

August 14, 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 this past week:

RFC #1195 - Added Luna ecFlow server host entries to Tide, Gyre, and CPecFlow /etc/hosts tables so IBM phase-1/phase-2 compute node can communicate with Luna's ecFlow servers. Implemented on August 11 at 1500Z.

RFC #1196 - Implemented additional kernel monitoring in order to determine root cause of the IDPAPP server crashes. Implemented on August 12 at 1500Z.

The following will be implemented the week of August 17, 2015:

RFC #1199 – NCODF Dataflow v2.7.1 - The LDM software on ncodf1/2 is being modified to begin requesting Level 3 NEXRAD datasets from the ncosrv LDM system. These datasets are required by the IDP MRMS application. To be implemented on August 17 at 1200Z.

RFC #1201 - Increase max connections for FNMOC ingest on ftp.hq site to 100. This is required to allow all needed ensemble data to be ingested as FNMOC adds to what they are uploading to NCO. To be implemented on August 17 at 1400Z.

RFC #1205 - Network engineers will be making configuration changes to the KC routers to allow the Eastern Region to talk to the Central Region through NCO's network. To be implemented on August 18 at 1800Z.

RFC #1207 – WCOSS Dataflow v1.63.10, WOC Dataflow v1.16.3 – Disseminate the parallel NAM MOS output to users for evaluation. These datasets will be sent to Boulder-NOMADS. Implementation to begin on August 18 at 1200Z and should be completed on August 25.

RFC #1208 – Install a beta version of wgrib in order to correctly process GRIB1 ECENS data in \$MODEL on the Compute Farm, as requested by CPC. To be implemented on August 18 at 1200Z.

RFC #1209 – verf_precip v3.3.0 - The verf_precip_getppt job has a 2-hr wall-clock limit. The actual run times are very close to this value (1:50 to 2:00 in most cases) and on 2015/08/07 the job failed when the limit was exceeded. The new wall-clock limit will be 2:30. To be implemented on August 18 at 1200Z.

RFC #1210 – CONDUIT Dataflow v1.2.2 - Dataflow will modify the LDM access control list to allow a new server of an existing University of Iowa customer into CONDUIT. SISB will also make the necessary system level changes to allow this connection. This change will be done in both Boulder and NCWCP. To be implemented on August 18 at 1200Z.

RFC #1211 – prod_filemanager v1.3.8 - Update the prod_cleanup job to keep the hurricane MAG status files for 10 days to avoid reprocessing. Continue to keep other status files for 3 days. Also update the cleanup parm files to clean up the parallel GEFS data in /nwges and /com on phase 2. To be implemented on August 18 at 1200Z.

RFC #1212 - Decommission the Interface POS8/0/0 on the Reston and Orlando Routers since it is no longer used. To be implemented on August 18 at 1400Z.

RFC #1213 – Allow user authentication against NEMS NOAA LDAP for the IRIS website. To be implemented on August 18 at 1800Z.

RFC #1214 - Deploy the Chart Tile Service (CTS) QA website on the operational IDP DMs. Deploy CTS Tomcat on the IDP App QA cluster. Deploy CTS database on the IDP PostgreSQL 9.3 cluster. To be implemented on August 19 at 1200Z.

RFC #1215 – Allow an ftps connection from CPC's Africa training server to a EUMETSAT server, in order to disseminate the NCEP model forecast data via EUMETSAT to the African National Meteorological Centers on a daily basis. To be implemented on August 19 at 1300Z.

RFC #1216 - Two ports need to be opened for the PostgreSQL database and pgbouncer component, so that the IRIS cluster needed for onboarding the IRIS application may be created. To be implemented on August 19 at 1400Z.

RFC #1218 – Allow one CPC user to have ssh access from his Windows desktop to host noaadev.nemac.org, so that the user may access a NCEI/NEMAC development site for climate.gov. To be implemented on August 19 at 1400Z.

The following items are in progress:

RFC #571 – NCODF phase2 upgrade - Major upgrade of hardware/software for the NCODF system. Includes sending dual data to both old and new systems, testing DBnet, NOMADS processing, and failovers. Implementation began on Jan. 5, was to be completed by July 22, new completion date is August 28.

RFC #1096 – WCOSS: SP5 Software Upgrade v5.0 - IBM will apply the Service Pack 5 software upgrade to the WCOSS systems. Included in this upgrade are changes to RHEL, GPFS, IBM PE, IBM xCAT and several other components. IBM software support has released its latest HPC software stack service pack and is urging all x86_64-based Infiniband HPC Cluster customers to apply it to maximize product support and address some known system issues. Work was completed on Tide. Gyre will be upgraded in August. There will be a 2-day outage on Gyre on or around August 20 (tentative) to install SP5.

RFC #1106 – Add a point to the canned Hysplit to support a motorcycle rally at Sturgis, SD during the week of Aug 3-9. Implemented on July 20 at 1200Z; will be rolled back on August 18 at 1200Z.

RFC #1155 – Central Region Headquarters migration and testing - Central Region is cutting over to College Park for its internet. Was to be implemented on July 30; DNS issues on the remote end forced this to be backed out; new implementation date still TBD.

RFC #1156 – WCOSS: TO4 network tie-in – Connect the Cray systems' Ethernet and Infiniband networks to WCOSS Phase 1 and Phase 2 network infrastructure. Work was completed on the Reston, VA systems the week of Aug. 3. The tentative date for this work in Orlando is August 31 and will include a 1-day outage of WCOSS (Gyre) that day.

RFC #1169 – Update the Apache Vhost configuration for chartsqa.ncep.noaa.gov to allow select groups to test against the NOS/OCS/Marine Charts Division (MCD) Existing Navigational Chart Data (ENCD) QA site. Implementation began on August 4 at 1400Z; expected completion date is September 15.

RFC #1189 – WCOSS Dataflow v1.63.8, NCOSRV Dataflow v2.6.21 - The DBNet software on WCOSS and NCOSRV is being modified to begin sending datasets from the parallel Global Ensemble Forecast System (GEFS) for evaluation. Implementation began on August 11 at 1200Z and should be completed by August 25.

RFC #1191 - Update several models that suffered performance degradation due to the SP5 upgrade on WCOSS/Tide. These changes will be implemented during the production switch to Tide. The following models/jobs were impacted: AQM_PREMAQ_CONUS, HRRR_FORECAST, HRRR_FORECASTPRE,

HIRESW_POST, WSA_ENLIL, CREOFS. In addition, IBM Parallel Environment was updated due to some changes in the Mellanox OFED. The following two models will be updated to use the new IBMPE version: PSURGE, HWRF. Was to be implemented on August 11 at 1200Z; delayed to the week of August 17 due to a delay in the WCOSS production switch.

RFC #1194 - Deploy CAPTCHA-enabled web comment forms for the main NCEP, NCO, CPC, EMC, OPC, and WPC web sites. Allowing 4 days to complete this work, as each Center has site-specific configurations. Implementation began on August 11 at 1400Z and should be completed by 2000Z on August 14.

NCO Silver Spring – NWSTG

The following accelerated items were implemented this past week:

None

The following will be implemented the week of August 17, 2015:

RFC #1200 – SNOTEL v1.1 - Snotel will go live but dataflow is not being turned on at this time. This will be monitored operationally. To be implemented on August 17 at 1400Z.

The following items are in progress:

RFC #1024 – NetApp – Install and configure new NetApp heads and disk shelves at site B in Fairmont, WV. Migrate data and clients from the old NetApp to the new one. The old NetApp hardware is no longer under maintenance. Implementation began on June 17 at 1400Z and was to have been completed by 2000Z on July 9; delayed to July 24; further postponed to August 21.

RFC #1124 – At Site A, upgrade Ontap OS and volumes to 64-bit on the current production NetApps to support the migration to new NetApps. Install and configure new NetApp heads and disk shelves. Migrate data and clients from the old NetApp to the new one. Implementation to begin on July 23 at 1400Z and be completed by August 20 at 2000Z.

RFC #1125 – The Sybase replication server crashes with stacks and then shuts down when it sees a signal 11 (which is a bug in the software). Implement a configuration change to the replication server recommended by SAP Sybase for the bug fix. Implementation to begin on July 23 at 1400Z and was to be completed by July 30 at 1500Z; new completion date is August 18.

RFC #1130 - Modify ARINC socket code - The Common Handling Message Protocol (CMHP) socket code was modified to change the time-out values that manage how the code checks for data being sent or received. The current code was checking too often and a recent increase of ARINC data revealed the inefficiency of the code. This change calls for more efficient processing and will then be able to handle an increase in the ARINC data. Implementation began on July 22 at 1300Z; was to be completed by 1400Z on August 6; should be completed on August 18.

RFC #1180 - The line monitor app monitors the health of the inbound and outbound customer interfaces. It is occasionally terminated by the system (dbrep1.tgprod2 at site A and dbrep2.btgprod2 at site B). This change will add the Process check script to the crontab for automatically checking the line monitor app. The script will bring it back up if it is down. Implementation began on August 10 at 1330Z and should be completed between August 18 and August 21.

NCO Silver Spring – One NWSnet (OPSnet)

The following accelerated items were implemented this past week:

None

The following will be implemented the week of August 17, 2015:

RFC #4145 - Provide access from NCEP into the AWIPSII system in support IDP Himawari dataflow. This is an addendum to RFC #4143 (implemented on August 11 at 1300Z). This RFC is to be implemented on August 18 at 1300Z.

RFC #4148 - Salt Lake City WFO requires access to the Mesowest servers at Western Regional Headquarters. Access is needed for MYSQL database support and maintenance of the Mesowest data services. To be implemented on August 19 at 1300Z.

RFC #4153 - Implement routing for a new AWIPS subnet in Silver Spring. To be implemented on August 18 at 1300Z.

RFC #4161 - Allow access from IDP QA and PROD ESBs to NLETS in Phoenix in support of the NLETS-to-IDP migration. To be implemented on August 19 at 1500Z.

RFC #4165 - Allow access from the Snotel servers at Fairmont to the subversion server in Silver Spring. The access is to support moving Snotel to an IOC state in production. To be implemented on August 17 at 1600Z.

NCO Kansas City

The following accelerated items were implemented this past week:

None

The following will be implemented the week of August 17, 2015:

RFC #1198 - Standardize MySQL/PostgreSQL config file locations and add them to the Git Repositories. To be implemented on August 17 at 0000Z.

RFC #1202 - Create a server in each of the production environments on which to store backups of all databases. Each server will be a VM with 500 GB of storage and will include client and backup software for mysql, postgresql, and mongodb. To be implemented on August 18 at 1500Z.

RFC #1203 – Alerts v1.1 – Make changes to the deployed software for the alerts.weather.gov website, to provide support for two new fire weather alert zones: PRZ014 - South Coastal Plains and PRZ027 - Southwest Coastal Plains and Mona Island. To be implemented on August 18 at 1800Z.

RFC #1204 - Copy updated Puerto Rico fire zone tables 'warning.fire_zone' and 'warning.zone_tzids' to the production database. To be implemented on August 18 at 1800Z.

RFC #1217 - A silent failure of MySQL replication between data centers during routine changes recently occurred and has not been reproducible in the development or staging environments. Open a maintenance window to allow time for pushing test data through the production environment while monitoring it as it is replicated between the data centers. Implementation to begin on August 19 at 1400Z and should be completed by 2100Z on August 21.

The following items are in progress:

RFC #1186 - The "More Local Wx" link on the point-and-click page has no content. It appears to be related to a zone change that happened on May 28 as it

is only those zones that seem to be affected. There is a lack of association of the new/changed zones with matching observation stations. The NIDS system configuration/content is being modified to correct this issue by adding new zones into its database. Implemented on August 10 at 2000Z; backed out due to replication error, will be rescheduled once error is resolved.

NCO OCONUS

The following accelerated items were implemented this past week:

None

The following will be implemented the week of August 17, 2015:

RFC #1197 - Adjust the routing protocols to most efficiently use the Reston and Orlando network by the Alaska and Pacific Regions. To be implemented on August 18 at 0000Z.

RFC #1206 – BGP Change v15.4(3)S3 - Connect the AT&T MPLS CE at Alaska Region HQ to the two IDP routers for redundant access into the IDP network. Two Gig-E links will be used (one for each router) and E-BGP will be used as the routing protocol. Implementation to begin on August 18 at 0000Z and be completed by 2359Z on August 21.

The following item was rescheduled due to CWD:

RFC #1151 – WFO-Guam BGP peering - Current default routing will be changed to align with other Pacific Region sites. BGP peering over the existing OPSNET tunnel will be implemented. Was to be implemented on August 6 at 1900Z; rescheduled for August 14; new implementation date is TBD but should be sometime the week of August 17.

NCO Boulder

The following accelerated items were implemented this past week:

None

The following will be implemented the week of August 17, 2015:

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.modevalinfo>

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>