Scripts

ffg

The script ffg can be used to execute the following Flash Flood Guidance System programs:

- FFGUID
- PRODGEN
- ZGRID

The command format is:

```
ffg -p progname
   [-a append_name] [-b bin_dir] [-c copy_method]
   [-f ffg_&_ofs_filesets] [-g ffg_fileset_only]
   [-h hydrologist_on_duty] [-i in_file] [-m message_filename]
   [-o out_file_prefix] [-r] [-u user] [-t] [-x]
```

The only required parameter is the program to be executed indicated by the -p option.

All other parameters are optional and will be provided values if not supplied on the command line. Available options are:

Option	Description	Default Value
-a	Append name to message filenames - enter 'date' to append date-time stamp	None
-b	Use executable bin directory indicated by: a = $ffg_dir/bin/ARCHIVE token d = $my_dir/bin token m = $mgr_dir/bin/RELEASE token ma = $mgr_dir/bin/ARCHIVE token name = path and directory	Use directory specified by token $ffg_dir/bin/RELEASE
-c	Method of copying files to append a suffix name to the message filenames: 'copy' = copy files 'move' = move files	Copy files to append filenames
-f	FFG and OFS file sets override	The file sets specified by the tokens ffg_level and ofs_level
-g	FFG file set override	The file set specified by the token ffg_level

Option	Description	Default Value
-h	Initials of hydrologist on duty	None
-i	Input control for program execution - 'auto' selects the first item in the ffguid or prodgen execution menu - 'chain' executes ffguid then prodgen and functions as 'auto'	'tty' to interact with the menu
-m	Change name of single message file which contains all the messages	ffgout (used only when a single file is specified for all messages)
-o	Output file prefix or 'tty' - files are date-time stamped and are placed in the output directory - if 'tty' is specified output is written to the terminal (use -m switch for single message file ffgout)	progname
-p	Program name	None
-r	Use alternate directories for gridded guidance(grff) and runoff (grro)	Use default directories for gridded guidance (grff) and runoff (grro)
-t	Output log information displayed to the terminal	Output to log file
-u	User name override - used to place output in the output directory other than the submitting user's	Login user name ($LOGNAME)
-x	Conduct execution check only displaying additional information but program is not executed	Program will be executed

Examples:

1. Print list of available options:

```
ffg
```

2. Run programs ffguid and prodgen:

```
ffg -p ffguid
ffg -p prodgen
```

3. Run program prodgen and append a date-time stamp to the message filenames (e.g. filename FFGABQ becomes FFGABQ.yymmdd.hhmmss):

```
ffg -p prodgen -a date
```

4. Run program prodgen and change the output filename to 'any_name' when all messages are directed to a single file (default output filename is ffgout):

```
ffg -p prodgen -m any_name
```

5. Change the filename to 'any_name' when all messages are directed to a single file and a date-time stamp (e.g. filename becomes any_name.yymmdd.hhmmss):

```
ffg -p prodgen -m any_name -a date
```

6. Use file set no_qpf for OFS and file set oper for FFG:

```
ffg -p ffguid -f no_qpf -g oper
```

7. Run programs ffguid and prodgen with no user interaction:

```
ffg -p ffguid -i chain -h abc -m any_name
```

First, ffguid runs using the menu item c (compute all). Then prodgen runs using it's menu item 1 (the first group of products). The hydrologist on duty represented by abc is appended to each message. Finally, the single file ffgout containing all messages is renamed 'any_name'.

8. Run the archive directory:

```
ffg -p prodgen -b a
   or
ffg -p ffguid -b a
```

ffg_binxmit

The script ffg_binxmit can be used to transmit binary files to AWIPS.

Tokens and parameters are defined for the AWIPS message handling application distributeProduct to transmit gridded flash flood guidance messages encoded in GRIB.

The following is the contents of script ffg_binxmit:

```
#  transmit gridded FFG to AWIPS
#  append to script that transmits SHEF FFG products to AWIPS

export FXA_HOME=/awips/fxa
. $FXA_HOME/readenv.sh

DPBIN=/awips/fxa/bin;export DPBIN
FFGGRIB=`get_apps_defaults ffg_grib_out`;export FFGGRIB
FFGA2AID='KcccFFGBIN'
#   where ccc is the old AFOS id for the RFC
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${FFGGRIB}/FFGBIN1 ${FFGA2AID}
crazy2
${DPBIN}/distributeProduct -a DEFAULTNCF -e ${FFGGRIB}/FFGBIN3 ${FFGA2AID}
crazy2
```

```
    ${DPBIN}/distributeProduct -a DEFAULTNCF -e ${FFGGRIB}/FFGBIN6 ${FFGA2AID}
crazy2
    #  end
```

The characters ‹ccc' in the line “FFGA2AID='KcccFFGBIN'” must be changed to the old AFOS identifier for the RFC.

The following entry must be included in the afos2awips.txt file for the binary flash flood guidance products:

```
    cccFFGBIN ZEGZ98 KCCC
```

where ccc is the old AFOS identifier for the RFC (same as above) and CCC is the AWIPS identifier for the RFC.

Apps Defaults Tokens

The Flash Flood Guidance System scripts and programs use the Apps Default System to set execution controls and path names (see Chapter I.2-UNIX-APPSDFLT).

The following is an example and description of each variable. The variables (tokens) to the left of the colon are defined by the expressions on the right using substitutions as needed.

```
ffg_level       : oper                              # FFG user directory
ffg_gff_level   : grff                              # Gridded FFG dir
ffg_gro_level   : grro                              # Gridded runoff dir

ffg_dir         : $(apps_dir)/rfc/ffg               # Top-level ffg

ffg_bin         : $(ffg_dir)/bin                    # FFG execution dir
ffg_rls         : $(ffg_dir)/bin/RELEASE            # FFG release dir
ffg_arc         : $(ffg_dir)/bin/ARCHIVE            # FFG archive dir
ffg_sys_dir     : $(ffg_dir)/sys_files              # FFG system files
ffg_files       : $(ffg_dir)/files                  # FFG file group
ffg_gsfiles     : $(ffg_files)/$(ffg_level)         # FFG files dir
ffg_output      : $(ffg_dir)/output                 # FFG output files
ffg_out_dir     : $(ffg_dir)/output                 # FFG output files
ffg_grib_out    : $(ffg_out_dir)/grib               # GRIB output files
ffg_scripts     : $(ffg_dir)/scripts                # FFG script files

ffg_usr_dir     : $(ffg_gsfiles)/user               # FFG user info
ffg_area_dir    : $(ffg_gsfiles)/affg               # FFG area files
ffg_cary_dir    : $(ffg_gsfiles)/cary               # Hydro model carryover
ffg_define_dir  : $(ffg_gsfiles)/define             # FFG ASCII define files
ffg_gridff_dir  : $(ffg_gsfiles)/$(ffg_gff_level)   # FFG gridded ffg dir
ffg_gridro_dir  : $(ffg_gsfiles)/$(ffg_gro_level)   # FFG gridded ro dir
ffg_gridpm_dir  : $(ffg_gsfiles)/gdpm               # grid runoff adjust parms
ffg_hwatr_dir   : $(ffg_gsfiles)/hffg               # FFG headwater files
ffg_wsup_dir    : $(ffg_gsfiles)/wsup               # FFG water supply files

ffg_group_dir   : $(ffg_gsfiles)/grpp               # FFG groups of products
ffg_prod_dir    : $(ffg_gsfiles)/prod               # FFG products files
ffg_text_dir    : $(ffg_gsfiles)/text               # FFG text files

#  FFGS program control
ffg_error_output : on                               # whether to output error
messages
#ffg_log_output  : on                               # whether to log program info

#  FFGS compile and link apps_defaults:
```

```
#ffg_ctl        : $(ffg_dir)/ctl                    # FFG control files
#ffg_inc        : $(ffg_dir)/inc                    # FFG include files
#ffg_mak        : $(ffg_dir)/mak                    # FFG makefile dir
#ffg_lib        : $(ffg_dir)/lib                    # FFG lib files
#ffg_log        : $(ffg_dir)/log                    # FFG output files
#ffg_src        : $(ffg_dir)/src                    # FFG source files

#  OFS apps_defaults used by the FFGS:
#ofs_level     : oper
#ofs_dir       : $(rfs_dir)/ofs                    # Top-level ofs
#rfs_sys_dir   : $(rfs_dir)/sys_files              # RFS sys files
#ofs_files     : $(ofs_dir)/files                  # OFS file group
#ofs_fs5files  : $(ofs_files)/$(ofs_level)/fs5files
                # OFS files dir
#ofs_error_output : on                             # whether to output error
messages
#ofs_log_output   : on                             # whether to output file r/w info
```

Directory Structure

Files:

There is a directory under the ../nwsrfs/ffg directory called files.

This directory contains one or more sets of sub-directories for parametric and computed data values. The sub-directories are:

- affg - parameters used to compute zone, county and urban area FFG based on gridded flash flood guidance
- cary - rainfall-runoff and snow model carryover values
- define - ASCII files used to define and redefine the parametric groups listed in the subdirectories above
- gdpm - grid runoff adjust parameters
- grff - gridded flash flood guidance
- grpp - groups of defined products
- grro - gridded threshold runoff values
- hffg - headwater and other gaged locations
- prod - product definitions
- text - text information appearing in products
- user - user information including options, extreme guidance values and general information
- wsup - municipal water supply

Output:

This directory contains the product output files. Products in SHEF are ready for transmission to users. Gridded products must be encoded in GRIB by a separate program. Sub-directory grib contains GRIB encoded products ready for transmission to users.