnings - Warnings & weather summary	202	txt	WARN
	WX		1	txt	WARN
	WY		1	txt	WARN
GBIB 2	YH	GRIB regional use - Height	165	grb2	— [1]
	YR	GRIB regional use - Relative humidity	44	grb2	— [1]
	YT	GRIB regional use - Temperature	154	grb2	— [1]
	YU	GRIB regional use - Eastward wind component	154	grb2	— [1]
	YV	GRIB regional use - Northward wind component	154	grb2	— [1]
		TOTAL:	15677		

Note 1 - All or a portion of these products are identified by the US Federal Aviation Administration (FAA) for use in aviation related services, and may not appear in the directory listing. These aviation related products are available through the FAA at: http://aviationweather.gov/wifs/