

STATUS REPORT - May/June 2007

Verification

Note that starting with build ob7.2 the executables (i.e. jar files) are delivered to only one location ... /awips/hydroapps/lx/rfc/nwsrfs/util/bin/RELEASE. None of the scripts point to the rax directory /rfc_arc/verify/bin/RELEASE any more.

The apps_defaults token vsys_rls is no longer used. IVP uses the token util_rls to point toward the executables.

Reminder about processed shefdecoder

The processed shefdecoder requires that all incoming messages have the full seven character SHEF code (pedtsep) within them. Unlike the raw shefdecoder, the processed shefdecoder does not assume a default value for missing characters. If only a partial code is provided it defaults the missing characters to NULL. And since nulls are not allowed to be part of a primary key, it generates a -400 sql error code at posting time. This is a known bug and because it has such a simple work-around it is considered very minor and is not likely to be fixed any time soon.

Postgres ob7.2 raw shefdecoder posting performance

Since the move to Postgres on the rax at NWRFC, the extremely poor performance of the shef_decode_raw apps has been a "showstopper" for them. Currently the NWRFC rax has a permanent backlog in the "raw" incoming directory of around 85,000 files. It Files are lost routinely because the system runs out of inodes and /or background scour apps deletes files. The minute their raw shefdecoder is turned on, one can see that the 1gb of memory is fully utilized.

Over the past 5 months or so, Randy Rieman and Juliann Meyer have tested a list of possible software related tweaks that might help them out. When something worked on the test system it was tried at other RFCs that were having poor performance problems. The items tested, include but are not limited to the following:

- turning off the processed shefdecoder
- not running the level 1 processors in oper's cron
- reducing the number of times per day that the vacuumdb script is run
- changing shef_decode_raw apps_defaults token adb_shef_raw_post_unk from IDS_AND_DATA to NONE.
- Unloading the archive database, dropping the archive database, and then restoring the archive database
- Changing the shef_decode_raw apps_defaults token adb_shef_raw_checktab from ON to OFF

- Changing Linux journaling from ext3 to ext2

Only the last two items have not yet been tried at NWRFC. Out of the blue, miraculously, the raw shefdecoder at the end June suddenly improved and actually cleared the message backlog. The posting performance which was at a dismal ~ 5 values/sec back in mid-January, then after the rebuild of the database ~ 15 values/sec, is now up to ~ 36 values/sec. And this without making some of the changes/tweaks that Randy and Julie had suggested. What is quite noticeable is that the max post time is down significantly from a range of 16,615 - 25.942 secs to a range of 226 - 523 secs. Julie and Randy have yet to find anything to explain this sudden improvement.

Postgres RDMS build ob7.2

Plans for build ob8.3 are to upgrade Postgres to version 8.2.4.

RAX Discrepancy Reports

Here is a list of the currently open RAX DRs. Additional information on these DRs can be found at: http://sec.noaa3.awips.noaa.gov/dr_display/index.html

DR#	Date Submitted	Title
18795	3/21/2007	OB7.2: Fatal DatView Editor Error
18797	3/21/2007	OB7.2: The RFC Archiver SHEF Ref Tables Need Updating
18798	3/21/2007	OB7.2: RFC Archiver Shefdecoder Incorrectly Testing Data Limits
18800	3/21/2007	OB7.2: OFSSHEF Program Mishandling Missing Data
18870	4/3/2007	OB7.2: DatView Will Not Display More Than Fours Years of Stage Data
18921	4/16/2007	OB7.2: ofsshef Not Correctly Calculating Flow in CMS
18949	4/23/2007	OB7.2: No PostaggreSQL log file on RFC Archive Server

RAX Small Enhancements

There is currently one Small Enhancement request, it is DR #18810 submitted 3/22/2007 entitled: "Small Enhancement: Inclusion of Tide Data into the Archive DB and Verification". This request has not been scheduled for a build as yet.