



Christina Holt - NOAA Affiliate <christina.holt@noaa.gov>

configurable cycling workflow

5 messages

Jason Sippel - NOAA Affiliate <jason.sippel@noaa.gov>
To: Christina Holt - NOAA Affiliate <christina.holt@noaa.gov>

Wed, Jun 29, 2016 at 10:24 AM

To start off with, it will be helpful to reference Mingjing's branch, which is at /branches/da-2016-mtong. Also note that she will need to merge her branch into the trunk, which obviously can't happen until the trunk is done being merged with H216. I think this is going to be an enormous task for her, and she's still doing testing, so I don't see this happening for at least another month, maybe 2.

The basic idea is to have a "cycle within a cycle" workflow. We still have our regular 6-h cycling workflow, but for DA purposes, we need to have the availability to have higher-frequency cycling within that window controllable in parm (i.e., just specify the DA cycling interval... 1, 2, 3h, whatever). I have attached a workflow to show this. The items in black are what are already there. The items in purple are what Mingjing is adding or making significant changes to. The items in red are what will be needed to implement a configurable cycling interval.

Some considerations:

- 1) This should be controllable with options: Always, TDR-dependent, and recon-dependent. This can be implemented by looking for the TDR and recon data files within a 6-h window.
- 2) For simplicity, any sub-6-h DA cycling should be contained within the 6-h forecast cycle windows. So if high-frequency DA cycling starts for a particular forecast cycle, it will continue for the duration of that cycle.
- 3) Currently, the analysis uses the GFS **analysis** in the merge step, but we will have to use the GDAS **forecast** for configurable cycling at non-synoptic times since a global analysis isn't available on sub-6h intervals. This isn't a big deal, but it does use the data differently.
- 4) I'm not sure if the 1-h GDAS forecasts are archived. If not, then we will need new executables to interpolate the global datasets between times. I think Xuguang has actually done this, so her executables could be used.
- 5) We will also need new executables to interpolate the TCVitals data between synoptic times for relocation and probably also vortex adjustments.

I have most likely missed or not considered something, so please ask away.

Jason

 **new_workflow.pdf**
430K

Jason Sippel - NOAA Affiliate <jason.sippel@noaa.gov>
To: Christina Holt - NOAA Affiliate <christina.holt@noaa.gov>

Wed, Jun 29, 2016 at 8:02 PM

More considerations...

I forgot to mention my intention is for the configurable cycling to start at synoptic times. If the configurable cycling condition is set to radar or HDOB dependency, the system should look to see if the necessary HDOB or radar files are there, and if they are then it will proceed through the entire 6-h window with the desired cycling interval.

FGAT - it seems easiest to just turn FGAT off when configurable cycling is used.

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Christina Holt - NOAA Affiliate <christina.holt@noaa.gov>
To: Jason Sippel - NOAA Affiliate <jason.sippel@noaa.gov>

Fri, Jul 1, 2016 at 11:42 AM

Hey Jason,

I wanted to let you know that I got this. It will take me a little while to assess and likely come up with more questions. Once I get a good idea of how it's going, I can discuss with Kathryn and see how we can best provide support.

Christina

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Jason Sippel - NOAA Affiliate <jason.sippel@noaa.gov>
To: Christina Holt - NOAA Affiliate <christina.holt@noaa.gov>

Tue, Aug 2, 2016 at 11:23 AM

Hi Christina -

I know things have been flipped upside down with Sam's departure, but do you have an idea yet of DTC's ability to do this work in the upcoming FY? Avichal and Vijay have asked Mingjing to come up with a 2-y plan for HWRF DA.

Jason

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Christina Holt - NOAA Affiliate <christina.holt@noaa.gov>
To: Jason Sippel - NOAA Affiliate <jason.sippel@noaa.gov>

Tue, Aug 2, 2016 at 11:24 AM

Jason,

I have it on the list of things to look over this week, but it will be quite a busy week with everything that is going on here in the DTC. I will try to at least get you something soon.

Christina

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