



CONDUIT Update

Cooperative Opportunity for NCEP Data using IDD Technology

Rebecca Cosgrove

NCEP/NCO/Production Management Branch

September 15, 2014





Agenda

- Technology Refresh
- Data available today
- NOAAPORT/SBN Expansion
- Upcoming NCEP model changes
- NOAA's IDP
- User Survey
- Discussion



CONDUIT Technology Refresh

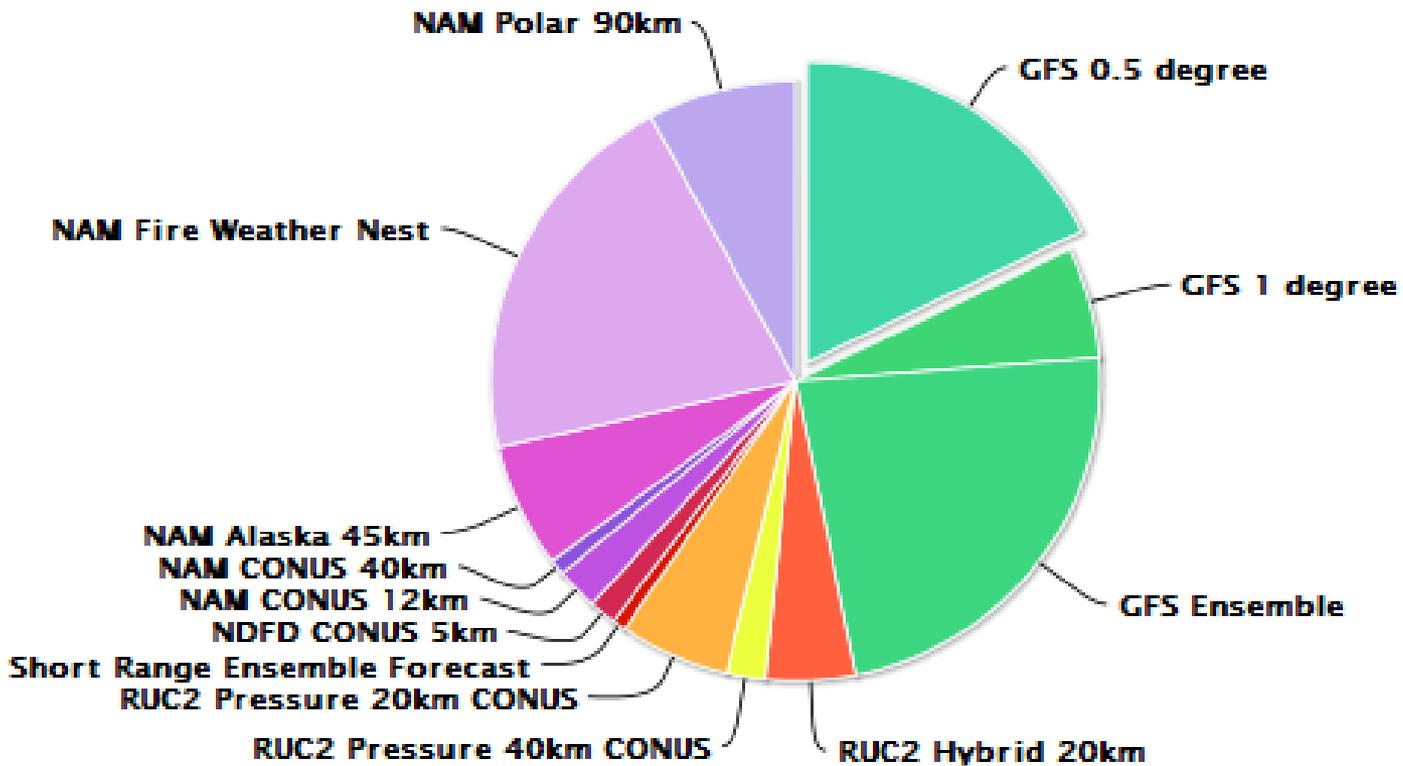


- New CONDUIT systems in NCWCP (College Park) operational in June 2014. Significantly larger LDM queues (20 GB) will allow for expansion of the datastream.
- Unidata and NCEP agreed to expand the CONDUIT datastream on NCWCP systems even though Boulder systems can not be expanded until late-2015. In the event NCWCP is down, CONDUIT will have less content
- It's time to add data!



Data in CONDUIT Today

Current CONDUIT Data Volumes



- Also 2.5km GFS, and “RUC2” entries are now RAP, NDFD is now 2.5km



NOAAPORT

- **Content on NOAAPORT is not duplicated on CONDUIT**
- **We have seen a push to add functionality to AWIPS, and therefore add data to the NOAAPORT**
- **Added to NOAAPORT recently:**
 - 2.5km Gridded MOS and Gridded LAMP
 - NAM DNG at 2.5km CONUS/3km Alaska
 - Global RTOFS in GRIB2
 - UnRestricted Mesoscale Analysis (URMA)
 - Extratropical Surge and Tide Operational Forecast System (ESTOFS) Atlantic
 - Global and Short-Range Ensemble member 2m temp & accumulated precip
 - Hurricane wave model (WW3)
 - Probabilistic Storm Surge (PSURGE)
- **AWIPS Data Delivery(DD) will impact what is put on NOAAPORT**
 - Items of interest to a few WFOs will be DD, not NOAAPORT
- **By October 1st Satellite Broadcast Network (SBN) will be expanded from 30 to 60 Mbps**



Coming to NOAAAPORT



- ESTOFS Pacific
- RTOFS Atlantic in GRIB2
- WW3 wave steepness
- Extra Tropical Storm Surge at 2.5km
- GEFS ensemble mean and Climate Forecast System (CFS) max/min temp and precipitation



Completed NCEP Model Changes potential options for CONDUIT



- **SREF Upgrade** – August 2012
 - 16 km output grid available – disseminated 1 hour later
- **HIRESW Upgrade** – June 2014
 - Introduced 5km full CONUS grid – not slated for NOAAPORT
- **New models not headed to NOAAPORT:**
 - NGAC -- global inline aerosol forecast system
 - NOS models for Gulf of Mexico, Columbia River, and San Francisco Bay
 - North American Land Data Assimilation System (NLDAS)



Upcoming NCEP Model Changes



- **High Resolution Rapid Refresh (HRRR)** – September 30, 2014
 - 2.5km data will be on NOAAPORT
 - 3km data will not – option for CONDUIT
- **Global Forecast System (GFS) upgrade** – November 2014
 - Upgrade model resolution to T1534 (~13km), T574 ENKF, extend high resolution to 10 days
 - 1 degree global grid will be added to NOAAPORT
 - 20km grids for CONUS, Alaska, Puerto Rico & the Pacific added to NOAAPORT
 - New 0.25 degree global output will not be on NOAAPORT
- **Global Ensemble (GEFS)** – FY15Q2
 - T574L64 out to 168 hrs, T382L64 to 384 hrs
 - 3 hourly output
 - New 0.5 degree output will be created but not on NOAAPORT



NOAA's IDP

- NOAA's Integrated Dissemination Program (IDP) established to transform organization's dissemination capabilities from a collection of independent stovepipes to an integrated enterprise-wide dissemination service
- Primary IDP infrastructure foundation to be part of NCEP Central Operations in College Park, MD, with a back-up in Boulder, CO
- Multi-Radar/Multi-Sensor (MRMS) first IDP project to go operational Sept. 30th
- NOAA Enterprise GIS coming soon



2012 User Survey

http://www.unidata.ucar.edu/community/surveys/conduit2012/2012survey_intro.html

unidata
providing data services, tools and cyberinfrastructure leadership

Login | Register

Data Software Downloads Support Community Projects News Events About Us

2012 CONDUIT User Survey

Unidata is in the process of evaluating the contents of the CONDUIT data feed. NCEP and Unidata would like your help in determining which of the model output currently included in the feed are in use, which are candidates for removal from the feed, and which new model runs (if any) should be added to the feed.

The chart below shows the model output that is currently being delivered via CONDUIT, along with their peak data volumes. Click on the slices of the chart to display additional information about each data set. Note that once NCEP's Rapid Refresh model becomes operational on March 20, 2012, the RUC products shown below will be replaced by their RAP equivalents.

NCEP is working to increase the capacity of the CONDUIT feed in the near future, opening up the possibility of including additional models. Even with the NCEP upgrades in place, bandwidth will be limited, so we are hoping to choose the most useful models for inclusion. For a graphical illustration of current CONDUIT data volumes, see Unidata's CONDUIT stats.

Click **Take the Survey** at right to answer four questions about your current use of CONDUIT model data and things we might be able to add to the feed.

Show:

Current CONDUIT Data Volumes

Model	Resolution
NAM Polar	90km
GFS	0.5 degree
GFS	1 degree
GFS	Ensemble
RUC2 Hybrid	20km
RUC2 Pressure	40km CONUS
Short Range Ensemble Forecast	
NDFD CONUS	5km
NAM CONUS	12km
NAM CONUS	40km
NAM Alaska	45km
NAM Fire Weather Nest	

Data: GFS 0.5 degree

Volume: 14.9 Gb/day

Description:
The Global Forecast System **gfs_pgrb2** product has a longitude-latitude grid and 0.5 degree resolution.

See the [NCEP Products Inventory](#) for more information.

[Take the Survey](#)

Contact Us Terms of Use Privacy Policy Participation Policy

UCAR COMMUNITY PROGRAMS

The Unidata Program Center is a member of the UCAR Community Programs, is managed by the University Corporation for Atmospheric Research, and is funded by the National Science Foundation.

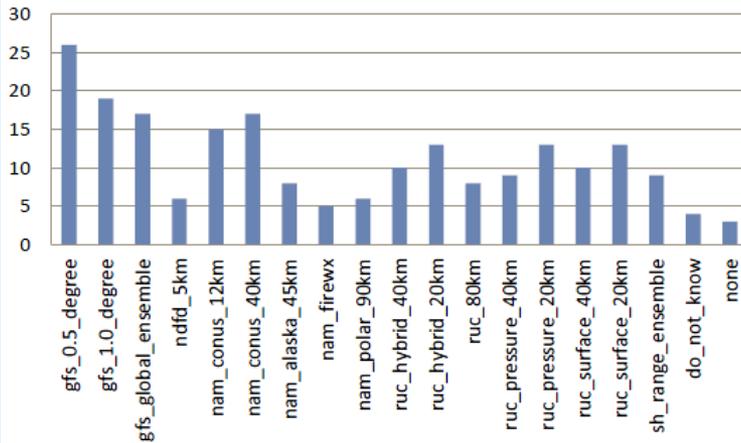
- What do you currently use?
- What do you not use?
- What should we add?

■ Surveyed users March 14th – 30th, 2012

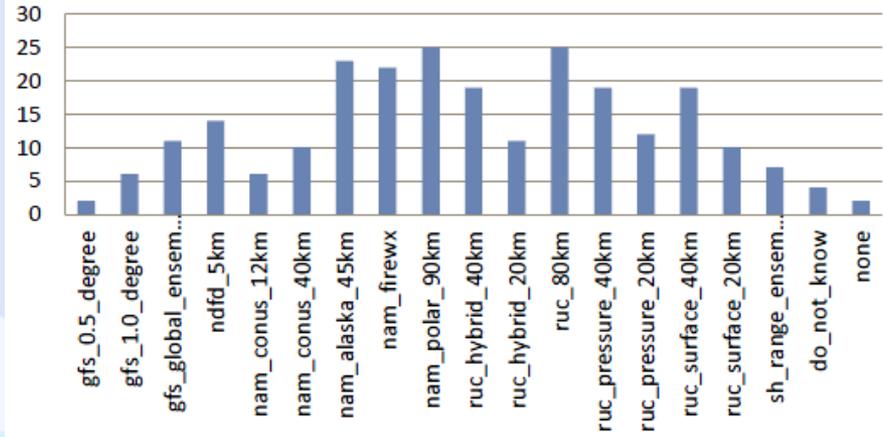


Survey Results

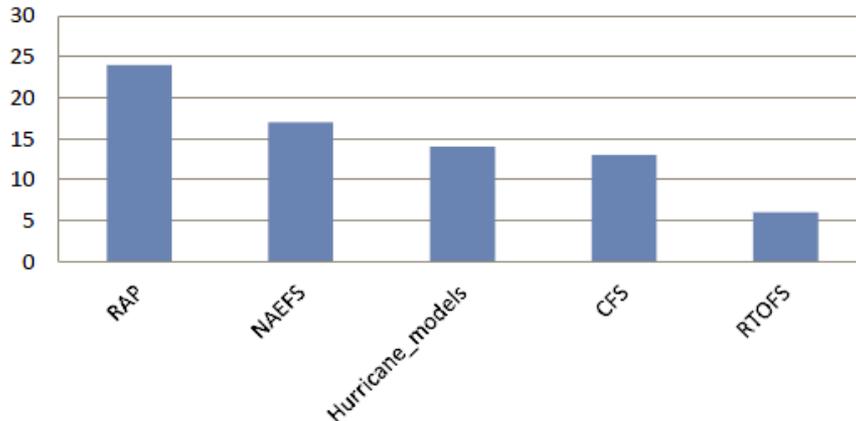
Feeds Currently Received



Feeds Not Being Used



Votes to Add



44 responses as of 4/2



Recommendations from 2012 Survey



- Remove all 40km RUC products
- Remove 45km NAM Alaska
- Remove 90km NAM Polar

- Add 32km RAP products when available
- Add bias-corrected NAEFS output (or raw?)
- Need more information from CFS and Global RTOFS requests due to large size of datasets



Next steps?

Questions/Discussion