December 4, 2015

MEMORANDUM FOR: Distribution Email

FROM: Chris Caruso Magee
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SUBJECT: Scheduled Operational Changes and Upgrades

NCO College Park

The following accelerated items were implemented last week:

RFC #1530 – NAM v3.1.18 - Turned off raob level enhancement in the NAM/NDAS analysis scripts since an observed input sonde had more levels than the GSI could handle. The fix is to change the parameter "ext_sonde=.true." to "ext_sonde=.false". Implemented on November 26 at 1700Z.

RFC #1534 – WCOSS Dataflow v1.74.3 - Modified the WCOSS DBNet configuration to send NWPS (Nearshore Wave Prediction System) parallel data to NOMADS. This is a break-fix and is in support of the 30-day NWPS evaluation.   Implemented on December 1 at 2000Z.

RFC #1535 - On Surge, IBM made the following changes: install bash 4.1.2; update LSF configuration to direct standard output and error; modify MODULES; add $SITE environment variable to default login; and rotate LSF logs. These changes were previously done on Luna. Implemented on Surge on December 2 at 1400Z.

RFC #1536 – SMW v7.2UP03 - IBM applied a software patch to the System Management Workstation (SMW) to fix an issue with Aries routing during warm swaps of hardware. A failure of these swaps requires a reboot of the entire system to resolve. Implemented on Surge on December 3. Install on Luna is TBD.

RFC #1537 - Aviationweather.ncep.noaa.gov was missing a configuration option that was affecting a Japanese customer's ability to authenticate. NCO/IWSB added this configuration option in an effort to resolve the customer's problem. This required a reload of web services on the production web servers. Implemented on December 3 at 1530Z.

RFC #1538 – NCO/IDSB/Dataflow and NCO/IWSB made changes to get the new Himawari data mounted on NCOSRV so that forecasters can see the data in N-AWIPS. Implemented on December 3 at 1700Z.

The following will be implemented on December 4, 2015:

RFC #1539 – xCAT – Install the IBM HPC Cluster Health Check package on WCOSS – Gyre, to verify correct node and cluster configuration prior to returning nodes to service after performing maintenance. To be implemented on December 4 at 1400Z.

The following will be implemented the week of December 7, 2015:

RFC #1540 – Make changes in support of on-boarding the Chart Tile Service (CTS) application to IDP, which is scheduled to go live on December 7.   The tasks include changes to allow the public to access the front-end website and to allow the application to be supported operationally. To be implemented on December 7 at 1300Z.

RFC #1542 - Allow SIZE command on the FTPS ingest servers. This will allow users to check the size of files to help confirm their upload completed successfully. To be implemented on December 7 at 1500Z.

RFC #1543 – IDP MADIS v2.1.3.1 – The Lower Colorado River Authority (LCRA) is decommissioning its current LDM server and has new servers from which MADIS needs to pull data. The MADIS Ingest nodes will be updated to retrieve data from the new LCRA servers in order to continue retrieving and processing LCRA data for MADIS. To be implemented on December 7 at 1600Z.

RFC #1546 – GEFS v11.0.4 - Update GEFS 0p5 degree GEMPAK job to include additional parameters at the request of OPC. To be implemented on December 8 at 1200Z.

RFC #1547 – tropcy_qc_reloc v5.0.2 – Add threading to the tropcy_qc_reloc job for multiple models so that the runtime for the job will be consistent and not vary based on the number of storms or size of the storms. To be implemented on December 8 at 1200Z.

RFC #1548 – RTGSSTHR v2.5.2 – Update RTGSSTHR to improve on the QC for the blending of NAVY and Physical SST Retrievals between 35km and

200km from land, to remove duplicate observations and avoid throwing out valid obs. The output is not publicly distributed but used by downstream job JRTGSSTHRVAL. To be implemented on December 8 at 1200Z.

RFC #1549 – RZDM Dataflow - The cleanup process on RZDM is being modified to keep 24 hours of satellite datasets sent to NCO from the Navy. EMC has asked that 24 hours be saved, instead of the current 12, to make the recovery process easier when there is a WCOSS outage. To be implemented on December 8 at 1300Z.

RFC #1550 – WCOSS Dataflow v1.75.0 - Modify the DBNet servers on WCOSS to begin sending additional CDAS ASCAT data to NOMADS at the request of CPC. To be implemented on December 8 at 1300Z.

RFC #1553 - Add 2 additional database read servers for AWC. This will allow NCO/IWSB to take 2 servers at a time out of the load-balanced pool for patching, to allow for patching without reducing capacity needed by users. To be implemented on December 8 at 1500Z.

RFC #1554 – WCOSS Dataflow v1.74.2 - The file names for MRMS will be updated to include the new domains. In order to avoid having multiple files with the same name overwriting each other, NCO/IDSB/Dataflow will need to change the 'ldmd.conf' file to point to the full CONUS path so that Dataflow continues to pull the correct data even after the MRMS upgrade. To be implemented on December 10 at 1300Z.

The following items are in progress:

RFC #1435 – GPFS v4.1 (on Tide) - Enhance the existing WCOSS - Tide phase-1 and phase-2 storage solution by adding metadata-only GPFS NSD servers and changing the existing data-and-metadata NSD to data-only servers. Existing data will be "restriped" to separate the data and metadata. Implementation began on November 4 at 1200Z and should be completed by December 20. NCO/IDSB will send notification to users via the WCOSS-announce mailing list should planned work be impactful to users.

RFC #1461 - Brocade firmware BIN file v8.30C 0 – On WCOSS – Luna, upgrade the Brocade firmware to fix an LACP LAG reassembly issue on Luna and eventually Surge when it comes out of acceptance. One of 4 connections went down and the automatic reassembly of the LAG with the remaining 3 connections failed and some nodes were not ping-able. This update will address the known defect in the Brocade. Implementation began on November 12 at 1400Z, but IBM encountered a switch that was slow to reboot so IBM will troubleshoot that first before they continue this upgrade. IBM reverted the switch back to the original

configuration. The configuration for /sss was changed successfully. IBM is still troubleshooting the switch problem. Completion date is TBD.

RFC #1474 – MADIS v2.1.3 - Upgrading MADIS to version 2.1.3. First major upgrade of the operational software. Includes numerous provider and coding changes. Implementation began on November 16 at 1630Z and should be completed by December 7.

RFC #1499 - The 40gig modules firmware has to be loaded on each of the Boulder Nexus core routers. This will require a maintenance window of 10 minutes in order for the router to rebind the Ethernet modules. There should be no impact because there is a redundant feed. Implementation began on November 30 at 1600Z but issues were encountered which required onsite assistance in Boulder, so the new completion date is TBD.

RFC #1505 – NCODF Dataflow v2.13.0 - Make machines sbn1and sbn2 operational, including LDM configurations and network devices supplying the NOAAPort feed. This work is in support of the MRMS-RIDGE2 (Radar Integrated Display with Geospatial Elements 2) IDP project and will feed the development IDP. Changes will be made by both IDSB and IWSB. The IDSB Dataflow team will support LDM, and IWSB will support the infrastructure components. Implementation began on November 25 at 1200Z and was to be completed by November 30. New completion date is TBD because the LDM work is taking longer than expected.

RFC #1510 – WCOSS – Luna - CLE v5.2UP03 – IBM is updating the module files and login scripts on Luna to generate only the list of modules required by users on WCOSS. Was to be implemented on November 23 at 1900Z; new completion date is TBD because the esub module needs to be updated on Luna.

RFC #1519 – WCOSS Dataflow v1.76.0 - Modify DBNet to ingest model input files from SWPC. This is in support of three SWPC models: ENLIL (Solar Storm model), SWMF (Space Weather Modeling Framework) Geospace, and WAM (Whole Atmosphere Model). NCO/IDSB/Dataflow implemented their part on November 30 at 1200Z; SWPC is implementing their part on December 7.

RFC #1522 – MRMS v10.5.1 - Update MRMS to version 10.5.1, to begin production of the RIDGE2 (Radar Integrated Display with Geospatial Elements version 2) products operationally. Implementation to begin on November 30 at 1300Z and should be completed by December 28.

RFC #1528 – McIDAS v2015.1 - Update the McIDAS version on the CPC compute farm to 2015.1 (from 2014.1). This upgrade is needed to allow processing of data from Himawari. Was to be implemented on December 1 at

1500Z; delayed to December 4 because of a NESDIS data outage and NCO/IWSB personnel availability.

The following NCO RFCs were approved with an implementation date TBD:

RFC #1357 – RTOFS global v1.1.0 – Major upgrade of the Global RTOFS model. See the TIN at: http://www.nws.noaa.gov/os/notification/tin15-36global-rtofsaaa.htm for details. This was advertised as having an October 6 implementation date but this implementation was postponed due to a delay in the Navy's HYCOM model upgrade. Once the HYCOM upgrade is implemented, the Global RTOFS will be scheduled for implementation. Notification will be given in advance so users may prepare for any changes which may affect them. This upgrade of the Global RTOFS was approved by the NCEP Director.

RFC #1497 – WCOSS Dataflow v 1.74.1, NCOSRV Dataflow v2.14.1 - The DBNet software on WCOSS and NCOSRV is being modified to begin sending all non-SBN datasets to the CTBN AWIPS-II system. Was to be implemented beginning November 23 at 1300Z but was put on hold until after the GEFS (RFC #1370) has been implemented so as not to exacerbate the increase in network traffic that will be coming with the GEFS. New implementation date is TBD.

NCO Silver Spring – NWSTG

The following accelerated items were implemented this past week:

RFC #1531 – Added 11 WMO Headings that were previously unknown into the NWSTG Switching Directory, so that these bulletins may be distributed via the GTS. Implemented on November 30 at 1800Z.

RFC #1532 – Added 131 WMO Headings (previously unknown) containing buoy data into the NWSTG Switching Directory, so that these data may be routed via GTS to NDBC and other GTS partners. Implemented on December 1 at 1900Z.

RFC #1533 – Added 4 WMO Headings that were previously unknown and which contain BUFR surface/sea level data into the NWSTG Switching Directory, so that these bulletins may be distributed via the GTS. Implemented on December 1 at 1930Z.

The following will be implemented the week of December 7, 2015:

RFC #1544 - 16 WMO Headings that are defined for distribution to EMWIN, which include operational data sets from the GTS partners, have been requested for removal from EMWIN distribution.   These Headings will be removed from line 9. To be implemented on December 7 at 1900Z.

RFC #1545 - 14 WMO Headings that are defined for distribution to GNCA, which include operational data sets from the GTS partners, have been requested for removal from GNCA distribution. These WMO Headings will be removed from lines 84, 90, 91 & 92. To be implemented on December 7 at 1905Z.

The following items are in progress:

RFC #1387 - The replication servers at site A and site B crashed with signal 11 once every 10 - 14 days. SAP has suggested that they be upgraded to the next version to fix the issue. There are 4 production replication servers. The upgrade will be done one server at a time, starting at site B first.   Implementation began on October 19 at 1330Z and was to be completed by November 30. New completion date is TBD.

NCO Silver Spring – One NWSnet (OPSnet)

The following accelerated items were implemented this past week:

None

The following will be implemented on December 4, 2015:

RFC #4315 – Modify routing at Ewa Beach and NWS HQ to support the partial migration of the subnet from Ewa Beach to the IRC. To be implemented on December 4 at 1800Z.

The following will be implemented the week of December 7, 2015:

RFC #4308 – Grant internet access from PTWC to multiple Hawaii seismic sites using Antelope application. To be implemented on December 8 at 1500Z.

RFC #4316 – Grant access from Eastern Region's WFO Wilmington to Central Region's Indianapolis intranet web server. To be implemented on December 8 at 1500Z.

RFC #4317 – Modify access for Gatlinburg, TN to the Office of Hydrologic Development (OHD) Automated Flood Warning System. To be implemented on December 7 at 1500Z.

RFC #4318 – Establish connectivity between TNCF (and other multiple AWIPS-II test bed sites) and PDA to make Open Geo-Spatial Consortium Web Coverage Service (OGC WCS) requests to NESDIS PDA OPS servers. To be implemented on December 8 at 1400Z.

RFC #4320 – Establish connectivity between 7 NWS AWIPS-II field sites and PDA to make Open Geo-Spatial Consortium Web Coverage Service (OGC WCS) requests to NESDIS PDA OPS servers and the Consolidated Backup Unit (CBU) in Fairmont, WV. To be implemented on December 8 at 1400Z.

RFC #4321 – Grant access for one Naval Oceanographic Center to the NDBC system to allow for data upload. To be implemented on December 7 at 1400Z.

The following will be implemented the week of December 21, 2015:

RFC #4116 - Enable Next Generation NOAA Profiler Network (NGNPN) connectivity at the Anchorage WFO.   Includes the Wind Profiler LAN turn up and implementation of network access for connectivity to the Wind Profiler network and OPSnet Network Time Protocol (NTP) services. To be implemented on December 21 at 1500Z.

RFC #4117 - Enable NGNPN connectivity at the Fairbanks WFO.   Includes the Wind Profiler LAN turn up and implementation of network access for connectivity to the Wind Profiler network and OPSnet NTP services. To be implemented on December 21 at 1500Z.

The following items are in progress:

RFC #4245 – Grant access for an NCO - KC user to the NWSTG Sybase utility center. Was to be implemented on October 13 at 1400Z; rescheduled for December 1 at 1500Z; new completion date is December 8.

<u>NCO Kansas City</u>

<u>The following accelerated items were implemented this past week</u>:

None

<u>The following will be implemented the week of December 7, 2015</u>:

RFC #1551 – NIDS Forecast v2.5.13 – Update the Forecast application to add a "Mobile Weather" link that points to mobile.weather.gov, as requested by the NWS HQ and Regional Teams. To be implemented on December 8 at 1300Z.

RFC #1552 – AHPS v10.1.6 – Update AHPS to address various reported errata. To be implemented on December 8 at 1500Z.

<u>The following items are in progress</u>:

None

<u>NCO OCONUS</u>

<u>The following accelerated items were implemented this past week</u>:

None

<u>The following will be implemented the week of December 7, 2015</u>:

None

<u>The following items are in progress</u>:

RFC #1529 - Pacific Region is adding additional subnets to 4 locations within the region. The new IP space has to be allocated and changes to RES/OLR routers need to be made to advertise that space to NCEP. To be implemented on December 4 at 1100Z.

NCO Boulder

The following accelerated items were implemented this past week:

None

The following will be implemented the week of December 7, 2015:

None

The following items are in progress:

None

RFCs that are security-related are not included in the RFC Memo.

---- OPERATIONAL ANNOUNCEMENTS ----

1. The WCOSS Implementation Standards are available at

    http://www.nco.ncep.noaa.gov/pmb/docs/.

    Please adhere to these standards when submitting changes for the WCOSS.

2. Upcoming major changes to NCEP's production suite and details on any product or timing changes associated with upcoming implementations can be viewed at the following website:

http://www.nco.ncep.noaa.gov/pmb/changes/

Test data for major changes should be available six weeks prior to implementation. Anyone wishing to receive formal notice of the final pre-implementation testing and the opportunity to provide feedback on the proposed changes can subscribe to the Model Evaluation mailing list via:

https://lstsrv.ncep.noaa.gov/mailman/listinfo/ncep.list.modelevalinfo

3. Maintenance of subscriptions to the Scheduled Operational Changes and Upgrades mailing list can be performed via the following website:

https://lstsrv.ncep.noaa.gov/mailman/listinfo/ncep.list.rfcmemo