

June 15, 2018

MEMORANDUM FOR: Distribution Email

FROM: Chris Caruso Magee
Configuration Manager, NCEP Central Operations

SUBJECT: Scheduled Operational Changes and Upgrades for
CPC, OPC, and WPC

Climate Prediction Center

The following accelerated items were implemented this past week:

None

The following approved changes will be implemented the week of June 18, 2018:

RFC 1105 – Deploy a new application that computes daily and monthly ONI (Oceanic Nino Index) from AVHRR-only SST data onto the Compute Farm. This supports CPC subseasonal statistical forecast models. To be implemented on June 18 at 1930Z.

RFC 1106 - The MJO (Madden-Julian Oscillation) Index code has been updated to include the MJO forecast that produces web diagrams. The calculations were derived from three statistical models and 4 dynamic models. The MJO forecast was previously produced on WCOSS and will now be run operationally on the Compute Farm. To be implemented on June 20 at 1230Z.

The following RFCs are in progress:

None

The following NCO RFCs which may affect CPC are scheduled to be implemented the week of June 18:

RFC 4546 – Send more GEFS GEMPAK data to /common/data for CPC to use as a backup/transition away from NCOSRV. CPC needs all 4 cycles of this data

(they're currently only receiving the 0000Z and 0600Z cycles) and needs to keep 6 cycles on disk. To be implemented on June 18 at 1500Z.

RFC 4549 – Seaice_analysis v4.3.0 – On WCOSS, upgrade the sea ice analysis to add AMSR2 data to the analysis suite. To be implemented on June 19 at 1045Z.

RFC 4550 – Implement a major upgrade to several components of WCOSS as outlined below. These will all be done during a 24 hour outage (14 hours for the IBM and Dell parts):

- CLE UP04: Cray CLE 5.2-UP04 brings the Cray Linux Environment (CLE) to the current/latest release of 5.2 including all available enhancements and patches.
- Upgrade IBM Flash storage: IBM has issued notice that the minimum recommended level of code for the FS-840 and FS-900 storage systems is now v1.4.8.0 so this upgrade will help IBM and NCO to maintain proper support posture.
- GPFS upgrade to 4.1.1.19: Upgrade IBM Spectrum Scale software to version 4.1.1.19 on all IBM Phase-1/2 systems.
- Upgrade Mellanox switches: Upgrade Mellanox FDR-14 SX6036 IB Leaf Switches to Mellanox/OS Level 3.5.1006. This will be done on IBM phase-1 and phase-2 and Cray systems.

Implementation to begin on June 19 at 1100Z and should be completed in Reston on June 20.

RFC 4553 – NCO/NSB will be configuring IDP Phase 1 chassis with 4 NEW dell MXL switches and then work with NCO/IWSB to test and validate. These chassis switches will use the new vendor recommended OS 9.13 and also incorporate LACP changes that are different from the current baseline but recommended by the vendors. This RFC is a prerequisite for RFC 4559. Implementation to begin on June 19 at 1400Z and be completed on June 21.

RFC 4559 – Move 71 VMs from the old Vcenter in College Park to the new Vcenter in College Park. This RFC is dependent upon the successful start of RFC 4553. To be implemented beginning June 20 at 1200Z and should be completed on June 27.

RFC 4565 – NWSChat SDB v0.1 – This NWSChat maintenance release will address issues documented by the field. Included in this release is support for mixed-case products, support for Storm Surge, Dust Storm, and Snow Squall, and other bug fixes. To be implemented in Kansas City on June 21 at 1800Z. To be implemented in Silver Spring on June 25 at 1400Z. No outage is expected on June 21. A 10 minute outage will be seen on June 25 since nwsbot will need to be restarted.

The following NCO RFCs are in progress and may affect CPC:

RFC 4520 – For WCOSS (Luna), update the System Management Workstation (SMW) to the current patch level. This is needed as part of the CLE (Cray Linux Environment). Downtime will be required for the Cray while the IBM and Dell system remain up during the outage. Part 1 of this update was implemented on June 12 between 1100Z and 2300Z. Part 2 will be done on June 19.

Ocean Prediction Center

The following accelerated items were implemented this past week:

RFC 1107 – ‘launch_reg_seastate.csh’ v2018.06.14 - The ‘launch_reg_seastate.csh’ script was modified to look for the RP1's latest satellite image using a wildcard for HH:MM instead of a hard-coded minute value (00 or 30). Also added additional logging to ease future troubleshooting. Implemented on June 14 at 1405Z.

The following will be implemented the week of June 18, 2018:

RFC 1108 - Modify OPC's Jason-2 processing scripts to use Dataflow's operational path for the source files. The NESDIS DDS is being turned off June 19 at 1500Z. This RFC is to be implemented on June 19 at 1200Z.

The following RFCs are in progress:

None

The following NCO RFCs which may affect OPC are scheduled to be implemented the week of June 18:

RFC 4549 – Seaice_analysis v4.3.0 – On WCOSS, upgrade the sea ice analysis to add AMSR2 data to the analysis suite. To be implemented on June 19 at 1045Z.

RFC 4550 – Implement a major upgrade to several components of WCOSS as outlined below. These will all be done during a 24 hour outage (14 hours for the

IBM and Dell parts):

- CLE UP04: Cray CLE 5.2-UP04 brings the Cray Linux Environment (CLE) to the current/latest release of 5.2 including all available enhancements and patches.
- Upgrade IBM Flash storage: IBM has issued notice that the minimum recommended level of code for the FS-840 and FS-900 storage systems is now v1.4.8.0 so this upgrade will help IBM and NCO to maintain proper support posture.
- GPFS upgrade to 4.1.1.19: Upgrade IBM Spectrum Scale software to version 4.1.1.19 on all IBM Phase-1/2 systems.
- Upgrade Mellanox switches: Upgrade Mellanox FDR-14 SX6036 IB Leaf Switches to Mellanox/OS Level 3.5.1006. This will be done on IBM phase-1 and phase-2 and Cray systems.

Implementation to begin on June 19 at 1100Z and should be completed in Reston on June 20.

RFC 4551 – On WCOSS, remove DBNet entries which push data to the NESDIS DDS. The DDS is being decommissioned on June 19 and has been replaced by the PDA. To be implemented on June 19 at 1100Z.

RFC 4553 – NCO/NSB will be configuring IDP Phase 1 chassis with 4 NEW dell MXL switches and then work with NCO/IWSB to test and validate. These chassis switches will use the new vendor recommended OS 9.13 and also incorporate LACP changes that are different from the current baseline but recommended by the vendors. This RFC is a prerequisite for RFC 4559. Implementation to begin on June 19 at 1400Z and be completed on June 21.

RFC 4559 – Move 71 VMs from the old Vcenter in College Park to the new Vcenter in College Park. This RFC is dependent upon the successful start of RFC 4553. To be implemented beginning June 20 at 1200Z and should be completed on June 27.

RFC 4565 – NWSChat SDB v0.1 – This NWSChat maintenance release will address issues documented by the field. Included in this release is support for mixed-case products, support for Storm Surge, Dust Storm, and Snow Squall, and other bug fixes. To be implemented in Kansas City on June 21 at 1800Z. To be implemented in Silver Spring on June 25 at 1400Z. No outage is expected on June 21. A 10 minute outage will be seen on June 25 since nwsbot will need to be restarted.

The following NCO RFCs which may affect OPC are scheduled to be implemented the week of June 25:

RFC 4567 – Wxconnect v3.2.1 – Upgrade the current Wxconnect services on all of the data processing servers (all GWSAS DBP and SMS servers) to correct

minor errors from old services, in order to improve server data processing functionality. To be implemented on June 25 at:

NCWCP Spare, at 1200Z;
IRC HRB Spare, at 1300Z;
WFO HRB Spare, at 1400Z;
SPC West, at 1500Z; and
NHC Spare, at 1600Z.

To be implemented on June 26 at:

SWPC Spare, at 1200Z;
AWC Spare, at 1300Z;
NCWCP West, at 1400Z;
NHC West, at 1500Z;
AWC West, at 1600Z; and
SWPC West, at 1700Z.

To be implemented on June 28 at:

ARH GRB, at 1200Z;
SPC Spare, at 1300Z;
IRC GRB Spare, at 1400Z;
WFO HRB, at 1500Z;
SPC East, at 1600Z;
IRC GRB, at 1700Z; and
ARH GRB Spare, at 1700Z.

To be implemented on June 29 at:

NHC East, at 1200Z;
AWC East, at 1300Z;
NCWCP East, at 1400Z;
SWPC East, at 1500Z; and
IRC HRB, at 1600Z.

The following NCO RFCs are in progress and may affect OPC:

RFC 4520 – For WCOSS (Luna), update the System Management Workstation (SMW) to the current patch level. This is needed as part of the CLE (Cray Linux Environment). Downtime will be required for the Cray while the IBM and Dell system remain up during the outage. Part 1 of this update was implemented on June 12 between 1100Z and 2300Z. Part 2 will be done on June 19.

RFC 4522 – NAWIPS v7.5.1 – Implement a patch to NAWIPS to fix the watch and warning decoder (dcwarn) which broke when NCO/SDB implemented the snow squall warning in NAWIPS v7.4.2. Implemented for NCO's Dataflow group on

June 1 at 1400Z. If it is successful, it will be released to the remote Centers on June 18.

The following NCO RFCs which may affect OPC have been delayed:

RFC 4431 – Implement BOD 18-01 change on w2.weather.gov, airquality.weather.gov, mobile.weather.gov, and marine.weather.gov. Was to be implemented on May 15 at 1400Z; NCO/SDB and Akamai are working to determine best way to implement this; new implementation date is TBD.

Weather Prediction Center

The following accelerated items were implemented this past week:

None

The following will be implemented the week of June 18, 2018:

None

The following RFCs are in progress:

None

The following NCO RFCs which may affect WPC are scheduled to be implemented the week of June 18:

RFC 4550 – Implement a major upgrade to several components of WCOSS as outlined below. These will all be done during a 24 hour outage (14 hours for the IBM and Dell parts):

- CLE UP04: Cray CLE 5.2-UP04 brings the Cray Linux Environment (CLE) to the current/latest release of 5.2 including all available enhancements and patches.
- Upgrade IBM Flash storage: IBM has issued notice that the minimum recommended level of code for the FS-840 and FS-900 storage systems is now v1.4.8.0 so this upgrade will help IBM and NCO to maintain proper support posture.

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To be implemented on June 26 at:

SWPC Spare, at 1200Z;
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NHC West, at 1500Z;
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To be implemented on June 28 at:
ARH GRB, at 1200Z;
SPC Spare, at 1300Z;
IRC GRB Spare, at 1400Z;
WFO HRB, at 1500Z;
SPC East, at 1600Z;
IRC GRB, at 1700Z; and
ARH GRB Spare, at 1700Z.

To be implemented on June 29 at:
NHC East, at 1200Z;
AWC East, at 1300Z;
NCWCP East, at 1400Z;
SWPC East, at 1500Z; and
IRC HRB, at 1600Z.

The following NCO RFCs are in progress and may affect WPC:

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RFC 4522 – NAWIPS v7.5.1 – Implement a patch to NAWIPS to fix the watch and warning decoder (dcwarn) which broke when NCO/SDB implemented the snow squall warning in NAWIPS v7.4.2. Implemented for NCO's Dataflow group on June 1 at 1400Z. If it is successful, it will be released to the remote Centers on June 18.

Please note that security-related RFCs are never listed in the RFC memo.

---- OPERATIONAL ANNOUNCEMENTS ----

The CPC/OPC/WPC Configuration Management documents are available at <https://sites.google.com/a/noaa.gov/nws-ncep-nco-cm/>.

Please review these documents if you have questions prior to submitting changes for CPC/OPC/WPC configurable items.

Users who wish to view their network utilization via the Scrutinizer appliance may request access from NCO/IWSB. Please send an account request to the NCWCP Helpdesk at NCWCP.helpdesk@noaa.gov.