**Overview**[**¶**](https://collaborate.nws.noaa.gov/trac/ncladt/wiki/PublishingGfeGrids#Overview)

Published GFE grids are transferred to two different dissemination vehicles. Two different scripts access different configuration files to determine the contents of published Grids.

One set of grids are rsync'd with the Central Server. Those grids are used, along with your GFE configuration files that are submitted via a separate process, for GFE Service Backup. The grids on the Central Server are rsync'd with the NDFD. From NDFD, the mosaics are built at 5km resolution. Not all local elements used. Data are made available from ftp servers, downloaded by partners, others, used for NDFD XML service (2-3 million requests per day) and used to build state/region/national graphical forecasts.

The other set of grids are rsync'd to the red/white/blue NWS web farms. The farms store the data for point/click and generate the CWA graphical forecast images at the native resolution provided by the WFO.

More details regarding the overall web farm setup can be found at <https://bestpractices.nws.noaa.gov/contents/web/forecast_grids/ndfd_population.php>

When it comes time to publish grids, the entry on in the Script interface to run "Send Grids to ERH and NDFD" should be used as the normal "send" process to do both NDFD and web farm grids. This will ensure grids are updated on the NDFD site and the Internet at the same time.

The information below seeks to document these two processes.

**Central Server and NDFD**[**¶**](https://collaborate.nws.noaa.gov/trac/ncladt/wiki/PublishingGfeGrids#CentralServerandNDFD)

*ccc = your site id*

/awips/adapt/ifps/localbin/ifps-ccc.env EXPORT\_GRID settings:

|  |  |
| --- | --- |
| 0 | Grids are never sent via cronjob, publishing is always manual (not recommended) |
| 1 | Grids are packaged and once per hour via cronjob **and** they can be published manually (highly recommended setting) |
| 2 | No Longer Used |

sendGridsToNDFD (/awips/ifps/primary/bin/sendGridsToNDFD.sh) from the GFE menu creates a netcdf file in /awips/GFESuite/ws/exportgrids. Grid Elements packaged in the netcdf file are governed by a variable setting in /awips/adapt/ifps/localbin/ifps-ccc.env and a list of elements in /awips/adapt/ifps/data/svcbu\_export\_elements.ccc

/awips/adapt/ifps/localbin/ifps-ccc.env SVCBU\_TRIM\_ELEMS settings:

|  |  |
| --- | --- |
| 0 | YOUR ENTIRE FORECAST DATABASE You do not want to do this. |
| 1 | sendGridsToNDFD.sh uses elements defined in /awips/adapt/ifps/data/svcbu\_export\_elements.ccc. The minimal list of elements are currently: MaxT, MinT, T, Td, PoP, QPF, Sky, SnowAmt, SnowLevel, Wind, WindGust, WaveHeight, Swell, Headlines, Hazards |

rsync at Central Server polls for changes in grids once per minute at every site. Central Server rsyncs with NDFD servers.

**Point/click and image generation**[**¶**](https://collaborate.nws.noaa.gov/trac/ncladt/wiki/PublishingGfeGrids#Pointclickandimagegeneration)

pushGfeGrids\_to\_ERH is required to be used by all ER sites to generate CurrentFcst.ccc.cdf netcdf files, and at coastal sites Marine.ccc.cdf netcdf files, from your Official database. The netcdf files are rsync'd to the red/white/blue web farms. The netCDF files for the web farm are written to the GFESuite products/NETCDF directory. Most sites write the files to a workstation, so the actual path would be /awips/GFESuite/products/NETCDF. If files are written to a server, the path will be /awips/GFESuite/primary/products/NETCDF. At the web farms, the CWA-scale Graphical Forecast Images are created for Public, Marine and Fire Weather elements. These grids are also used for the Point and Click forecasts. The script should no longer be sending any netcdf files to ERH. The configuration file that controls the script is /home/ERH\_apps/pushGfeGrids\_to\_ERH/pushGfeGrids\_to\_ERH.config The key variables that need to be set:

doFtp=0

doRsync=1

It is possible to modify the behavior of the pushGfeGrids\_to\_ERH to reduce the elements in the resulting netcdf files, but you run the risk of leaving out an element that is needed at the web farm. The following list of 45 elements are currently used for point/click and CWA image generation: T, Td, Wind\_Dir, Wind\_Mag, Sky, MaxT, MinT, PoP, SnowAmt, WindGust, Wx, RH, WindChill and HeatIndex or ApparentT, QPF, IceAccum, SnowLevel, Hazards, pwsD34, pwsD64, pwsN34, pwsN64, CigHgt, Vsby, !TransWind\_Mag, !TransWind\_Dir, MixHgt, Haines, LAL, Wind20ft\_Mag, Wind20ft\_Dir, WaveHeight, Period, !WaveDir\_Dir, Swell\_Mag, Swell\_Dir, Swell2\_Mag, Swell2\_Dir, Period2, WindWaveHgt, LkSfcT, CLRIndx, LDSI, FreeWind. Those 45, at a minimum, should be in CurrentFcst.ccc.cdf. As for the marine elements in Marine.ccc.cdf, the following 15 are the minimum required: PoP, Wx, Wind\_Mag, Wind\_Dir, Wind\_Gust, Vsby, Sky, WaveHeight, Period, !WaveDir\_Dir, Swell\_Mag, Swell\_Dir, Swell2\_Mag, Swell2\_Dir, Period2.

When running GFE in backup mode, you will still use your version of pushGfeGrids\_to\_ERH.sh

pushGfeGrids\_to\_ERH contains a monitoring program that will alert forecasters when either the grids have not been sent to the web farm in a certain number of hours or if the publishing time is a certain number of hours older than the last time grids were sent to the web farm. Those values are controlled in the file /home/ERH\_apps/pushGfeGrids\_to\_ERH/pushGfeMonitor.config with default values of:

timeThresh\_send=8

timeThresh\_publish=1