



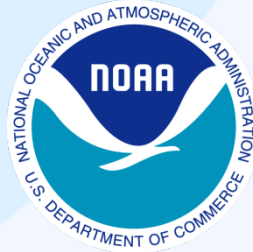
CONDUIT Update

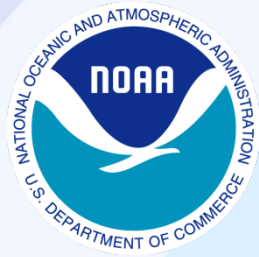
Cooperative Opportunity for NCEP Data using IDD Technology

Rebecca Cosgrove/Scott Jacobs

NCEP Central Operations

September 17, 2012



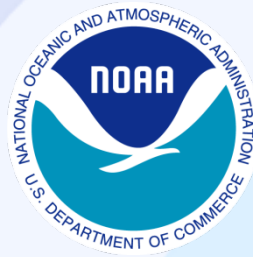


Agenda

- Activities for last 6 months
- CONDUIT Technology Refresh
- Plan for upcoming CONDUIT changes
- Future plans
- Discussion

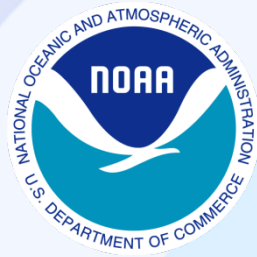


Activities April – August 2012



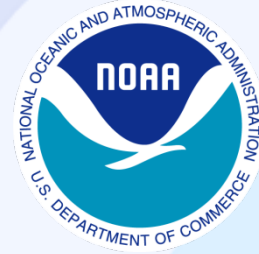
- **Bulk of NCO Dataflow Team Effort focused on move to new NCWCP building**
 - Move was a huge success
 - Building is wonderful!
- **Rapid Refresh (RAP) Implementation**
 - RUC 80km, 40km native levels and all surface grids removed from CONDUIT
 - All other RUC grids replaced with corresponding RAP product
- **SREF Implementation**
 - Eta and RSM members removed from CONDUIT
 - New ensemble comprised of 7 members each NMMB, NMM WRF and NMM ARW – all sent to CONDUIT
 - Added a few ensemble percentage products to CONDUIT





CONDUIT Tech Refresh

- Sizeable additions to CONDUIT not possible due to 6GB LDM queue
- Currently working on technical refresh
 - New systems have 20GB LDM queue
 - Change from 6 LDM boxes at two locations to 4 LDM boxes at two locations based on WOC recommendation
- Week of 9/10 began testing live feed with Unidata staff
- Once testing is complete we'll transition to the four new servers – estimate mid-October
- Then datasets can be added to CONDUIT!



User Survey

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

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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	Volume
GFS 0.5 degree	14.9 Gb/day
GFS 1 degree	
GFS Ensemble	
RUC2 Hybrid 20km	
RUC2 Pressure 40km CONUS	
RUC2 Pressure 20km CONUS	
Short Range Ensemble Forecast	
NDFD CONUS 5km	
NAM CONUS 12km	
NAM CONUS 40km	
NAM Alaska 45km	
NAM Fire Weather Nest	
NAM Polar 90km	

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](#)

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UCAR COMMUNITY PROGRAMS

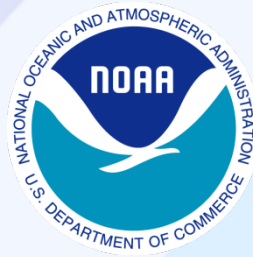
The Unidata Program Center is a member of the UCAR Community Programs, is managed by the University Corporation for Atmospheric Research, and is funded by the National Science Foundation.

- Surveyed users March 14th – 30th, 2012
- 47 responses

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



Upcoming CONDUIT Changes

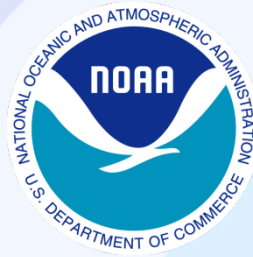


Based on Survey results

- Remove 40km RAP, 45km NAM Alaska, 90km NAM Polar products
- Add 32km RAP products
- Add 1 degree NAEFS output
- Add hurricane model output

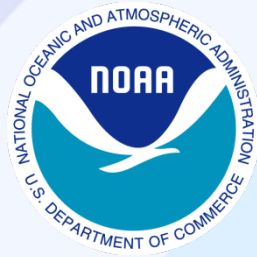
Based on recent feedback from CONDUIT users

- Add full grid 218 NAM 12km dataset
- Add 13km RAP grids



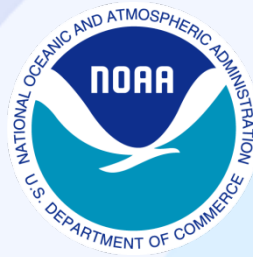
Need Guidance

- **RAP – 13km or 32km – which first?**
 - 24 said 32km RAP in survey, 4 or 5 wanted 13km RAP in recent email exchange – I'm leaning towards 32km first and see if they still want the 13km after that
- **NAEFS 1 degree grids**
 - Raw or bias-corrected?
- **Hurricane models**
 - GFDL has 1 degree, 1/6th and 1/12th degree grids
 - HWRF has 5 different output grids – .25 degree parent down to 0.03 degree nest or 3 domains combined
- **CFS and Global RTOFS**
 - Need Unidata staff to contact respondents for more specifics



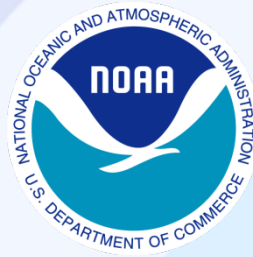
What's next?

- Not offering usual list of other datasets available
 - we've got enough on the list for the next 6 months!
- Next 12 months NCEP will be working to transition to new supercomputer – WCOSS
 - As a result, no model upgrades till Fall 2013
 - There is possibility of adding already-existing model data to CONDUIT during that period



HRRR

- I knew you'd ask 😊
- NCEP has a requirement to get the HRRR data for internal use by the NCEP Centers
- I ask that Usercomm send a request to my boss, Ben Kyger, stating the value of the HRRR to the university community and ask that he provide it via CONDUIT



Questions/Discussion