

Notes from CAT-II Meeting Tuesday December 1, 2009

Attendees

CAT-II Representatives:

APRFC	Scott Lindsey, Ben Balk, Jim Coe
WGRFC	Bob Corby, Greg Waller
NCRFC	(absent)
CBRFC	Michelle Schmidt
OHRFC	Craig Hunter, Tom Adams
SERFC	John Schmidt, Judi Bradberry
LMRFC	(absent)
MBRFC	Tom Gurss, Gregg Schalk
MARFC	Peter Ahnert, Joe Ostrowski

CAT representatives:

ABRFC	Billy Olsen
NERFC	Rob Shedd
CNRFC	Rob Hartman

Reps from Central Region and Southern Region were also present.

Other:

Chris Dietz, OHD HSEB (CHPS Project Manager)
Joe Gofus, OHD HSEB
Dave Kitzmiller, OHD HSMB
Edwin Welles, Deltares

Document reference: none

Agenda:

1. CAT status report on their parallel operations

1.1. ABRFC

- ABRFC reports entering parallel operations yesterday (Mon 11/30/09). For the past 3 or 4 weeks focal points went through the basins twice a week – they gained experience with the IFD, and provided some feedback to OHD and Deltares. They are still refining configurations and learning as they go. The end goal is to compare NWSRFS forecasts with CHPS.
- ABRFC's plan calls for 2 cycles: during the first cycle (now) a given forecaster will be assigned to one of 2 river basin (Arkansas, Red); during the second cycle (end January/early February) the same forecaster will be assigned to the other river basin. There will be a few weeks gap between cycles for forecasters to learn more and brush up on some aspects not well understood in preparation for the next cycle. No real forecasts will be generated using CHPS during either cycle.
- During each cycle a forecaster will prepare the daily forecasts using NWSRFS as usual; then ~9 am after the forecasts for a basin are out, another forecaster will use CHPS to step through the entire process for the same basin as if preparing a forecast for real. [NERFC and CNRFC said in their case the same individual would do both NWSRFS and CHPS activities so they get a better feel for whether or not CHPS is working properly.] Yesterday (Day 1 at ABRFC) things went very slowly – fixing things as they went along – so there was no time for back-to-back activities by the same forecaster. Things should calm down. ABRFC might be able to use the same forecaster as they get further along.
- To account for everyone, ABRFC will divide forecasters into 2 groups: Monday & Tuesday one group will work with RFS/CHPS as described; Thursday & Friday the second group of forecasters will work with RFS/CHPS. Wednesday will be an overlap day, where the first group will collaborate with the second, and to mentor and teach lessons learned.
- At ABRFC there were some glitches with gxsets, but these have been resolved. So far (after one day) the forecasts look good. It took longer this first day mainly due to inexperience. Since there's no flooding they also can't make certain changes (e.g. precip values).
- ABRFC concerns: another CHPS release is coming in ~2 weeks (the December release); although it will contain more changes, bug fixes, etc. it complicates ABRFC's plan. There are still performance issues with some functions taking too long to run. They also experienced a partition fill-up; this is also fixed now. However as a CAT site they expected it to be a bumpy ride; things will get smoother. They aren't sending CHPS-generated forecasts but they might archive some data and run some statistics. The primary focus at the moment is to gain experience.
- Question: what's contained in the December release? Some examples from Edwin: auto ingest of rating curves; BOC-II models; IFD functions for dual y-axis (for different units); stage/flow conversions for display on a single plot; improved color customization; different ensemble trace colors; synchronization for more than one MC (for potential use in RFC backup scenarios); some bug fixes critical to CAT operations.
- Question: what's ABRFC's strategy for comparing RFS and CHPS output? They are archiving input forcings and forecasts. They might run statistics but it isn't clear what that will tell them. Forecasters will know as they go along. Some statistical analyses might help with the final report.

1.2. NERFC

- NERFC plans to start parallel operations this Friday 12/4/09, after the “Day 2” user training on Thursday. Most forecasters get onto CHPS on a routine basis to gain familiarity. They routinely run through all or most forecast groups Monday through Friday; they are archiving all forecasts for later comparison. Some bugs need to be worked out, but they’re not show stoppers. NERFC expects 4 or 5 forecasters to go through all forecast groups in late winter to get a workload assessment.

1.3. CNRFC

- CNRFC has been in “tangential operations” for about 6 weeks. CHPS activities are integrated into their routine operations as follow-on to RFS routine ops. The goal is familiarity with the new interface, and for forecasters to spend as much time as possible. Pete (Fickenscher) says it’s rough. There are bugs and problems. There are patches and multiple remigrations. There are differences between versions of migration scripts. It’s very rocky. They are not producing any simulations worthy of archiving. The CAT-II should be happy they won’t have to go through this. There’s a fair amount of mess. The CAT-II will also expose their own unique problems. CNRFC views this period as a training exercise. Performance is still an issue; CHPS is “substantially slower”; this is a concern as we implement ensembles. It has felt like playing whack-a-mole at times: you fix one problem and another one pops up. This is to be expected as a CAT RFC.
- Question: how do mods compare? Are they the same types and magnitudes? They’re not tracking them qualitatively, but will look at them as they go forward and once the system is stable; for example the SACCO mod doesn’t work. *[Note from Chris: CNRFC and Deltares subsequently confirmed that the SACCO mod is indeed working as of the November patch.]*
- Question: does CNRFC push their model states from RFS to CHPS? Results will drift if you don’t. CNRFC continues to re-migrate, possibly monthly, to address this issue. They will need to do a final re-migration before CHPS can become the primary.
- Question: what about ensembles? CNRFC has focused on getting single-value working. They are just beginning to set up some ensembles workflows and have made a few runs; they take a lot longer than they had hoped. They have a team working on this. ABRFC noted that they routinely run a 2-member ensemble (0-QPF and QPF) but it isn’t probabilistic in nature.
- Question: is NERFC doing anything with ensembles? They are working on getting short term ensembles running. They’ve had problems importing the data. They tried to run the AHPS ensembles on Monday but Rob thinks the problems were user error. They’ll look at them again on Thursday.

2. Updates on forcings activities (CAT-II)

2.1. No updates from the CAT-II RFCs.

2.2. Dave Kitzmiller had a few questions to ask but he had to leave the meeting; he will forward his questions by email.

3. Other

- 3.1. Chris asked the CAT-II if they feel these meetings are useful. In general the answer was yes. A couple of RFCs felt today's meeting was very helpful, providing some good information for planning purposes. Are the meetings frequent enough? We can't compare these with the weekly CAT meetings, where there was a lot of interaction with Deltares, because there were many early decisions to be made. Perhaps once the CAT-II gets into their Migration phase there will be a need for increased interaction. The various infolists are also helpful. The group agreed to hold 2 more conference calls before Migration Training: one in the first week of January; a second the first week of February. Then we might return to calls every 2 weeks.
 - 3.2. Question: what is the status of the installation notes? Chris reported that Randy Rieman has just finished the note for the CAT (their chps4, chps5, and chps6 servers). Randy expects to have the mod note for the CAT-II sites (their chps1, chps2, and chps3 servers) ready by Wednesday. Chris will ask again.
 - 3.3. Question: when is the MPE/DQC webinar/GoToMeeting scheduled? The group agreed that this time slot was good. Joe Gofus will set something up for Tuesday Dec 15 at 11:00 am ET. The approach will be to discuss some installation points, a general overview, followed by some Q&As. Joe requested that if anyone has specific topics they'd like to address please let him know (Joseph.Gofus@noaa.gov), or email the chps_forcings infolist. Which version (OB9.1 or OB9.2) will be described? OB9.2 focuses on capabilities specifically for CHPS. OB9.2 is due to be distributed beginning December 14. Although some RFCs wanted a pre-distribution copy, OHD doesn't want to aggravate the AWIPS program people any further than we already have in the past. The OB9.2 version contains the features already available at the CAT sites.
 - 3.4. MBRFC basin migration: there's a major issue with migration of MBRFC's time series. They use a 4-digit time series identifier. Python reads in digits as a number not as a string, but they need to be treated as a string. OHRFC/Tom volunteered to help MBRFC with the effort to convert their IDs, and requested they email segment definitions for a forecast group. Potential solutions involve a non-trivial effort; one of them would require major changes to the migration scripts, which introduces risk for the CAT RFCs. Deltares/Peter is working with Greg Schalk to identify the simplest/least painful solution.
4. Next CAT-II conference call: Tuesday January 5, 2010.

Action Number/Item	Who	Notes
C2-03102009-01: Capture changes to BOC-II from this meeting; distribute updated version of BOC-II document	Rob Hartman	Closed (updated version emailed on 3/10/09 to cat_2 infolist)
C2-03102009-02: Distribute “matrix” from the OHD (“national”) Forcings Team, which describes CAT strategy/requirements for transition to CHPS in the absence of NWSRFS pre-processors	Harold Opitz	Closed (matrix emailed on 3/10/09 to cat_2 infolist)
C2-03102009-03: Each CAT-II RFC to prepare initial version of their entry for the Forcings “matrix”	CAT-II attendees	Closed (all responses received via email by 3/24/09)
C2-03102009-04: Get statement from Deltares whether FEWS has capability to identify sensitive/proprietary data that must be excluded from external reports (BOC requirement)	Harold Opitz	Closed (email sent by Chris on 3/24/09 to cat_2 infolist).
C2-03102009-05: Distribute notes from this meeting to the cat_2 infolist	Chris Dietz	Closed (emailed on 3/10/09 to cat_2 infolist)
C2-03172009-01: Distribute notes from this meeting to the cat_2 infolist	Chris Dietz	Closed (emailed on 3/20/09 to cat_2 infolist)
C2-03242009-01: distribute to all of the CAT-IIs instructions (also script?) originally developed by Joe Ostrowski for the purpose of identifying NWSRFS operations in active use	Chris Dietz	Closed (emailed on 3/25/09 to cat_2 infolist)
C2-03242009-02: review list of operations to make sure they’re accurate; please notify RobH if any critical operations are missing	All CAT-IIs	Closed (emails received)
C2-03242009-03: review list of operations in BOC-II doc to make sure it matches the original script output we gathered	Chris Dietz	Closed (emails received)
C2-03242009-04: update (correct, complete) the Software Migration Mapping document; distribute the updated version to the cat_2 infolist	Deltares/Edwin Welles	Closed. (available on the CHPS wiki under Documentation > Gap Analysis & Migration Mapping)

Action Number/Item	Who	Notes
C2-03242009-05: Compile and distribute to the CAT-II a matrix showing every RFC's response for AI # C2-03102009-03	OHD/TBD	Closed. Sent via email by Mark Glaudemans to cat_2 infolist on 3/27/2009
C2-03242009-06: Time series output from HL-RDHM must ingestible into CHPS; HSMB will define a format (e.g., SHEF) for said HL-RDHM output and change the HL-RDHM software accordingly	OHD/HSMB	Hold for post-BOC-II; HSMB has received the necessary details, but the requirement isn't needed until beyond February 2011.
C2-03242009-07: For agenda April 7 meeting: report from NERFC on their investigation into a replacement HWG process.	Rob Shedd	Closed. Presented as part of the 4/9/09 monthly briefing.
C2-040720090-01: Find out status of Baseflow implementation in OHD (incl MODs)	Chris Dietz	Closed. Now irrelevant, since no RFC uses BASEFLOW.
C2-040720090-02: Check to see if cat_2 infolist is working correctly. NCRFC reports not receiving some mailings.	Chris Dietz	Closed per email from Mike DeWeese on 4/22/09.
C2-041420090-01: Send out an email on preparing for CHPS prototype hardware IP addresses	Randy Rieman	Closed. Information distributed during Buddy visits.
C2-041420090-02: Send out documentation to cat_2 infolist on ER approach/procedures for RFC site backup	George McKillop	Closed by email to cat_2 infolist on 4/20/09.
C2-041420090-03: Send list of Techniques used to Chris (including esp)	CAT-II	Closed
C2-041420090-04: Let Chris know if you use IHABBS and if so, which version	CAT-II	Closed 4/29/09
C2-04212009-01: Forward to the cat_2 list documentation on DailyQC's algorithm to fill in missing station data.	Mark Glaudemans	Closed 7/30/09 via email
C2-04212009-02: Come up with an alternative mechanism to define Techniques that are in operational use at all RFCs; solicit results from all RFCs	Deltares/Edwin, Joe Ostrowski	Closed. Report provided at meeting on 4/21/09

Action Number/Item	Who	Notes
C2-04282009-01: Draft a list of Techniques and distribute to CAT-II	Deltares/Edwin	Closed. List created 5/13/09
C2-04282009-02: Review and provide feedback on list of Techniques from AI # C2-04282009-01	CAT-II	Open. List sent to CAT but did not send yet to CAT-II
C2-04282009-03: Determine a single XML format for describing rating tables for ingest into CHPS; send examples using the agreed format to Deltares/Edwin	Harold, Mike DeWeese	Closed/Canceled. 11/6/09: Deltares has determined they will ingest legacy NWSRFS format rather than define an interim XML format and then change when WaterML comes along.
C2-04282009-04: Distribute functional requirements document for USGS rating tables retrieval and processing.	Dave Reed	Closed. Forwarded to the cat_2 infolist on 4/28/09
C2-04282009-05: Come up with a proposal for ingesting NOHRSC SMWE data into CHPS to meet OHRFC's requirement	CAT	Open
C2-04282009-06: Add to the next CAT call agenda an item to discuss a national approach for alternative to IHABBS as a basin delineation and UHG development tool.	Chris	Open
C2-009222009-01: Compile and distribute to Deltares a list of CAT-II CHPS focal points gathered during the buddy visits.	Chris	Closed. Email sent to cat_2 infolist on 9/23/09.