



Release Notes



Application Name: NAWIPS
Application Version: v7.7.0
Release Date: July 16,, 2019



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Introduction

NAWIPS v7.7.0 release notes. Highlights of this release:

- Fixed 8/16 bits color depth GIF image distortion
- Day 2 prob2cat user options

This release note covers the following Requests for Change.

RFC NUMBER	RFC DESCRIPTION	Release Date
RFC5852	NAWIPS v7.7.0 release	July 16, 2019

System Requirements

Operating Systems Supported

The supported operating systems for installing the product are:

- RedHat 6 Linux 32 bit Version 2.6.32-754.3.5
- RedHat 6 Linux 64 bit Version 2.6.32-754.3.5
- RedHat 7 Linux 64 bit Version 3.10.0-862.14.4 (beta version)

Minimum system requirements

- Operation system:
 - RHEL 6.10: RedHat Linux 64 bit version 2.6.32-754.15.3.el6.x86_64
 - RHEL 7.6: RedHat Linux 64 bit version 3.10.0-957.21.3.el7.x86_64
- CPU Model:
 - RHEL 6.10: Intel(R) Xeon(R) CPU E5520 @ 2.27GHz 4 CPU cores
 - RHEL 7.6: Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz 8 CPU cores
- Number of physical processors: 1
- RAM: 12G
- Graphics:
 - NVIDIA Quadro P1000 4GB video memory, or
 - NVIDIA Quadro K2200 4GB video memory
- Hard drive:
 - 256GB SATA SSD drive
- Network:
 - 1Gbps ethernet





Fixed Issues

Operational and Maintenance Fixes

The following list contains fixed issues for releases v7.7.0.

NAWIPS 7.7.0 Tickets	DESCRIPTION
NAWIPS-10	Get healthy of 64 bits RHEL 7, Part A: Fixed ASCAT all zero's wind speed
NAWIPS-74	Get healthy of 64 bits RHEL 7, Part G: Fixed Convective Sigmet decoder (dcssig)
NAWIPS-77	Get healthy of 64 bits RHEL 7, Part C: Fixed the zero output of CB tops, tropapauses, etc.
NAWIPS-85	Added more surface stations and sounding stations
NAWIPS-86	Get healthy of 64 bits RHEL 7, Part F: Fixed gdcross linkage
NAWIPS-87	Get healthy of 64 bits RHEL 7, Part E: Improved NAWIPS applications performance
NAWIPS-90	Updated breakpoint tables for 2019
NAWIPS-94	Get healthy of 64 bits RHEL 7, Part B: Fixed 8/16 bits GIF image export issues
NAWIPS-96	Updated NHC hurricane forecast cone radii for 2019

The following list contains fixed issues for releases v7.6.0.

NAWIPS v7.6.0 Tickets	DESCRIPTION
NAWIPS-5	Addressed GEMPAK year 2020 issue so the 2-digit year beyond 21 up to 40 is assumed to be 2021 to 2040. Any other 2-digit year is assumed to be in the 1900s, i.e., 1941 through 1999.
NAWIPS-13	Fixed incorrect format of the first two header lines in International SIGMET
NAWIPS-29	Fixed the contour algorithm that produces duplicate and/or segmented lines when using gdplot3 with high resolution models
NAWIPS-32	Doubled XM string allocation in textlib module (afgetairmetxml.c) to





	mitigate nmap2 crashes during G-Airmet production
NAWIPS-34	Geo-locations of the volcanoes in volcano.tbl match PGEN volcano locations
NAWIPS-42	Updated sounding station RAP to UNR, SD in snstns.tbl
NAWIPS-45	Fixed AREA coordinates computed from GPMXPLT
NAWIPS-51	Increased maximum lightning strikes from 160K to 800K per hour
NAWIPS-52	Updated high resolution world map, including South Sudan country boundary and Canadian Provincial borders between Northwest Territories and Nunavut
NAWIPS-53	Fixed Day 1 prob2cat additional line issues which once occurred on May 19, 2018
NAWIPS-55	Added the following Canadian metar stations to sfstns.tbl: CABR 713250 BEDFORD_RANGE CPAT 719860 ATLEE_AUTO8
NAWIPS-57	Fixed two Day 2 prob2cat operational issues occurred on July 20, 2018 1. Lines drawn backward (counterclockwise) 2. Missing the "SLGT" contour line
NAWIPS-58	Fixed NEXRAD table (nexrad.tbl): Changed LGX (Langley Hill, WA) ID number to 870
NAWIPS-63	Created testing scripts to test modules/applications https://jira.dev.nids.noaa.gov/browse/NAWIPS \$OS_BIN prior to each release
NAWIPS-64	Remove .so from Makefiles that were inadvertently added in v7.5.0
NAWIPS-67	Enabled lightning decoder to restart after LDM crashes on operational servers. Also enabled data store to pre-existing lightning files.
NAWIPS-91	Changed PLB to PBG in sfstns.tbl.
NAWIPS-95	RHEL 7 gets healthy: Part D: Update daily and release build scripts
NAWIPS-X's	Updated maps/bounds/tables files as of April 2, 2019.





Performance

	RHEL 6 (secs)	RHEL 7 (secs)	Performance
Start up Nmap2	9	6	33.3% faster
Restore spf (am_all.spf)	26	20	23.1% faster
Data loading (14 loops of grids/radar)	654	326	50.2% faster

Other Known Issues, Limitations and Restrictions

	DESCRIPTION
Issue 1	<p>Run nmap2 v7.6.0 on RHEL 7, the following error messages show up</p> <p>Warning:</p> <p style="padding-left: 40px;">Name: mmenuw_menubar</p> <p style="padding-left: 40px;">Class: XmRowColumn</p> <p style="padding-left: 40px;">XtGrabKeyboard failed</p>
Issue 2	<p>To build the NAWIPS software, make sure the following packages exist:</p> <p><i>/usr/include/Xm/* (install motif and motif-devel)</i></p> <p><i>/usr/bin/gfortran (replace g77, converts f2c & complies as C programs)</i></p> <p><i>/usr/bin/gcc</i></p> <p>link \$GEMINC/MCHPRM.RPM to \$GEMINC/MCHPRM.Linux.gfortran</p> <p>To run e.g., ntl, mgdiff, need</p> <p><i>/usr/lib64/libXm.so</i></p> <p>Install NX client and server</p>





Deployment Instructions

Schedule

Time	ACTION
7/16/2019	Release to NCWCP Centers 14-15Z WPC WS/NESDIS 15-16Z SDM
7/23/2019	14-15Z WPC Compute Farm 20Z CPC
7/30/19	12Z OPC

NCWCP Workstation Deployment Instructions

STEP	ACTION
1	ssh nawips1@vm-lnx-ncosrv
2	cd .operations
3	vi *_<center> (e.g., opc) <Change the files to source the appropriate account> (e.g., nawips1)

NCWCP Compute Farm Deployment Instructions

STEP	ACTION
1	ssh nawcf1@vm-lnx-sibcf1
2	cd .operations
3	vi *_<center> (e.g., opc) <Change the files to source the appropriate account> (e.g., nawips1)





Remote Centers Deployment Instructions

STEP	ACTION
1	Save a copy of the keys to a temporary folder (\$TEMP): cp \$OS_BIN/etc/.kf/* \$TEMP
2	Download the compressed tar file from the distribution site, http://www.nco.ncep.noaa.gov/sdb/nawips/distribution , and unpack the file in an NAWIPS user directory.
3	Copy the lighting decoder keys over: cp \$TEMP/* \$OS_BIN/etc/.kf
4	Update all users' .cshrc or .profile as needed
5	Build the new NAWIPS system cd \$GEMPAK/build external_libs_compile >&! EXTERNAL_BUILD_\$NA_OS
6	cd \$NAWIPS make all >&! MAKE_ALL_\$NA_OS make link >&! MAKE_LINK_\$NA_OS
7	cd \$GEMPAK/utilities/a2conv make >&! A2CONV_MAKE_\$NA_OS
8	To install NAWIPS onto AWIPS systems, follow the instructions from this link

